

# Batch Wafer Quality Report

**Report Date:** 2025-12-27 12:19:03

## Per-Wafer Decisions

### ***Wafer 1 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0001

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:04:46.220967

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 35.74%

**Reason:** Defect Percentage: 35.74% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 2 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0001

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:04:46.221975

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 38.39%

**Reason:** Defect Percentage: 38.39% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 3 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0001

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:04:46.223318

**Defect Class:** Random

**Confidence Score:** 0.9997

**Defect Percentage:** 76.97%

**Reason:** Defect Percentage: 76.97% (>40% threshold), Defect Class: Random, Confidence: 99.97%

### ***Wafer 4 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0001

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:04:46.223318

**Defect Class:** Edge-Ring

**Confidence Score:** 0.9954

**Defect Percentage:** 58.04%

**Reason:** Defect Percentage: 58.04% (>40% threshold), Defect Class: Edge-Ring, Confidence: 99.54%

### ***Wafer 5 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0001

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:04:46.223823

**Defect Class:** Normal

**Confidence Score:** 0.9996

**Defect Percentage:** 34.12%

**Reason:** Defect Percentage: 34.12% (<=40% threshold), Defect Class: Normal, Confidence: 99.96%

### ***Wafer 6 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0001

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:04:46.223823

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 36.26%

**Reason:** Defect Percentage: 36.26% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 7 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0002

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:04:51.707457

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 34.97%

**Reason:** Defect Percentage: 34.97% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 8 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0002

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:04:51.786085

**Defect Class:** Normal

**Confidence Score:** 0.9993

**Defect Percentage:** 36.47%

**Reason:** Defect Percentage: 36.47% (<=40% threshold), Defect Class: Normal, Confidence: 99.93%

### ***Wafer 9 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0002

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:04:52.264065

**Defect Class:** Center

**Confidence Score:** 0.9999

**Defect Percentage:** 59.07%

**Reason:** Defect Percentage: 59.07% (>40% threshold), Defect Class: Center, Confidence: 99.99%

### ***Wafer 10 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0002

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:04:52.603979

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 38.11%

**Reason:** Defect Percentage: 38.11% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 11 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0002

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:04:52.690484

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 38.39%

**Reason:** Defect Percentage: 38.39% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 12 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0002

**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:04:55.370718

**Defect Class:** Edge-Loc

**Confidence Score:** 0.9531

**Defect Percentage:** 45.25%

**Reason:** Defect Percentage: 45.25% (>40% threshold), Defect Class: Edge-Loc, Confidence: 95.31%

### ***Wafer 13 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0003

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:04:57.634761

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 33.38%

**Reason:** Defect Percentage: 33.38% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 14 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0003

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:04:58.043874

**Defect Class:** Normal

**Confidence Score:** 1.0000

**Defect Percentage:** 38.90%

**Reason:** Defect Percentage: 38.9% (<=40% threshold), Defect Class: Normal, Confidence: 100.00%

### ***Wafer 15 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0003

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:04:58.826203

**Defect Class:** Normal

**Confidence Score:** 0.9995

**Defect Percentage:** 39.51%

**Reason:** Defect Percentage: 39.51% (<=40% threshold), Defect Class: Normal, Confidence: 99.95%

### ***Wafer 16 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0003

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:04:59.142516

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 35.20%

**Reason:** Defect Percentage: 35.2% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 17 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0003

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:04:59.606736

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 34.89%

**Reason:** Defect Percentage: 34.89% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 18 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0004

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:05:03.060846

**Defect Class:** Donut

**Confidence Score:** 1.0000

**Defect Percentage:** 55.45%

**Reason:** Defect Percentage: 55.45% (>40% threshold), Defect Class: Donut, Confidence: 100.00%

### ***Wafer 19 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0004

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:05:03.455798

**Defect Class:** Center

**Confidence Score:** 1.0000

**Defect Percentage:** 53.65%

**Reason:** Defect Percentage: 53.65% (>40% threshold), Defect Class: Center, Confidence: 100.00%

### ***Wafer 20 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0004

**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:05:04.929362

**Defect Class:** Edge-Loc

**Confidence Score:** 0.9990

**Defect Percentage:** 45.65%

**Reason:** Defect Percentage: 45.65% (>40% threshold), Defect Class: Edge-Loc, Confidence: 99.90%

### ***Wafer 21 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0004

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:05:05.520309

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 34.03%

**Reason:** Defect Percentage: 34.03% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 22 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0003

**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:05:07.149710

**Defect Class:** Near-Full

**Confidence Score:** 0.9999

**Defect Percentage:** 91.72%

**Reason:** Defect Percentage: 91.72% (>40% threshold), Defect Class: Near-Full, Confidence: 99.99%

### ***Wafer 23 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0004  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:05:07.445990

**Defect Class:** Normal  
**Confidence Score:** 0.9997  
**Defect Percentage:** 29.05%

**Reason:** Defect Percentage: 29.05% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 24 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0005  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:05:08.524111

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 30.86%

**Reason:** Defect Percentage: 30.86% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 25 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0005  
**Decision:** FAIL

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:05:09.327225

**Defect Class:** Local  
**Confidence Score:** 1.0000  
**Defect Percentage:** 53.72%

**Reason:** Defect Percentage: 53.72% (>40% threshold), Defect Class: Local, Confidence: 100.00%

### ***Wafer 26 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0005  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:05:10.881489

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 37.71%

**Reason:** Defect Percentage: 37.71% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 27 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0005

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:05:12.360378

**Defect Class:** Normal

**Confidence Score:** 0.9996

**Defect Percentage:** 37.60%

**Reason:** Defect Percentage: 37.6% (<=40% threshold), Defect Class: Normal, Confidence: 99.96%

### ***Wafer 28 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0006

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:05:14.161093

**Defect Class:** Local

**Confidence Score:** 1.0000

**Defect Percentage:** 49.60%

**Reason:** Defect Percentage: 49.6% (>40% threshold), Defect Class: Local, Confidence: 100.00%

### ***Wafer 29 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0006

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:05:14.563979

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 32.88%

**Reason:** Defect Percentage: 32.88% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 30 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0005

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:05:15.316036

**Defect Class:** Normal

**Confidence Score:** 0.9997  
**Defect Percentage:** 35.66%

**Reason:** Defect Percentage: 35.66% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 31 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0006  
**Decision:** FAIL

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:05:17.279825

**Defect Class:** Edge-Loc  
**Confidence Score:** 0.9999  
**Defect Percentage:** 48.70%

**Reason:** Defect Percentage: 48.7% (>40% threshold), Defect Class: Edge-Loc, Confidence: 99.99%

### ***Wafer 32 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0004  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_02  
**Timestamp:** 2025-12-27T12:05:17.282335

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 38.54%

**Reason:** Defect Percentage: 38.54% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 33 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0006  
**Decision:** FAIL

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:05:18.053274

**Defect Class:** Local  
**Confidence Score:** 1.0000  
**Defect Percentage:** 45.35%

**Reason:** Defect Percentage: 45.35% (>40% threshold), Defect Class: Local, Confidence: 100.00%

### ***Wafer 34 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0007  
**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:05:19.803333

**Defect Class:** Random  
**Confidence Score:** 0.9999  
**Defect Percentage:** 73.27%

**Reason:** Defect Percentage: 73.27% (>40% threshold), Defect Class: Random, Confidence: 99.99%

### ***Wafer 35 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0006  
**Decision:** FAIL

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:05:20.402885

**Defect Class:** Local  
**Confidence Score:** 1.0000  
**Defect Percentage:** 48.94%

**Reason:** Defect Percentage: 48.94% (>40% threshold), Defect Class: Local, Confidence: 100.00%

### ***Wafer 36 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0007  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:05:20.435388

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 31.81%

**Reason:** Defect Percentage: 31.81% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 37 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0007  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:05:23.681753

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 33.69%

**Reason:** Defect Percentage: 33.69% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 38 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0007

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:05:23.952339

**Defect Class:** Donut

**Confidence Score:** 0.9997

**Defect Percentage:** 57.79%

**Reason:** Defect Percentage: 57.79% (>40% threshold), Defect Class: Donut, Confidence: 99.97%

### ***Wafer 39 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0008

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:05:25.065850

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 35.60%

**Reason:** Defect Percentage: 35.6% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 40 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0008

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:05:25.674798

**Defect Class:** Random

**Confidence Score:** 0.9808

**Defect Percentage:** 62.73%

**Reason:** Defect Percentage: 62.73% (>40% threshold), Defect Class: Random, Confidence: 98.08%

### ***Wafer 41 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0007

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:05:27.352415

**Defect Class:** Edge-Ring

**Confidence Score:** 0.9940

**Defect Percentage:** 54.68%

**Reason:** Defect Percentage: 54.68% (>40% threshold), Defect Class: Edge-Ring, Confidence: 99.40%

### ***Wafer 42 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0005

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:05:28.720322

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 39.60%

**Reason:** Defect Percentage: 39.6% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 43 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0008

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:05:30.062679

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 36.26%

**Reason:** Defect Percentage: 36.26% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 44 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0009

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:05:30.618248

**Defect Class:** Random

**Confidence Score:** 0.9999

**Defect Percentage:** 0.36%

**Reason:** Defect Percentage: 0.36% (<=40% threshold), Defect Class: Random, Confidence: 99.99%

### ***Wafer 45 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0009

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:05:30.853988

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 35.77%

**Reason:** Defect Percentage: 35.77% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 46 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0008

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:05:33.978257

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 37.45%

**Reason:** Defect Percentage: 37.45% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 47 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0008

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:05:34.252295

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 35.77%

**Reason:** Defect Percentage: 35.77% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 48 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0006

**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:05:36.119961

**Defect Class:** Edge-Loc

**Confidence Score:** 0.9933

**Defect Percentage:** 51.32%

**Reason:** Defect Percentage: 51.32% (>40% threshold), Defect Class: Edge-Loc, Confidence: 99.33%

### ***Wafer 49 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0009

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:05:36.230835

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 33.69%

**Reason:** Defect Percentage: 33.69% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 50 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0010  
**Decision:** FAIL

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:05:36.529291

**Defect Class:** Random  
**Confidence Score:** 0.9999  
**Defect Percentage:** 73.10%

**Reason:** Defect Percentage: 73.1% (>40% threshold), Defect Class: Random, Confidence: 99.99%

### ***Wafer 51 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0010  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:05:36.546121

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 33.22%

**Reason:** Defect Percentage: 33.22% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 52 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0009  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:05:41.435925

**Defect Class:** Normal  
**Confidence Score:** 0.9991  
**Defect Percentage:** 38.98%

**Reason:** Defect Percentage: 38.98% (<=40% threshold), Defect Class: Normal, Confidence: 99.91%

### ***Wafer 53 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0009  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:05:41.758738

**Defect Class:** Normal  
**Confidence Score:** 0.9996  
**Defect Percentage:** 33.89%

**Reason:** Defect Percentage: 33.89% (<=40% threshold), Defect Class: Normal, Confidence: 99.96%

### ***Wafer 54 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0011

**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:05:41.793896

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 33.52%

**Reason:** Defect Percentage: 33.52% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 55 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0011

**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:05:42.370591

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 33.44%

**Reason:** Defect Percentage: 33.44% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 56 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0010

**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:05:43.938247

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 38.44%

**Reason:** Defect Percentage: 38.44% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### **Wafer 57 Inspection Decision**

**Wafer ID:** Thermal\_THERM\_02\_W0007

**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:05:45.940390

**Defect Class:** Donut

**Confidence Score:** 1.0000

**Defect Percentage:** 59.76%

**Reason:** Defect Percentage: 59.76% (>40% threshold), Defect Class: Donut, Confidence: 100.00%

### **Wafer 58 Inspection Decision**

**Wafer ID:** Electrical\_ELEC\_01\_W0012

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:05:46.897439

**Defect Class:** Random

**Confidence Score:** 0.9998

**Defect Percentage:** 71.30%

**Reason:** Defect Percentage: 71.3% (>40% threshold), Defect Class: Random, Confidence: 99.98%

### **Wafer 59 Inspection Decision**

**Wafer ID:** Electrical\_ELEC\_02\_W0012

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:05:47.599214

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 35.66%

**Reason:** Defect Percentage: 35.66% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### **Wafer 60 Inspection Decision**

**Wafer ID:** Mechanical\_MECH\_01\_W0010

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:05:49.114666

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 35.70%

**Reason:** Defect Percentage: 35.7% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 61 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0011  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:05:51.328704

**Defect Class:** Normal  
**Confidence Score:** 0.9997  
**Defect Percentage:** 35.20%

**Reason:** Defect Percentage: 35.2% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 62 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0010  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:05:51.433861

**Defect Class:** Normal  
**Confidence Score:** 0.9996  
**Defect Percentage:** 33.89%

**Reason:** Defect Percentage: 33.89% (<=40% threshold), Defect Class: Normal, Confidence: 99.96%

### ***Wafer 63 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0013  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:05:51.978675

**Defect Class:** Normal  
**Confidence Score:** 0.9997  
**Defect Percentage:** 35.54%

**Reason:** Defect Percentage: 35.54% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 64 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0013  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:05:53.053750

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 35.70%

**Reason:** Defect Percentage: 35.7% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 65 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0011  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:05:56.313130

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 38.11%

**Reason:** Defect Percentage: 38.11% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 66 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0008  
**Decision:** FAIL

**Machine Type:** Thermal  
**Machine ID:** THERM\_02  
**Timestamp:** 2025-12-27T12:05:57.418650

**Defect Class:** Edge-Ring  
**Confidence Score:** 0.9923  
**Defect Percentage:** 55.67%

**Reason:** Defect Percentage: 55.67% (>40% threshold), Defect Class: Edge-Ring, Confidence: 99.23%

### ***Wafer 67 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0014  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:05:57.638565

**Defect Class:** Normal  
**Confidence Score:** 0.9996  
**Defect Percentage:** 35.93%

**Reason:** Defect Percentage: 35.93% (<=40% threshold), Defect Class: Normal, Confidence: 99.96%

### ***Wafer 68 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0011  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:05:57.671134

**Defect Class:** Normal

**Confidence Score:** 0.9999  
**Defect Percentage:** 38.85%

**Reason:** Defect Percentage: 38.85% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 69 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0014  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:05:58.388002

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 33.56%

**Reason:** Defect Percentage: 33.56% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 70 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0012  
**Decision:** FAIL

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:05:58.997624

**Defect Class:** Random  
**Confidence Score:** 0.9991  
**Defect Percentage:** 70.29%

**Reason:** Defect Percentage: 70.29% (>40% threshold), Defect Class: Random, Confidence: 99.91%

### ***Wafer 71 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0015  
**Decision:** FAIL

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:06:02.921634

**Defect Class:** Local  
**Confidence Score:** 1.0000  
**Defect Percentage:** 45.66%

**Reason:** Defect Percentage: 45.66% (>40% threshold), Defect Class: Local, Confidence: 100.00%

### ***Wafer 72 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0012  
**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:06:03.301529

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 33.38%

**Reason:** Defect Percentage: 33.38% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 73 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0015

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:06:03.903929

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 36.54%

**Reason:** Defect Percentage: 36.54% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 74 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0013

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:06:06.593978

**Defect Class:** Local

**Confidence Score:** 1.0000

**Defect Percentage:** 47.13%

**Reason:** Defect Percentage: 47.13% (>40% threshold), Defect Class: Local, Confidence: 100.00%

### ***Wafer 75 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0009

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:06:07.616231

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 38.11%

**Reason:** Defect Percentage: 38.11% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 76 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0016

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:06:08.548773

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 32.88%

**Reason:** Defect Percentage: 32.88% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 77 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0012

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:06:08.867935

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 39.16%

**Reason:** Defect Percentage: 39.16% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 78 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0016

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:06:08.950678

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 35.77%

**Reason:** Defect Percentage: 35.77% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 79 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0013

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:06:09.962193

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 36.69%

**Reason:** Defect Percentage: 36.69% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 80 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0014  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:06:11.734808

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 36.54%

**Reason:** Defect Percentage: 36.54% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 81 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0017  
**Decision:** FAIL

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:06:13.715121

**Defect Class:** Center  
**Confidence Score:** 0.9999  
**Defect Percentage:** 59.07%

**Reason:** Defect Percentage: 59.07% (>40% threshold), Defect Class: Center, Confidence: 99.99%

### ***Wafer 82 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0013  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:06:14.436573

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 35.70%

**Reason:** Defect Percentage: 35.7% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 83 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0017  
**Decision:** FAIL

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:06:14.720768

**Defect Class:** Random  
**Confidence Score:** 1.0000  
**Defect Percentage:** 75.51%

**Reason:** Defect Percentage: 75.51% (>40% threshold), Defect Class: Random, Confidence: 100.00%

### ***Wafer 84 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0010

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:06:14.881292

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 35.83%

**Reason:** Defect Percentage: 35.83% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 85 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0014

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:06:15.420153

**Defect Class:** Local

**Confidence Score:** 0.9998

**Defect Percentage:** 48.65%

**Reason:** Defect Percentage: 48.65% (>40% threshold), Defect Class: Local, Confidence: 99.98%

### ***Wafer 86 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0015

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:06:17.576237

**Defect Class:** Donut

**Confidence Score:** 1.0000

**Defect Percentage:** 63.56%

**Reason:** Defect Percentage: 63.56% (>40% threshold), Defect Class: Donut, Confidence: 100.00%

### ***Wafer 87 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0018

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:06:19.638251

**Defect Class:** Normal

**Confidence Score:** 0.9997  
**Defect Percentage:** 29.05%

**Reason:** Defect Percentage: 29.05% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 88 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0018  
**Decision:** FAIL

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:06:20.709268

**Defect Class:** Scratch  
**Confidence Score:** 1.0000  
**Defect Percentage:** 43.34%

**Reason:** Defect Percentage: 43.34% (>40% threshold), Defect Class: Scratch, Confidence: 100.00%

### ***Wafer 89 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0015  
**Decision:** FAIL

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:06:21.109262

**Defect Class:** Donut  
**Confidence Score:** 0.9999  
**Defect Percentage:** 55.99%

**Reason:** Defect Percentage: 55.99% (>40% threshold), Defect Class: Donut, Confidence: 99.99%

### ***Wafer 90 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0011  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_02  
**Timestamp:** 2025-12-27T12:06:22.296010

**Defect Class:** Normal  
**Confidence Score:** 0.9997  
**Defect Percentage:** 35.54%

**Reason:** Defect Percentage: 35.54% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 91 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0014  
**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:06:24.251113

**Defect Class:** Normal

**Confidence Score:** 0.9996

**Defect Percentage:** 35.18%

**Reason:** Defect Percentage: 35.18% (<=40% threshold), Defect Class: Normal, Confidence: 99.96%

### ***Wafer 92 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0019

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:06:24.761425

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 33.22%

**Reason:** Defect Percentage: 33.22% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 93 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0016

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:06:24.935151

**Defect Class:** Edge-Ring

**Confidence Score:** 0.9917

**Defect Percentage:** 56.59%

**Reason:** Defect Percentage: 56.59% (>40% threshold), Defect Class: Edge-Ring, Confidence: 99.17%

### ***Wafer 94 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0019

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:06:26.683602

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 34.83%

**Reason:** Defect Percentage: 34.83% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 95 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0016

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:06:27.800614

**Defect Class:** Normal

**Confidence Score:** 0.9996

**Defect Percentage:** 35.18%

**Reason:** Defect Percentage: 35.18% (<=40% threshold), Defect Class: Normal, Confidence: 99.96%

### ***Wafer 96 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0020

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:06:30.235885

**Defect Class:** Normal

**Confidence Score:** 0.9996

**Defect Percentage:** 33.89%

**Reason:** Defect Percentage: 33.89% (<=40% threshold), Defect Class: Normal, Confidence: 99.96%

### ***Wafer 97 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0017

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:06:31.531958

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 38.11%

**Reason:** Defect Percentage: 38.11% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 98 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0020

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:06:32.084824

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 38.85%

**Reason:** Defect Percentage: 38.85% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 99 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0017  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:06:33.736893

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 35.70%

**Reason:** Defect Percentage: 35.7% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 100 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0012  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_02  
**Timestamp:** 2025-12-27T12:06:33.984933

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 38.11%

**Reason:** Defect Percentage: 38.11% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 101 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0015  
**Decision:** FAIL

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:06:34.020927

**Defect Class:** Random  
**Confidence Score:** 0.9996  
**Defect Percentage:** 77.21%

**Reason:** Defect Percentage: 77.21% (>40% threshold), Defect Class: Random, Confidence: 99.96%

### ***Wafer 102 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0021  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:06:35.993893

**Defect Class:** Normal  
**Confidence Score:** 0.9999

**Defect Percentage:** 37.90%

**Reason:** Defect Percentage: 37.9% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 103 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0018

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:06:36.738499

**Defect Class:** Donut

**Confidence Score:** 0.9997

**Defect Percentage:** 56.64%

**Reason:** Defect Percentage: 56.64% (>40% threshold), Defect Class: Donut, Confidence: 99.97%

### ***Wafer 104 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0021

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:06:37.392655

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 34.76%

**Reason:** Defect Percentage: 34.76% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 105 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0018

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:06:40.009928

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 34.83%

**Reason:** Defect Percentage: 34.83% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 106 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0022

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:06:41.972288

**Defect Class:** Center  
**Confidence Score:** 0.9999  
**Defect Percentage:** 45.54%

**Reason:** Defect Percentage: 45.54% (>40% threshold), Defect Class: Center, Confidence: 99.99%

### ***Wafer 107 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0016  
**Decision:** FAIL

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:06:42.572294

**Defect Class:** Random  
**Confidence Score:** 0.9976  
**Defect Percentage:** 84.62%

**Reason:** Defect Percentage: 84.62% (>40% threshold), Defect Class: Random, Confidence: 99.76%

### ***Wafer 108 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0022  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:06:43.270395

**Defect Class:** Normal  
**Confidence Score:** 0.9993  
**Defect Percentage:** 36.47%

**Reason:** Defect Percentage: 36.47% (<=40% threshold), Defect Class: Normal, Confidence: 99.93%

### ***Wafer 109 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0019  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:06:43.495097

**Defect Class:** Normal  
**Confidence Score:** 0.9996  
**Defect Percentage:** 35.93%

**Reason:** Defect Percentage: 35.93% (<=40% threshold), Defect Class: Normal, Confidence: 99.96%

### ***Wafer 110 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0013  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_02  
**Timestamp:** 2025-12-27T12:06:45.246058

**Defect Class:** Normal  
**Confidence Score:** 0.9996  
**Defect Percentage:** 37.60%

**Reason:** Defect Percentage: 37.6% (<=40% threshold), Defect Class: Normal, Confidence: 99.96%

### ***Wafer 111 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0019  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:06:46.654884

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 37.45%

**Reason:** Defect Percentage: 37.45% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 112 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0023  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:06:47.800404

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 36.68%

**Reason:** Defect Percentage: 36.68% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 113 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0023  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:06:48.979185

**Defect Class:** Normal  
**Confidence Score:** 0.9997  
**Defect Percentage:** 36.26%

**Reason:** Defect Percentage: 36.26% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 114 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0020

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:06:49.957325

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 37.49%

**Reason:** Defect Percentage: 37.49% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 115 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0017

**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:06:50.750237

**Defect Class:** Edge-Loc

**Confidence Score:** 0.9987

**Defect Percentage:** 54.02%

**Reason:** Defect Percentage: 54.02% (>40% threshold), Defect Class: Edge-Loc, Confidence: 99.87%

### ***Wafer 116 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0014

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:06:52.298564

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 38.54%

**Reason:** Defect Percentage: 38.54% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 117 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0020

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:06:52.726050

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 32.13%

**Reason:** Defect Percentage: 32.13% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 118 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0024

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:06:53.166136

**Defect Class:** Center

**Confidence Score:** 0.9996

**Defect Percentage:** 45.15%

**Reason:** Defect Percentage: 45.15% (>40% threshold), Defect Class: Center, Confidence: 99.96%

### ***Wafer 119 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0024

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:06:54.687358

**Defect Class:** Edge-Ring

**Confidence Score:** 0.9893

**Defect Percentage:** 53.70%

**Reason:** Defect Percentage: 53.7% (>40% threshold), Defect Class: Edge-Ring, Confidence: 98.93%

### ***Wafer 120 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0018

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:06:55.859420

**Defect Class:** Normal

**Confidence Score:** 0.9991

**Defect Percentage:** 38.98%

**Reason:** Defect Percentage: 38.98% (<=40% threshold), Defect Class: Normal, Confidence: 99.91%

### ***Wafer 121 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0021

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:06:56.749327

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 35.54%

**Reason:** Defect Percentage: 35.54% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 122 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0025

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:06:59.057905

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 34.55%

**Reason:** Defect Percentage: 34.55% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 123 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0021

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:06:59.968110

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 34.89%

**Reason:** Defect Percentage: 34.89% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 124 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0025

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:07:00.672033

**Defect Class:** Normal

**Confidence Score:** 0.9976

**Defect Percentage:** 37.70%

**Reason:** Defect Percentage: 37.7% (<=40% threshold), Defect Class: Normal, Confidence: 99.76%

### ***Wafer 125 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0019

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:07:01.498254

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 31.11%

**Reason:** Defect Percentage: 31.11% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 126 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0015

**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:07:02.734960

**Defect Class:** Random

**Confidence Score:** 0.9999

**Defect Percentage:** 79.42%

**Reason:** Defect Percentage: 79.42% (>40% threshold), Defect Class: Random, Confidence: 99.99%

### ***Wafer 127 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0022

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:07:03.106505

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 30.86%

**Reason:** Defect Percentage: 30.86% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 128 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0026

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:07:04.430468

**Defect Class:** Edge-Loc

**Confidence Score:** 0.9893

**Defect Percentage:** 44.78%

**Reason:** Defect Percentage: 44.78% (>40% threshold), Defect Class: Edge-Loc, Confidence: 98.93%

### ***Wafer 129 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0026

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:07:05.717798

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 30.04%

**Reason:** Defect Percentage: 30.04% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 130 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0022

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:07:06.873197

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 34.20%

**Reason:** Defect Percentage: 34.2% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 131 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0023

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:07:09.854951

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 33.38%

**Reason:** Defect Percentage: 33.38% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 132 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0027

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:07:10.288258

**Defect Class:** Normal

**Confidence Score:** 0.9976

**Defect Percentage:** 37.70%

**Reason:** Defect Percentage: 37.7% (<=40% threshold), Defect Class: Normal, Confidence: 99.76%

### ***Wafer 133 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0027

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:07:10.797005

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 34.83%

**Reason:** Defect Percentage: 34.83% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 134 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0020

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:07:12.096002

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 34.03%

**Reason:** Defect Percentage: 34.03% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 135 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0023

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:07:13.152086

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 35.74%

**Reason:** Defect Percentage: 35.74% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 136 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0016

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:07:13.822573

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 36.68%

**Reason:** Defect Percentage: 36.68% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 137 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0024

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:07:15.997936

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 39.60%

**Reason:** Defect Percentage: 39.6% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 138 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0028

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:07:15.997936

**Defect Class:** Local

**Confidence Score:** 1.0000

**Defect Percentage:** 51.96%

**Reason:** Defect Percentage: 51.96% (>40% threshold), Defect Class: Local, Confidence: 100.00%

### ***Wafer 139 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0028

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:07:16.215188

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 38.27%

**Reason:** Defect Percentage: 38.27% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 140 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0024

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:07:20.761128

**Defect Class:** Normal

**Confidence Score:** 0.9999  
**Defect Percentage:** 37.90%

**Reason:** Defect Percentage: 37.9% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 141 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0029  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:07:21.762754

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 39.60%

**Reason:** Defect Percentage: 39.6% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 142 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0021  
**Decision:** FAIL

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:07:21.774080

**Defect Class:** Donut  
**Confidence Score:** 0.9982  
**Defect Percentage:** 55.10%

**Reason:** Defect Percentage: 55.1% (>40% threshold), Defect Class: Donut, Confidence: 99.82%

### ***Wafer 143 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0029  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:07:21.972610

**Defect Class:** Normal  
**Confidence Score:** 0.9995  
**Defect Percentage:** 39.46%

**Reason:** Defect Percentage: 39.46% (<=40% threshold), Defect Class: Normal, Confidence: 99.95%

### ***Wafer 144 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0025  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:07:22.316698

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 33.33%

**Reason:** Defect Percentage: 33.33% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 145 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0017  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_02  
**Timestamp:** 2025-12-27T12:07:23.586239

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 33.33%

**Reason:** Defect Percentage: 33.33% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 146 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0025  
**Decision:** FAIL

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:07:25.964321

**Defect Class:** Edge-Ring  
**Confidence Score:** 0.9951  
**Defect Percentage:** 53.62%

**Reason:** Defect Percentage: 53.62% (>40% threshold), Defect Class: Edge-Ring, Confidence: 99.51%

### ***Wafer 147 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0030  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:07:27.403453

**Defect Class:** Normal  
**Confidence Score:** 0.9996  
**Defect Percentage:** 35.93%

**Reason:** Defect Percentage: 35.93% (<=40% threshold), Defect Class: Normal, Confidence: 99.96%

### ***Wafer 148 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0030  
**Decision:** FAIL

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:07:27.700614

**Defect Class:** Local  
**Confidence Score:** 0.9999  
**Defect Percentage:** 53.16%

**Reason:** Defect Percentage: 53.16% (>40% threshold), Defect Class: Local, Confidence: 99.99%

### ***Wafer 149 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0026  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:07:27.706340

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 34.28%

**Reason:** Defect Percentage: 34.28% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 150 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0022  
**Decision:** FAIL

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:07:29.093285

**Defect Class:** Near-Full  
**Confidence Score:** 1.0000  
**Defect Percentage:** 94.31%

**Reason:** Defect Percentage: 94.31% (>40% threshold), Defect Class: Near-Full, Confidence: 100.00%

### ***Wafer 151 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0026  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:07:32.222126

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 33.38%

**Reason:** Defect Percentage: 33.38% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 152 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0031

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:07:32.527610

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 38.39%

**Reason:** Defect Percentage: 38.39% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 153 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0031

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:07:32.928420

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 34.76%

**Reason:** Defect Percentage: 34.76% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 154 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0018

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:07:33.363221

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 34.28%

**Reason:** Defect Percentage: 34.28% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 155 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0027

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:07:34.455162

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 39.60%

**Reason:** Defect Percentage: 39.6% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 156 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0023

**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:07:37.156033

**Defect Class:** Edge-Loc

**Confidence Score:** 0.9996

**Defect Percentage:** 44.30%

**Reason:** Defect Percentage: 44.3% (>40% threshold), Defect Class: Edge-Loc, Confidence: 99.96%

### ***Wafer 157 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0032

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:07:38.018935

**Defect Class:** Random

**Confidence Score:** 0.5003

**Defect Percentage:** 86.14%

**Reason:** Defect Percentage: 86.14% (>40% threshold), Defect Class: Random, Confidence: 50.03%

### ***Wafer 158 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0032

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:07:38.618548

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 38.11%

**Reason:** Defect Percentage: 38.11% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 159 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0027

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:07:39.704952

**Defect Class:** Scratch  
**Confidence Score:** 0.9999  
**Defect Percentage:** 43.89%

**Reason:** Defect Percentage: 43.89% (>40% threshold), Defect Class: Scratch, Confidence: 99.99%

### ***Wafer 160 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0028  
**Decision:** FAIL

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:07:40.414450

**Defect Class:** Local  
**Confidence Score:** 0.9998  
**Defect Percentage:** 47.63%

**Reason:** Defect Percentage: 47.63% (>40% threshold), Defect Class: Local, Confidence: 99.98%

### ***Wafer 161 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0019  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_02  
**Timestamp:** 2025-12-27T12:07:41.513978

**Defect Class:** Normal  
**Confidence Score:** 0.9997  
**Defect Percentage:** 32.51%

**Reason:** Defect Percentage: 32.51% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 162 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0033  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:07:43.120392

**Defect Class:** Normal  
**Confidence Score:** 0.9997  
**Defect Percentage:** 35.74%

**Reason:** Defect Percentage: 35.74% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 163 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0033  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:07:44.406012

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 33.01%

**Reason:** Defect Percentage: 33.01% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 164 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0028

**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:07:46.257925

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 32.88%

**Reason:** Defect Percentage: 32.88% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 165 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0029

**Decision:** FAIL

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:07:47.784857

**Defect Class:** Near-Full  
**Confidence Score:** 0.9993  
**Defect Percentage:** 89.73%

**Reason:** Defect Percentage: 89.73% (>40% threshold), Defect Class: Near-Full, Confidence: 99.93%

### ***Wafer 166 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0024

**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:07:47.876958

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 30.04%

**Reason:** Defect Percentage: 30.04% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 167 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0020

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:07:48.493667

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 33.52%

**Reason:** Defect Percentage: 33.52% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 168 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0034

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:07:48.993093

**Defect Class:** Scratch

**Confidence Score:** 1.0000

**Defect Percentage:** 45.04%

**Reason:** Defect Percentage: 45.04% (>40% threshold), Defect Class: Scratch, Confidence: 100.00%

### ***Wafer 169 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0034

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:07:50.257878

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 36.26%

**Reason:** Defect Percentage: 36.26% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 170 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0029

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:07:51.591608

**Defect Class:** Edge-Ring

**Confidence Score:** 0.9973

**Defect Percentage:** 55.05%

**Reason:** Defect Percentage: 55.05% (>40% threshold), Defect Class: Edge-Ring, Confidence: 99.73%

### ***Wafer 171 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0030

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:07:53.006021

**Defect Class:** Donut

**Confidence Score:** 0.9989

**Defect Percentage:** 56.15%

**Reason:** Defect Percentage: 56.15% (>40% threshold), Defect Class: Donut, Confidence: 99.89%

### ***Wafer 172 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0035

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:07:54.933584

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 33.22%

**Reason:** Defect Percentage: 33.22% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 173 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0035

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:07:55.926978

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 35.70%

**Reason:** Defect Percentage: 35.7% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 174 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0021

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:07:56.557852

**Defect Class:** Normal

**Confidence Score:** 0.9999  
**Defect Percentage:** 39.60%

**Reason:** Defect Percentage: 39.6% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 175 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0030  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:07:56.800615

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 33.33%

**Reason:** Defect Percentage: 33.33% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 176 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0025  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:07:56.907960

**Defect Class:** Normal  
**Confidence Score:** 0.9996  
**Defect Percentage:** 34.12%

**Reason:** Defect Percentage: 34.12% (<=40% threshold), Defect Class: Normal, Confidence: 99.96%

### ***Wafer 177 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0031  
**Decision:** FAIL

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:07:59.597338

**Defect Class:** Scratch  
**Confidence Score:** 0.9999  
**Defect Percentage:** 45.11%

**Reason:** Defect Percentage: 45.11% (>40% threshold), Defect Class: Scratch, Confidence: 99.99%

### ***Wafer 178 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0036  
**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:08:00.086225

**Defect Class:** Edge-Ring  
**Confidence Score:** 0.9981  
**Defect Percentage:** 51.43%

**Reason:** Defect Percentage: 51.43% (>40% threshold), Defect Class: Edge-Ring, Confidence: 99.81%

### ***Wafer 179 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0036  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:08:01.723669

**Defect Class:** Normal  
**Confidence Score:** 0.9993  
**Defect Percentage:** 36.47%

**Reason:** Defect Percentage: 36.47% (<=40% threshold), Defect Class: Normal, Confidence: 99.93%

### ***Wafer 180 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0026  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:08:02.595036

**Defect Class:** Normal  
**Confidence Score:** 0.9996  
**Defect Percentage:** 33.89%

**Reason:** Defect Percentage: 33.89% (<=40% threshold), Defect Class: Normal, Confidence: 99.96%

### ***Wafer 181 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0031  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:08:02.796663

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 31.73%

**Reason:** Defect Percentage: 31.73% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 182 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0037

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:08:05.769858

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 34.78%

**Reason:** Defect Percentage: 34.78% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 183 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0037

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:08:06.819263

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 34.56%

**Reason:** Defect Percentage: 34.56% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 184 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0032

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:08:06.960011

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 29.05%

**Reason:** Defect Percentage: 29.05% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 185 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0022

**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:08:08.277420

**Defect Class:** Scratch

**Confidence Score:** 1.0000

**Defect Percentage:** 43.14%

**Reason:** Defect Percentage: 43.14% (>40% threshold), Defect Class: Scratch, Confidence: 100.00%

### ***Wafer 186 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0032  
**Decision:** FAIL

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:08:08.450964

**Defect Class:** Edge-Ring  
**Confidence Score:** 0.9641  
**Defect Percentage:** 51.21%

**Reason:** Defect Percentage: 51.21% (>40% threshold), Defect Class: Edge-Ring, Confidence: 96.41%

### ***Wafer 187 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0038  
**Decision:** FAIL

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:08:11.137349

**Defect Class:** Donut  
**Confidence Score:** 0.9999  
**Defect Percentage:** 57.79%

**Reason:** Defect Percentage: 57.79% (>40% threshold), Defect Class: Donut, Confidence: 99.99%

### ***Wafer 188 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0027  
**Decision:** FAIL

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:08:12.554765

**Defect Class:** Edge-Loc  
**Confidence Score:** 0.9979  
**Defect Percentage:** 50.44%

**Reason:** Defect Percentage: 50.44% (>40% threshold), Defect Class: Edge-Loc, Confidence: 99.79%

### ***Wafer 189 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0033  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:08:12.600179

**Defect Class:** Normal  
**Confidence Score:** 0.9999

**Defect Percentage:** 31.11%

**Reason:** Defect Percentage: 31.11% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 190 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0038

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:08:12.805623

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 29.05%

**Reason:** Defect Percentage: 29.05% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 191 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0033

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:08:15.142133

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 34.78%

**Reason:** Defect Percentage: 34.78% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 192 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0039

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:08:16.966058

**Defect Class:** Donut

**Confidence Score:** 0.9999

**Defect Percentage:** 59.78%

**Reason:** Defect Percentage: 59.78% (>40% threshold), Defect Class: Donut, Confidence: 99.99%

### ***Wafer 193 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0039

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:08:18.033811

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 33.38%

**Reason:** Defect Percentage: 33.38% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 194 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0034

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:08:18.267186

**Defect Class:** Normal

**Confidence Score:** 0.9996

**Defect Percentage:** 35.18%

**Reason:** Defect Percentage: 35.18% (<=40% threshold), Defect Class: Normal, Confidence: 99.96%

### ***Wafer 195 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0023

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:08:19.662174

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 35.83%

**Reason:** Defect Percentage: 35.83% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 196 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0034

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:08:20.730252

**Defect Class:** Edge-Loc

**Confidence Score:** 0.9617

**Defect Percentage:** 48.28%

**Reason:** Defect Percentage: 48.28% (>40% threshold), Defect Class: Edge-Loc, Confidence: 96.17%

### ***Wafer 197 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0040

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:08:22.179691

**Defect Class:** Normal

**Confidence Score:** 1.0000

**Defect Percentage:** 38.90%

**Reason:** Defect Percentage: 38.9% (<=40% threshold), Defect Class: Normal, Confidence: 100.00%

### ***Wafer 198 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0028

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:08:22.835920

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 32.36%

**Reason:** Defect Percentage: 32.36% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 199 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0040

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:08:23.119402

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 29.05%

**Reason:** Defect Percentage: 29.05% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 200 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0035

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:08:23.618790

**Defect Class:** Donut

**Confidence Score:** 0.9999

**Defect Percentage:** 55.77%

**Reason:** Defect Percentage: 55.77% (>40% threshold), Defect Class: Donut, Confidence: 99.99%

### ***Wafer 201 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0035  
**Decision:** FAIL

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:08:26.396342

**Defect Class:** Random  
**Confidence Score:** 0.9992  
**Defect Percentage:** 79.16%

**Reason:** Defect Percentage: 79.16% (>40% threshold), Defect Class: Random, Confidence: 99.92%

### ***Wafer 202 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0041  
**Decision:** FAIL

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:08:28.171803

**Defect Class:** Edge-Ring  
**Confidence Score:** 0.9966  
**Defect Percentage:** 52.67%

**Reason:** Defect Percentage: 52.67% (>40% threshold), Defect Class: Edge-Ring, Confidence: 99.66%

### ***Wafer 203 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0024  
**Decision:** FAIL

**Machine Type:** Thermal  
**Machine ID:** THERM\_02  
**Timestamp:** 2025-12-27T12:08:28.368351

**Defect Class:** Donut  
**Confidence Score:** 0.9991  
**Defect Percentage:** 56.61%

**Reason:** Defect Percentage: 56.61% (>40% threshold), Defect Class: Donut, Confidence: 99.91%

### ***Wafer 204 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0041  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:08:29.028208

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 35.92%

**Reason:** Defect Percentage: 35.92% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 205 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0036

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:08:29.448517

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 38.27%

**Reason:** Defect Percentage: 38.27% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 206 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0029

**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:08:30.028375

**Defect Class:** Donut

**Confidence Score:** 0.9998

**Defect Percentage:** 61.40%

**Reason:** Defect Percentage: 61.4% (>40% threshold), Defect Class: Donut, Confidence: 99.98%

### ***Wafer 207 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0036

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:08:34.040122

**Defect Class:** Center

**Confidence Score:** 0.9999

**Defect Percentage:** 51.84%

**Reason:** Defect Percentage: 51.84% (>40% threshold), Defect Class: Center, Confidence: 99.99%

### ***Wafer 208 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0042

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:08:34.117900

**Defect Class:** Normal

**Confidence Score:** 0.9998  
**Defect Percentage:** 33.33%

**Reason:** Defect Percentage: 33.33% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 209 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0042  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:08:34.460928

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 32.88%

**Reason:** Defect Percentage: 32.88% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 210 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0025  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_02  
**Timestamp:** 2025-12-27T12:08:35.151263

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 39.60%

**Reason:** Defect Percentage: 39.6% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 211 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0030  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:08:35.909985

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 35.70%

**Reason:** Defect Percentage: 35.7% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 212 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0037  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:08:37.428221

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 32.51%

**Reason:** Defect Percentage: 32.51% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 213 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0037

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:08:39.261422

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 38.85%

**Reason:** Defect Percentage: 38.85% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 214 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0043

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:08:39.420486

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 39.60%

**Reason:** Defect Percentage: 39.6% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 215 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0043

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:08:40.112664

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 32.51%

**Reason:** Defect Percentage: 32.51% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 216 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0026

**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:08:42.894608

**Defect Class:** Near-Full

**Confidence Score:** 0.9979

**Defect Percentage:** 91.11%

**Reason:** Defect Percentage: 91.11% (>40% threshold), Defect Class: Near-Full, Confidence: 99.79%

### ***Wafer 217 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0038

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:08:44.472797

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 38.11%

**Reason:** Defect Percentage: 38.11% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 218 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0044

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:08:44.552965

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 32.51%

**Reason:** Defect Percentage: 32.51% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 219 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0038

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:08:44.608325

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 39.16%

**Reason:** Defect Percentage: 39.16% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 220 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0044

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:08:45.352535

**Defect Class:** Normal

**Confidence Score:** 1.0000

**Defect Percentage:** 38.90%

**Reason:** Defect Percentage: 38.9% (<=40% threshold), Defect Class: Normal, Confidence: 100.00%

### ***Wafer 221 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0031

**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:08:46.877594

**Defect Class:** Edge-Loc

**Confidence Score:** 0.9930

**Defect Percentage:** 45.07%

**Reason:** Defect Percentage: 45.07% (>40% threshold), Defect Class: Edge-Loc, Confidence: 99.30%

### ***Wafer 222 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0039

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:08:50.122537

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 32.51%

**Reason:** Defect Percentage: 32.51% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 223 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0045

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:08:50.285765

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 31.07%

**Reason:** Defect Percentage: 31.07% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 224 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0045

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:08:51.090926

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 35.77%

**Reason:** Defect Percentage: 35.77% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 225 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0039

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:08:52.153464

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 38.44%

**Reason:** Defect Percentage: 38.44% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 226 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0032

**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:08:52.562110

**Defect Class:** Edge-Ring

**Confidence Score:** 0.9832

**Defect Percentage:** 56.34%

**Reason:** Defect Percentage: 56.34% (>40% threshold), Defect Class: Edge-Ring, Confidence: 98.32%

### ***Wafer 227 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0027

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:08:52.990747

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 34.76%

**Reason:** Defect Percentage: 34.76% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 228 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0040  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:08:55.887363

**Defect Class:** Normal  
**Confidence Score:** 0.9997  
**Defect Percentage:** 35.74%

**Reason:** Defect Percentage: 35.74% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 229 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0046  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:08:56.022099

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 36.69%

**Reason:** Defect Percentage: 36.69% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 230 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0046  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:08:56.661864

**Defect Class:** Normal  
**Confidence Score:** 0.9997  
**Defect Percentage:** 35.66%

**Reason:** Defect Percentage: 35.66% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 231 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0040

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:08:58.337849

**Defect Class:** Edge-Ring

**Confidence Score:** 0.9825

**Defect Percentage:** 58.92%

**Reason:** Defect Percentage: 58.92% (>40% threshold), Defect Class: Edge-Ring, Confidence: 98.25%

### ***Wafer 232 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0041

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:09:01.428594

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 34.78%

**Reason:** Defect Percentage: 34.78% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 233 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0028

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:09:01.501863

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 30.04%

**Reason:** Defect Percentage: 30.04% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 234 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0047

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:09:01.812549

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 32.51%

**Reason:** Defect Percentage: 32.51% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 235 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0033

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:09:01.910529

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 35.66%

**Reason:** Defect Percentage: 35.66% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 236 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0047

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:09:02.624133

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 32.88%

**Reason:** Defect Percentage: 32.88% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 237 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0001

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:11:07.905529

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 32.51%

**Reason:** Defect Percentage: 32.51% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 238 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0001

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:11:07.905529

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 35.60%

**Reason:** Defect Percentage: 35.6% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 239 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0001

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:11:07.906553

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 37.71%

**Reason:** Defect Percentage: 37.71% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 240 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0001

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:11:07.906553

**Defect Class:** Local

**Confidence Score:** 0.9999

**Defect Percentage:** 54.81%

**Reason:** Defect Percentage: 54.81% (>40% threshold), Defect Class: Local, Confidence: 99.99%

### ***Wafer 241 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0001

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:11:07.907553

**Defect Class:** Normal

**Confidence Score:** 0.9996

**Defect Percentage:** 37.60%

**Reason:** Defect Percentage: 37.6% (<=40% threshold), Defect Class: Normal, Confidence: 99.96%

### ***Wafer 242 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0001

**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:11:07.908559

**Defect Class:** Donut

**Confidence Score:** 0.9999

**Defect Percentage:** 64.90%

**Reason:** Defect Percentage: 64.9% (>40% threshold), Defect Class: Donut, Confidence: 99.99%

### ***Wafer 243 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0002

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:11:13.171162

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 33.44%

**Reason:** Defect Percentage: 33.44% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 244 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0002

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:11:13.408344

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 34.03%

**Reason:** Defect Percentage: 34.03% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 245 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0002

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:11:15.238308

**Defect Class:** Donut

**Confidence Score:** 0.9999

**Defect Percentage:** 64.90%

**Reason:** Defect Percentage: 64.9% (>40% threshold), Defect Class: Donut, Confidence: 99.99%

### ***Wafer 246 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0002

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:11:15.383860

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 33.22%

**Reason:** Defect Percentage: 33.22% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 247 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0002  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_02  
**Timestamp:** 2025-12-27T12:11:16.735697

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 33.33%

**Reason:** Defect Percentage: 33.33% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 248 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0003  
**Decision:** FAIL

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:11:18.326535

**Defect Class:** Edge-Loc  
**Confidence Score:** 0.9999  
**Defect Percentage:** 50.55%

**Reason:** Defect Percentage: 50.55% (>40% threshold), Defect Class: Edge-Loc, Confidence: 99.99%

### ***Wafer 249 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0003  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:11:18.602831

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 33.44%

**Reason:** Defect Percentage: 33.44% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 250 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0002  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:11:19.878541

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 32.88%

**Reason:** Defect Percentage: 32.88% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 251 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0003  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:11:21.510777

**Defect Class:** Normal  
**Confidence Score:** 0.9996  
**Defect Percentage:** 35.93%

**Reason:** Defect Percentage: 35.93% (<=40% threshold), Defect Class: Normal, Confidence: 99.96%

### ***Wafer 252 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0003  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:11:23.008356

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 33.44%

**Reason:** Defect Percentage: 33.44% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 253 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0004  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:11:23.789852

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 29.98%

**Reason:** Defect Percentage: 29.98% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 254 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0004

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:11:24.297623

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 33.38%

**Reason:** Defect Percentage: 33.38% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 255 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0003

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:11:27.463287

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 39.16%

**Reason:** Defect Percentage: 39.16% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 256 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0003

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:11:28.078421

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 34.66%

**Reason:** Defect Percentage: 34.66% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 257 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0004

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:11:28.120768

**Defect Class:** Local

**Confidence Score:** 1.0000

**Defect Percentage:** 47.13%

**Reason:** Defect Percentage: 47.13% (>40% threshold), Defect Class: Local, Confidence: 100.00%

### ***Wafer 258 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0004

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:11:28.414000

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 33.56%

**Reason:** Defect Percentage: 33.56% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 259 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0005

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:11:29.110476

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 32.51%

**Reason:** Defect Percentage: 32.51% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 260 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0005

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:11:29.559380

**Defect Class:** Edge-Ring

**Confidence Score:** 0.9960

**Defect Percentage:** 54.35%

**Reason:** Defect Percentage: 54.35% (>40% threshold), Defect Class: Edge-Ring, Confidence: 99.60%

### ***Wafer 261 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0006

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:11:34.165982

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 37.49%

**Reason:** Defect Percentage: 37.49% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 262 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0005  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:11:34.253019

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 33.38%

**Reason:** Defect Percentage: 33.38% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 263 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0004  
**Decision:** FAIL

**Machine Type:** Thermal  
**Machine ID:** THERM\_02  
**Timestamp:** 2025-12-27T12:11:35.126397

**Defect Class:** Edge-Loc  
**Confidence Score:** 0.9909  
**Defect Percentage:** 44.71%

**Reason:** Defect Percentage: 44.71% (>40% threshold), Defect Class: Edge-Loc, Confidence: 99.09%

### ***Wafer 264 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0006  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:11:35.540822

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 34.76%

**Reason:** Defect Percentage: 34.76% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 265 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0005  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:11:35.857349

**Defect Class:** Normal  
**Confidence Score:** 0.9993  
**Defect Percentage:** 36.47%

**Reason:** Defect Percentage: 36.47% (<=40% threshold), Defect Class: Normal, Confidence: 99.93%

### ***Wafer 266 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0004  
**Decision:** FAIL

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:11:37.794446

**Defect Class:** Local  
**Confidence Score:** 0.9995  
**Defect Percentage:** 50.32%

**Reason:** Defect Percentage: 50.32% (>40% threshold), Defect Class: Local, Confidence: 99.95%

### ***Wafer 267 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0007  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:11:39.815718

**Defect Class:** Normal  
**Confidence Score:** 0.9997  
**Defect Percentage:** 34.20%

**Reason:** Defect Percentage: 34.2% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 268 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0007  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:11:41.120054

**Defect Class:** Normal  
**Confidence Score:** 0.9993  
**Defect Percentage:** 36.47%

**Reason:** Defect Percentage: 36.47% (<=40% threshold), Defect Class: Normal, Confidence: 99.93%

### ***Wafer 269 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0006

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:11:41.357653

**Defect Class:** Center

**Confidence Score:** 0.9999

**Defect Percentage:** 45.85%

**Reason:** Defect Percentage: 45.85% (>40% threshold), Defect Class: Center, Confidence: 99.99%

### ***Wafer 270 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0006

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:11:42.658638

**Defect Class:** Edge-Ring

**Confidence Score:** 0.7675

**Defect Percentage:** 50.71%

**Reason:** Defect Percentage: 50.71% (>40% threshold), Defect Class: Edge-Ring, Confidence: 76.75%

### ***Wafer 271 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0005

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:11:44.312518

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 36.26%

**Reason:** Defect Percentage: 36.26% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 272 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0008

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:11:45.475294

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 30.86%

**Reason:** Defect Percentage: 30.86% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 273 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0008  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:11:46.443384

**Defect Class:** Normal  
**Confidence Score:** 0.9996  
**Defect Percentage:** 37.60%

**Reason:** Defect Percentage: 37.6% (<=40% threshold), Defect Class: Normal, Confidence: 99.96%

### ***Wafer 274 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0007  
**Decision:** FAIL

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:11:46.479813

**Defect Class:** Center  
**Confidence Score:** 1.0000  
**Defect Percentage:** 46.97%

**Reason:** Defect Percentage: 46.97% (>40% threshold), Defect Class: Center, Confidence: 100.00%

### ***Wafer 275 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0005  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:11:46.871810

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 36.60%

**Reason:** Defect Percentage: 36.6% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 276 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0007  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:11:48.299908

**Defect Class:** Normal  
**Confidence Score:** 0.9991  
**Defect Percentage:** 38.98%

**Reason:** Defect Percentage: 38.98% (<=40% threshold), Defect Class: Normal, Confidence: 99.91%

### ***Wafer 277 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0009  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:11:50.775506

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 38.39%

**Reason:** Defect Percentage: 38.39% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 278 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0009  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:11:51.560865

**Defect Class:** Normal  
**Confidence Score:** 0.9997  
**Defect Percentage:** 34.83%

**Reason:** Defect Percentage: 34.83% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 279 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0008  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:11:53.660454

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 30.86%

**Reason:** Defect Percentage: 30.86% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 280 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0008  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:11:54.477255

**Defect Class:** Normal

**Confidence Score:** 0.9998  
**Defect Percentage:** 33.38%

**Reason:** Defect Percentage: 33.38% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 281 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0006  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:11:54.611201

**Defect Class:** Normal  
**Confidence Score:** 1.0000  
**Defect Percentage:** 38.90%

**Reason:** Defect Percentage: 38.90% (<=40% threshold), Defect Class: Normal, Confidence: 100.00%

### ***Wafer 282 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0006  
**Decision:** FAIL

**Machine Type:** Thermal  
**Machine ID:** THERM\_02  
**Timestamp:** 2025-12-27T12:11:56.104792

**Defect Class:** Random  
**Confidence Score:** 0.9999  
**Defect Percentage:** 79.42%

**Reason:** Defect Percentage: 79.42% (>40% threshold), Defect Class: Random, Confidence: 99.99%

### ***Wafer 283 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0010  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:11:56.544174

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 38.11%

**Reason:** Defect Percentage: 38.11% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 284 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0010  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:11:57.420833

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 35.92%

**Reason:** Defect Percentage: 35.92% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 285 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0009

**Decision:** FAIL

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:11:59.971964

**Defect Class:** Near-Full  
**Confidence Score:** 0.9981  
**Defect Percentage:** 88.14%

**Reason:** Defect Percentage: 88.14% (>40% threshold), Defect Class: Near-Full, Confidence: 99.81%

### ***Wafer 286 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0009

**Decision:** FAIL

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:12:00.158700

**Defect Class:** Donut  
**Confidence Score:** 0.9999  
**Defect Percentage:** 52.28%

**Reason:** Defect Percentage: 52.28% (>40% threshold), Defect Class: Donut, Confidence: 99.99%

### ***Wafer 287 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0007

**Decision:** FAIL

**Machine Type:** Thermal  
**Machine ID:** THERM\_02  
**Timestamp:** 2025-12-27T12:12:01.145846

**Defect Class:** Local  
**Confidence Score:** 0.9989  
**Defect Percentage:** 52.45%

**Reason:** Defect Percentage: 52.45% (>40% threshold), Defect Class: Local, Confidence: 99.89%

### ***Wafer 288 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0011

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:12:01.650239

**Defect Class:** Random

**Confidence Score:** 0.9978

**Defect Percentage:** 80.45%

**Reason:** Defect Percentage: 80.45% (>40% threshold), Defect Class: Random, Confidence: 99.78%

### ***Wafer 289 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0011

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:12:03.224187

**Defect Class:** Donut

**Confidence Score:** 1.0000

**Defect Percentage:** 63.00%

**Reason:** Defect Percentage: 63.0% (>40% threshold), Defect Class: Donut, Confidence: 100.00%

### ***Wafer 290 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0007

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:12:04.770492

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 38.85%

**Reason:** Defect Percentage: 38.85% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 291 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0010

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:12:06.973965

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 37.45%

**Reason:** Defect Percentage: 37.45% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 292 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0010  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:12:07.266318

**Defect Class:** Normal  
**Confidence Score:** 0.9997  
**Defect Percentage:** 34.20%

**Reason:** Defect Percentage: 34.2% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 293 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0012  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:12:07.506936

**Defect Class:** Normal  
**Confidence Score:** 0.9996  
**Defect Percentage:** 37.60%

**Reason:** Defect Percentage: 37.6% (<=40% threshold), Defect Class: Normal, Confidence: 99.96%

### ***Wafer 294 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0012  
**Decision:** FAIL

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:12:09.068470

**Defect Class:** Random  
**Confidence Score:** 0.9999  
**Defect Percentage:** 73.27%

**Reason:** Defect Percentage: 73.27% (>40% threshold), Defect Class: Random, Confidence: 99.99%

### ***Wafer 295 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0008  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:12:10.968562

**Defect Class:** Normal  
**Confidence Score:** 0.9997  
**Defect Percentage:** 34.55%

**Reason:** Defect Percentage: 34.55% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 296 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0008

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:12:11.434715

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 34.76%

**Reason:** Defect Percentage: 34.76% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 297 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0011

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:12:13.035533

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 30.44%

**Reason:** Defect Percentage: 30.44% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 298 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0013

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:12:13.251039

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 30.86%

**Reason:** Defect Percentage: 30.86% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 299 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0013

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:12:14.315325

**Defect Class:** Edge-Ring

**Confidence Score:** 0.9805  
**Defect Percentage:** 56.51%

**Reason:** Defect Percentage: 56.51% (>40% threshold), Defect Class: Edge-Ring, Confidence: 98.05%

### ***Wafer 300 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0011  
**Decision:** FAIL

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:12:14.635029

**Defect Class:** Donut  
**Confidence Score:** 0.9997  
**Defect Percentage:** 57.79%

**Reason:** Defect Percentage: 57.79% (>40% threshold), Defect Class: Donut, Confidence: 99.97%

### ***Wafer 301 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0009  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_02  
**Timestamp:** 2025-12-27T12:12:16.546762

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 37.49%

**Reason:** Defect Percentage: 37.49% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 302 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0014  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:12:18.298227

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 31.07%

**Reason:** Defect Percentage: 31.07% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 303 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0014  
**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:12:19.629735

**Defect Class:** Scratch

**Confidence Score:** 1.0000

**Defect Percentage:** 44.70%

**Reason:** Defect Percentage: 44.7% (>40% threshold), Defect Class: Scratch, Confidence: 100.00%

### ***Wafer 304 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0009

**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:12:19.877142

**Defect Class:** Donut

**Confidence Score:** 1.0000

**Defect Percentage:** 58.95%

**Reason:** Defect Percentage: 58.95% (>40% threshold), Defect Class: Donut, Confidence: 100.00%

### ***Wafer 305 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0012

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:12:20.017013

**Defect Class:** Random

**Confidence Score:** 0.9999

**Defect Percentage:** 74.35%

**Reason:** Defect Percentage: 74.35% (>40% threshold), Defect Class: Random, Confidence: 99.99%

### ***Wafer 306 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0012

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:12:20.604735

**Defect Class:** Scratch

**Confidence Score:** 0.9999

**Defect Percentage:** 43.89%

**Reason:** Defect Percentage: 43.89% (>40% threshold), Defect Class: Scratch, Confidence: 99.99%

### ***Wafer 307 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0015

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:12:23.681734

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 35.77%

**Reason:** Defect Percentage: 35.77% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 308 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0015

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:12:24.686161

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 35.20%

**Reason:** Defect Percentage: 35.2% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 309 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0010

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:12:26.508353

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 35.83%

**Reason:** Defect Percentage: 35.83% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 310 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0013

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:12:27.012650

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 38.85%

**Reason:** Defect Percentage: 38.85% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 311 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0013  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:12:27.652490

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 35.70%

**Reason:** Defect Percentage: 35.7% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 312 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0010  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_02  
**Timestamp:** 2025-12-27T12:12:28.574695

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 37.49%

**Reason:** Defect Percentage: 37.49% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 313 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0016  
**Decision:** FAIL

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:12:29.002120

**Defect Class:** Local  
**Confidence Score:** 1.0000  
**Defect Percentage:** 46.16%

**Reason:** Defect Percentage: 46.16% (>40% threshold), Defect Class: Local, Confidence: 100.00%

### ***Wafer 314 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0016  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:12:30.610204

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 35.70%

**Reason:** Defect Percentage: 35.7% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 315 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0014  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:12:33.586652  
**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 34.97%

**Reason:** Defect Percentage: 34.97% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 316 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0014  
**Decision:** FAIL

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:12:33.967885  
**Defect Class:** Random  
**Confidence Score:** 0.9589  
**Defect Percentage:** 83.22%

**Reason:** Defect Percentage: 83.22% (>40% threshold), Defect Class: Random, Confidence: 95.89%

### ***Wafer 317 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0017  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:12:34.434222  
**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 34.89%

**Reason:** Defect Percentage: 34.89% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 318 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0017  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:12:36.624209  
**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 33.01%

**Reason:** Defect Percentage: 33.01% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 319 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0011

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:12:36.625214

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 38.44%

**Reason:** Defect Percentage: 38.44% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 320 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0011

**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:12:37.516394

**Defect Class:** Local

**Confidence Score:** 1.0000

**Defect Percentage:** 52.27%

**Reason:** Defect Percentage: 52.27% (>40% threshold), Defect Class: Local, Confidence: 100.00%

### ***Wafer 321 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0015

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:12:39.564405

**Defect Class:** Edge-Ring

**Confidence Score:** 0.7199

**Defect Percentage:** 52.08%

**Reason:** Defect Percentage: 52.08% (>40% threshold), Defect Class: Edge-Ring, Confidence: 71.99%

### ***Wafer 322 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0018

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:12:40.283785

**Defect Class:** Normal  
**Confidence Score:** 0.9997  
**Defect Percentage:** 35.20%

**Reason:** Defect Percentage: 35.2% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 323 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0015  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:12:41.723715

**Defect Class:** Normal  
**Confidence Score:** 1.0000  
**Defect Percentage:** 38.90%

**Reason:** Defect Percentage: 38.9% (<=40% threshold), Defect Class: Normal, Confidence: 100.00%

### ***Wafer 324 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0018  
**Decision:** FAIL

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:12:42.187812

**Defect Class:** Near-Full  
**Confidence Score:** 1.0000  
**Defect Percentage:** 98.04%

**Reason:** Defect Percentage: 98.04% (>40% threshold), Defect Class: Near-Full, Confidence: 100.00%

### ***Wafer 325 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0012  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_02  
**Timestamp:** 2025-12-27T12:12:45.168122

**Defect Class:** Normal  
**Confidence Score:** 0.9997  
**Defect Percentage:** 32.51%

**Reason:** Defect Percentage: 32.51% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 326 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0019  
**Decision:** FAIL

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:12:45.495234

**Defect Class:** Edge-Ring  
**Confidence Score:** 0.9942  
**Defect Percentage:** 57.28%

**Reason:** Defect Percentage: 57.28% (>40% threshold), Defect Class: Edge-Ring, Confidence: 99.42%

### ***Wafer 327 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0016

**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:12:46.653565

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 34.76%

**Reason:** Defect Percentage: 34.76% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 328 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0012

**Decision:** FAIL

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:12:46.818348

**Defect Class:** Random  
**Confidence Score:** 0.9992  
**Defect Percentage:** 79.16%

**Reason:** Defect Percentage: 79.16% (>40% threshold), Defect Class: Random, Confidence: 99.92%

### ***Wafer 329 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0019

**Decision:** FAIL

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:12:47.681434

**Defect Class:** Near-Full  
**Confidence Score:** 0.9381  
**Defect Percentage:** 84.72%

**Reason:** Defect Percentage: 84.72% (>40% threshold), Defect Class: Near-Full, Confidence: 93.81%

### ***Wafer 330 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0016  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:12:49.045058

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 30.04%

**Reason:** Defect Percentage: 30.04% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 331 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0020  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:12:51.148809

**Defect Class:** Normal  
**Confidence Score:** 0.9995  
**Defect Percentage:** 39.46%

**Reason:** Defect Percentage: 39.46% (<=40% threshold), Defect Class: Normal, Confidence: 99.95%

### ***Wafer 332 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0017  
**Decision:** FAIL

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:12:52.390545

**Defect Class:** Random  
**Confidence Score:** 0.9992  
**Defect Percentage:** 79.16%

**Reason:** Defect Percentage: 79.16% (>40% threshold), Defect Class: Random, Confidence: 99.92%

### ***Wafer 333 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0020  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:12:52.836865

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 35.70%

**Reason:** Defect Percentage: 35.7% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 334 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0017

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:12:55.836314

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 32.51%

**Reason:** Defect Percentage: 32.51% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 335 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0013

**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:12:56.463520

**Defect Class:** Edge-Loc

**Confidence Score:** 1.0000

**Defect Percentage:** 47.84%

**Reason:** Defect Percentage: 47.84% (>40% threshold), Defect Class: Edge-Loc, Confidence: 100.00%

### ***Wafer 336 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0021

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:12:57.082228

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 34.55%

**Reason:** Defect Percentage: 34.55% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 337 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0013

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:12:57.192145

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 35.77%

**Reason:** Defect Percentage: 35.77% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 338 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0021

**Decision:** FAIL

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:12:58.408801

**Defect Class:** Near-Full  
**Confidence Score:** 0.7516  
**Defect Percentage:** 86.05%

**Reason:** Defect Percentage: 86.05% (>40% threshold), Defect Class: Near-Full, Confidence: 75.16%

### ***Wafer 339 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0018

**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:12:58.634388

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 31.11%

**Reason:** Defect Percentage: 31.11% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 340 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0018

**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:13:01.444936

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 33.69%

**Reason:** Defect Percentage: 33.69% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 341 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0022

**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:13:02.354104

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 34.97%

**Reason:** Defect Percentage: 34.97% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 342 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0022  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:13:03.729530

**Defect Class:** Normal  
**Confidence Score:** 0.9997  
**Defect Percentage:** 35.54%

**Reason:** Defect Percentage: 35.54% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 343 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0014  
**Decision:** FAIL

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:13:04.728349

**Defect Class:** Donut  
**Confidence Score:** 0.9982  
**Defect Percentage:** 55.10%

**Reason:** Defect Percentage: 55.1% (>40% threshold), Defect Class: Donut, Confidence: 99.82%

### ***Wafer 344 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0014  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_02  
**Timestamp:** 2025-12-27T12:13:05.159325

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 37.90%

**Reason:** Defect Percentage: 37.9% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 345 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0019

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:13:06.637509

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 34.56%

**Reason:** Defect Percentage: 34.56% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 346 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0023

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:13:07.540932

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 29.98%

**Reason:** Defect Percentage: 29.98% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 347 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0019

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:13:08.809372

**Defect Class:** Normal

**Confidence Score:** 0.9996

**Defect Percentage:** 35.93%

**Reason:** Defect Percentage: 35.93% (<=40% threshold), Defect Class: Normal, Confidence: 99.96%

### ***Wafer 348 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0023

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:13:09.418875

**Defect Class:** Donut

**Confidence Score:** 0.9999

**Defect Percentage:** 64.90%

**Reason:** Defect Percentage: 64.9% (>40% threshold), Defect Class: Donut, Confidence: 99.99%

### ***Wafer 349 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0015  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:13:12.307794

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 37.49%

**Reason:** Defect Percentage: 37.49% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 350 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0024  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:13:12.635967

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 36.60%

**Reason:** Defect Percentage: 36.6% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 351 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0020  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:13:13.963357

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 34.66%

**Reason:** Defect Percentage: 34.66% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 352 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0020  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:13:15.386533

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 32.51%

**Reason:** Defect Percentage: 32.51% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 353 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0024

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:13:15.551284

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 33.38%

**Reason:** Defect Percentage: 33.38% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 354 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0015

**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:13:16.022348

**Defect Class:** Near-Full

**Confidence Score:** 0.9999

**Defect Percentage:** 93.20%

**Reason:** Defect Percentage: 93.2% (>40% threshold), Defect Class: Near-Full, Confidence: 99.99%

### ***Wafer 355 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0025

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:13:18.469333

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 34.28%

**Reason:** Defect Percentage: 34.28% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 356 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0021

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:13:19.924269

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 33.69%

**Reason:** Defect Percentage: 33.69% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 357 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0016  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:13:20.665867

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 33.69%

**Reason:** Defect Percentage: 33.69% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 358 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0025  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:13:21.482193

**Defect Class:** Normal  
**Confidence Score:** 0.9997  
**Defect Percentage:** 35.74%

**Reason:** Defect Percentage: 35.74% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 359 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0021  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:13:22.038922

**Defect Class:** Normal  
**Confidence Score:** 0.9997  
**Defect Percentage:** 35.74%

**Reason:** Defect Percentage: 35.74% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 360 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0016

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:13:23.172407

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 34.20%

**Reason:** Defect Percentage: 34.2% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 361 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0026

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:13:24.154658

**Defect Class:** Normal

**Confidence Score:** 0.9976

**Defect Percentage:** 37.70%

**Reason:** Defect Percentage: 37.7% (<=40% threshold), Defect Class: Normal, Confidence: 99.76%

### ***Wafer 362 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0022

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:13:25.867352

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 35.77%

**Reason:** Defect Percentage: 35.77% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 363 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0026

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:13:27.135609

**Defect Class:** Edge-Ring

**Confidence Score:** 0.9941

**Defect Percentage:** 52.70%

**Reason:** Defect Percentage: 52.7% (>40% threshold), Defect Class: Edge-Ring, Confidence: 99.41%

### ***Wafer 364 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0017

**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:13:27.464388

**Defect Class:** Center

**Confidence Score:** 1.0000

**Defect Percentage:** 47.02%

**Reason:** Defect Percentage: 47.02% (>40% threshold), Defect Class: Center, Confidence: 100.00%

### ***Wafer 365 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0022

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:13:29.506565

**Defect Class:** Edge-Loc

**Confidence Score:** 0.9998

**Defect Percentage:** 49.95%

**Reason:** Defect Percentage: 49.95% (>40% threshold), Defect Class: Edge-Loc, Confidence: 99.98%

### ***Wafer 366 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0027

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:13:29.739129

**Defect Class:** Edge-Ring

**Confidence Score:** 0.9976

**Defect Percentage:** 54.32%

**Reason:** Defect Percentage: 54.32% (>40% threshold), Defect Class: Edge-Ring, Confidence: 99.76%

### ***Wafer 367 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0023

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:13:32.123253

**Defect Class:** Normal

**Confidence Score:** 0.9996

**Defect Percentage:** 34.12%

**Reason:** Defect Percentage: 34.12% (<=40% threshold), Defect Class: Normal, Confidence: 99.96%

### ***Wafer 368 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0017

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:13:32.359530

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 35.20%

**Reason:** Defect Percentage: 35.2% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 369 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0027

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:13:32.922020

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 32.51%

**Reason:** Defect Percentage: 32.51% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 370 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0018

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:13:33.651286

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 34.89%

**Reason:** Defect Percentage: 34.89% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 371 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0028

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:13:35.479202

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 31.81%

**Reason:** Defect Percentage: 31.81% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 372 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0023  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:13:37.584635

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 34.56%

**Reason:** Defect Percentage: 34.56% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 373 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0024  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:13:37.639428

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 33.22%

**Reason:** Defect Percentage: 33.22% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 374 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0018  
**Decision:** FAIL

**Machine Type:** Thermal  
**Machine ID:** THERM\_02  
**Timestamp:** 2025-12-27T12:13:37.691535

**Defect Class:** Donut  
**Confidence Score:** 0.9997  
**Defect Percentage:** 49.31%

**Reason:** Defect Percentage: 49.31% (>40% threshold), Defect Class: Donut, Confidence: 99.97%

### ***Wafer 375 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0028  
**Decision:** FAIL

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:13:38.348445

**Defect Class:** Edge-Ring  
**Confidence Score:** 0.9960  
**Defect Percentage:** 54.35%

**Reason:** Defect Percentage: 54.35% (>40% threshold), Defect Class: Edge-Ring, Confidence: 99.60%

### ***Wafer 376 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0029  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:13:41.103156

**Defect Class:** Normal  
**Confidence Score:** 0.9993  
**Defect Percentage:** 36.47%

**Reason:** Defect Percentage: 36.47% (<=40% threshold), Defect Class: Normal, Confidence: 99.93%

### ***Wafer 377 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0019  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:13:41.576443

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 37.45%

**Reason:** Defect Percentage: 37.45% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 378 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0025  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:13:43.004431

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 35.83%

**Reason:** Defect Percentage: 35.83% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 379 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0029

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:13:44.219038

**Defect Class:** Normal

**Confidence Score:** 0.9996

**Defect Percentage:** 35.18%

**Reason:** Defect Percentage: 35.18% (<=40% threshold), Defect Class: Normal, Confidence: 99.96%

### ***Wafer 380 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0024

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:13:45.392329

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 36.54%

**Reason:** Defect Percentage: 36.54% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 381 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0019

**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:13:46.530295

**Defect Class:** Near-Full

**Confidence Score:** 0.9990

**Defect Percentage:** 87.47%

**Reason:** Defect Percentage: 87.47% (>40% threshold), Defect Class: Near-Full, Confidence: 99.90%

### ***Wafer 382 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0030

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:13:46.699660

**Defect Class:** Scratch

**Confidence Score:** 1.0000

**Defect Percentage:** 44.18%

**Reason:** Defect Percentage: 44.18% (>40% threshold), Defect Class: Scratch, Confidence: 100.00%

### ***Wafer 383 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0026

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:13:49.150127

**Defect Class:** Edge-Loc

**Confidence Score:** 0.9999

**Defect Percentage:** 50.94%

**Reason:** Defect Percentage: 50.94% (>40% threshold), Defect Class: Edge-Loc, Confidence: 99.99%

### ***Wafer 384 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0030

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:13:49.438134

**Defect Class:** Edge-Loc

**Confidence Score:** 0.9930

**Defect Percentage:** 45.07%

**Reason:** Defect Percentage: 45.07% (>40% threshold), Defect Class: Edge-Loc, Confidence: 99.30%

### ***Wafer 385 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0020

**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:13:51.804309

**Defect Class:** Scratch

**Confidence Score:** 0.9998

**Defect Percentage:** 44.26%

**Reason:** Defect Percentage: 44.26% (>40% threshold), Defect Class: Scratch, Confidence: 99.98%

### ***Wafer 386 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0020

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:13:52.052045

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 35.77%

**Reason:** Defect Percentage: 35.77% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 387 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0031  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:13:52.718350

**Defect Class:** Normal  
**Confidence Score:** 0.9997  
**Defect Percentage:** 34.55%

**Reason:** Defect Percentage: 34.55% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 388 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0025  
**Decision:** FAIL

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:13:53.293185

**Defect Class:** Random  
**Confidence Score:** 1.0000  
**Defect Percentage:** 78.73%

**Reason:** Defect Percentage: 78.73% (>40% threshold), Defect Class: Random, Confidence: 100.00%

### ***Wafer 389 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0031  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:13:55.052719

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 36.69%

**Reason:** Defect Percentage: 36.69% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 390 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0027

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:13:56.817395

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 34.71%

**Reason:** Defect Percentage: 34.71% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 391 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0032

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:13:57.894633

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 37.45%

**Reason:** Defect Percentage: 37.45% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 392 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0021

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:13:58.369956

**Defect Class:** Normal

**Confidence Score:** 0.9996

**Defect Percentage:** 35.18%

**Reason:** Defect Percentage: 35.18% (<=40% threshold), Defect Class: Normal, Confidence: 99.96%

### ***Wafer 393 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0032

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:14:00.515270

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 29.98%

**Reason:** Defect Percentage: 29.98% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 394 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0026  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:14:00.842921

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 33.45%

**Reason:** Defect Percentage: 33.45% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 395 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0028  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:14:03.332152

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 31.73%

**Reason:** Defect Percentage: 31.73% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 396 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0033  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:14:03.723318

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 38.27%

**Reason:** Defect Percentage: 38.27% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 397 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0021  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:14:03.823462

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 38.44%

**Reason:** Defect Percentage: 38.44% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 398 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0033

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:14:06.393370

**Defect Class:** Random

**Confidence Score:** 0.9992

**Defect Percentage:** 79.16%

**Reason:** Defect Percentage: 79.16% (>40% threshold), Defect Class: Random, Confidence: 99.92%

### ***Wafer 399 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0027

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:14:06.933575

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 38.54%

**Reason:** Defect Percentage: 38.54% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 400 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0034

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:14:08.982859

**Defect Class:** Edge-Ring

**Confidence Score:** 0.9812

**Defect Percentage:** 56.71%

**Reason:** Defect Percentage: 56.71% (>40% threshold), Defect Class: Edge-Ring, Confidence: 98.12%

### ***Wafer 401 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0022

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:14:09.768500

**Defect Class:** Normal  
**Confidence Score:** 0.9997  
**Defect Percentage:** 34.71%

**Reason:** Defect Percentage: 34.71% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 402 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0029  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:14:11.376955

**Defect Class:** Normal  
**Confidence Score:** 0.9997  
**Defect Percentage:** 35.20%

**Reason:** Defect Percentage: 35.20% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 403 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0034  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:14:11.874282

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 30.86%

**Reason:** Defect Percentage: 30.86% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 404 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0028  
**Decision:** FAIL

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:14:12.617601

**Defect Class:** Local  
**Confidence Score:** 1.0000  
**Defect Percentage:** 53.37%

**Reason:** Defect Percentage: 53.37% (>40% threshold), Defect Class: Local, Confidence: 100.00%

### ***Wafer 405 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0022  
**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:14:14.441465

**Defect Class:** Near-Full

**Confidence Score:** 1.0000

**Defect Percentage:** 92.05%

**Reason:** Defect Percentage: 92.05% (>40% threshold), Defect Class: Near-Full, Confidence: 100.00%

### ***Wafer 406 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0035

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:14:14.768562

**Defect Class:** Scratch

**Confidence Score:** 1.0000

**Defect Percentage:** 45.02%

**Reason:** Defect Percentage: 45.02% (>40% threshold), Defect Class: Scratch, Confidence: 100.00%

### ***Wafer 407 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0023

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:14:15.583036

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 35.20%

**Reason:** Defect Percentage: 35.2% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 408 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0035

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:14:17.114822

**Defect Class:** Donut

**Confidence Score:** 0.9998

**Defect Percentage:** 63.89%

**Reason:** Defect Percentage: 63.89% (>40% threshold), Defect Class: Donut, Confidence: 99.98%

### ***Wafer 409 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0030

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:14:18.505168

**Defect Class:** Edge-Loc

**Confidence Score:** 0.9985

**Defect Percentage:** 43.08%

**Reason:** Defect Percentage: 43.08% (>40% threshold), Defect Class: Edge-Loc, Confidence: 99.85%

### ***Wafer 410 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0029

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:14:20.149246

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 38.39%

**Reason:** Defect Percentage: 38.39% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 411 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0036

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:14:20.715437

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 35.66%

**Reason:** Defect Percentage: 35.66% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 412 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0036

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:14:22.366111

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 35.83%

**Reason:** Defect Percentage: 35.83% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 413 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0023

**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:14:23.250801

**Defect Class:** Center

**Confidence Score:** 1.0000

**Defect Percentage:** 58.23%

**Reason:** Defect Percentage: 58.23% (>40% threshold), Defect Class: Center, Confidence: 100.00%

### ***Wafer 414 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0030

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:14:25.814849

**Defect Class:** Edge-Ring

**Confidence Score:** 0.9686

**Defect Percentage:** 57.23%

**Reason:** Defect Percentage: 57.23% (>40% threshold), Defect Class: Edge-Ring, Confidence: 96.86%

### ***Wafer 415 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0031

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:14:26.155564

**Defect Class:** Edge-Loc

**Confidence Score:** 0.9975

**Defect Percentage:** 46.08%

**Reason:** Defect Percentage: 46.08% (>40% threshold), Defect Class: Edge-Loc, Confidence: 99.75%

### ***Wafer 416 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0037

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:14:26.244017

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 33.38%

**Reason:** Defect Percentage: 33.38% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 417 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0024

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:14:26.814918

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 33.69%

**Reason:** Defect Percentage: 33.69% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 418 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0037

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:14:27.867361

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 32.88%

**Reason:** Defect Percentage: 32.88% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 419 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0031

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:14:31.680431

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 33.44%

**Reason:** Defect Percentage: 33.44% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 420 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0038

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:14:31.684733

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 30.86%

**Reason:** Defect Percentage: 30.86% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 421 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0038  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:14:33.486926

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 31.73%

**Reason:** Defect Percentage: 31.73% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 422 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0032  
**Decision:** FAIL

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:14:33.992737

**Defect Class:** Donut  
**Confidence Score:** 0.9997  
**Defect Percentage:** 60.56%

**Reason:** Defect Percentage: 60.56% (>40% threshold), Defect Class: Donut, Confidence: 99.97%

### ***Wafer 423 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0024  
**Decision:** FAIL

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:14:34.813003

**Defect Class:** Donut  
**Confidence Score:** 0.9997  
**Defect Percentage:** 56.64%

**Reason:** Defect Percentage: 56.64% (>40% threshold), Defect Class: Donut, Confidence: 99.97%

### ***Wafer 424 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0025  
**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:14:36.165511

**Defect Class:** Edge-Loc

**Confidence Score:** 0.9996

**Defect Percentage:** 52.66%

**Reason:** Defect Percentage: 52.66% (>40% threshold), Defect Class: Edge-Loc, Confidence: 99.96%

### ***Wafer 425 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0039

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:14:37.211504

**Defect Class:** Edge-Ring

**Confidence Score:** 0.9917

**Defect Percentage:** 56.59%

**Reason:** Defect Percentage: 56.59% (>40% threshold), Defect Class: Edge-Ring, Confidence: 99.17%

### ***Wafer 426 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0032

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:14:38.717308

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 35.74%

**Reason:** Defect Percentage: 35.74% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 427 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0039

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:14:39.430231

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 36.69%

**Reason:** Defect Percentage: 36.69% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 428 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0033

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:14:39.811926

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 34.78%

**Reason:** Defect Percentage: 34.78% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 429 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0040

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:14:42.826011

**Defect Class:** Normal

**Confidence Score:** 0.9996

**Defect Percentage:** 33.89%

**Reason:** Defect Percentage: 33.89% (<=40% threshold), Defect Class: Normal, Confidence: 99.96%

### ***Wafer 430 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0026

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:14:43.185942

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 35.92%

**Reason:** Defect Percentage: 35.92% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 431 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0025

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:14:44.506280

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 32.36%

**Reason:** Defect Percentage: 32.36% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 432 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0040

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:14:44.660073

**Defect Class:** Local

**Confidence Score:** 0.9989

**Defect Percentage:** 45.95%

**Reason:** Defect Percentage: 45.95% (>40% threshold), Defect Class: Local, Confidence: 99.89%

### ***Wafer 433 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0034

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:14:45.235048

**Defect Class:** Normal

**Confidence Score:** 0.9976

**Defect Percentage:** 37.70%

**Reason:** Defect Percentage: 37.7% (<=40% threshold), Defect Class: Normal, Confidence: 99.76%

### ***Wafer 434 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0033

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:14:46.168439

**Defect Class:** Local

**Confidence Score:** 1.0000

**Defect Percentage:** 49.30%

**Reason:** Defect Percentage: 49.3% (>40% threshold), Defect Class: Local, Confidence: 100.00%

### ***Wafer 435 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0041

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:14:48.569929

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 35.20%

**Reason:** Defect Percentage: 35.2% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 436 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0027

**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:14:48.817877

**Defect Class:** Scratch

**Confidence Score:** 1.0000

**Defect Percentage:** 44.30%

**Reason:** Defect Percentage: 44.3% (>40% threshold), Defect Class: Scratch, Confidence: 100.00%

### ***Wafer 437 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0041

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:14:49.742426

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 36.69%

**Reason:** Defect Percentage: 36.69% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 438 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0026

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:14:51.066392

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 32.36%

**Reason:** Defect Percentage: 32.36% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 439 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0034

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:14:52.458633

**Defect Class:** Normal

**Confidence Score:** 0.9997  
**Defect Percentage:** 34.20%

**Reason:** Defect Percentage: 34.2% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 440 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0035  
**Decision:** FAIL

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:14:52.716504

**Defect Class:** Center  
**Confidence Score:** 0.9999  
**Defect Percentage:** 49.39%

**Reason:** Defect Percentage: 49.39% (>40% threshold), Defect Class: Center, Confidence: 99.99%

### ***Wafer 441 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0042  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:14:53.979042

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 33.38%

**Reason:** Defect Percentage: 33.38% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 442 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0042  
**Decision:** FAIL

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:14:55.110860

**Defect Class:** Edge-Ring  
**Confidence Score:** 0.9940  
**Defect Percentage:** 54.68%

**Reason:** Defect Percentage: 54.68% (>40% threshold), Defect Class: Edge-Ring, Confidence: 99.40%

### ***Wafer 443 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0027  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:14:57.104367

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 33.38%

**Reason:** Defect Percentage: 33.38% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 444 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0043

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:14:59.348155

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 34.89%

**Reason:** Defect Percentage: 34.89% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 445 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0036

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:14:59.625152

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 33.38%

**Reason:** Defect Percentage: 33.38% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 446 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0035

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:15:00.073109

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 35.92%

**Reason:** Defect Percentage: 35.92% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 447 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0028

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:15:00.192520

**Defect Class:** Normal

**Confidence Score:** 0.9996

**Defect Percentage:** 37.60%

**Reason:** Defect Percentage: 37.6% (<=40% threshold), Defect Class: Normal, Confidence: 99.96%

### ***Wafer 448 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0043

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:15:01.079165

**Defect Class:** Edge-Loc

**Confidence Score:** 0.9959

**Defect Percentage:** 46.07%

**Reason:** Defect Percentage: 46.07% (>40% threshold), Defect Class: Edge-Loc, Confidence: 99.59%

### ***Wafer 449 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0044

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:15:04.876321

**Defect Class:** Near-Full

**Confidence Score:** 0.9999

**Defect Percentage:** 93.20%

**Reason:** Defect Percentage: 93.2% (>40% threshold), Defect Class: Near-Full, Confidence: 99.99%

### ***Wafer 450 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0036

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:15:06.252022

**Defect Class:** Scratch

**Confidence Score:** 1.0000

**Defect Percentage:** 44.89%

**Reason:** Defect Percentage: 44.89% (>40% threshold), Defect Class: Scratch, Confidence: 100.00%

### ***Wafer 451 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0037  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:15:06.361341

**Defect Class:** Normal  
**Confidence Score:** 0.9995  
**Defect Percentage:** 35.78%

**Reason:** Defect Percentage: 35.78% (<=40% threshold), Defect Class: Normal, Confidence: 99.95%

### ***Wafer 452 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0044  
**Decision:** FAIL

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:15:07.134055

**Defect Class:** Near-Full  
**Confidence Score:** 0.9998  
**Defect Percentage:** 91.16%

**Reason:** Defect Percentage: 91.16% (>40% threshold), Defect Class: Near-Full, Confidence: 99.98%

### ***Wafer 453 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0028  
**Decision:** FAIL

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:15:08.742571

**Defect Class:** Center  
**Confidence Score:** 0.9998  
**Defect Percentage:** 44.40%

**Reason:** Defect Percentage: 44.4% (>40% threshold), Defect Class: Center, Confidence: 99.98%

### ***Wafer 454 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0029  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_02  
**Timestamp:** 2025-12-27T12:15:09.731054

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 34.97%

**Reason:** Defect Percentage: 34.97% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 455 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0045

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:15:10.574478

**Defect Class:** Normal

**Confidence Score:** 0.9993

**Defect Percentage:** 36.47%

**Reason:** Defect Percentage: 36.47% (<=40% threshold), Defect Class: Normal, Confidence: 99.93%

### ***Wafer 456 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0038

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:15:11.893812

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 35.60%

**Reason:** Defect Percentage: 35.6% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 457 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0045

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:15:12.185084

**Defect Class:** Near-Full

**Confidence Score:** 0.9992

**Defect Percentage:** 87.50%

**Reason:** Defect Percentage: 87.5% (>40% threshold), Defect Class: Near-Full, Confidence: 99.92%

### ***Wafer 458 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0037

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:15:12.832102

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 33.52%

**Reason:** Defect Percentage: 33.52% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 459 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0029  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:15:14.335153

**Defect Class:** Normal  
**Confidence Score:** 0.9996  
**Defect Percentage:** 33.89%

**Reason:** Defect Percentage: 33.89% (<=40% threshold), Defect Class: Normal, Confidence: 99.96%

### ***Wafer 460 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0030  
**Decision:** FAIL

**Machine Type:** Thermal  
**Machine ID:** THERM\_02  
**Timestamp:** 2025-12-27T12:15:15.662900

**Defect Class:** Center  
**Confidence Score:** 0.9999  
**Defect Percentage:** 46.34%

**Reason:** Defect Percentage: 46.34% (>40% threshold), Defect Class: Center, Confidence: 99.99%

### ***Wafer 461 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0046  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:15:16.286468

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 36.68%

**Reason:** Defect Percentage: 36.68% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 462 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0046  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:15:18.128677

**Defect Class:** Normal  
**Confidence Score:** 1.0000  
**Defect Percentage:** 38.90%

**Reason:** Defect Percentage: 38.9% (<=40% threshold), Defect Class: Normal, Confidence: 100.00%

### ***Wafer 463 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0038

**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:15:18.574096

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 35.92%

**Reason:** Defect Percentage: 35.92% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 464 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0039

**Decision:** FAIL

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:15:19.645314

**Defect Class:** Donut  
**Confidence Score:** 0.9996  
**Defect Percentage:** 56.36%

**Reason:** Defect Percentage: 56.36% (>40% threshold), Defect Class: Donut, Confidence: 99.96%

### ***Wafer 465 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0001

**Decision:** FAIL

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:15:45.922057

**Defect Class:** Local  
**Confidence Score:** 1.0000  
**Defect Percentage:** 46.01%

**Reason:** Defect Percentage: 46.01% (>40% threshold), Defect Class: Local, Confidence: 100.00%

### ***Wafer 466 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0001

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:15:45.923316

**Defect Class:** Normal

**Confidence Score:** 0.9993

**Defect Percentage:** 36.47%

**Reason:** Defect Percentage: 36.47% (<=40% threshold), Defect Class: Normal, Confidence: 99.93%

### ***Wafer 467 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0001

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:15:45.923316

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 36.89%

**Reason:** Defect Percentage: 36.89% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 468 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0001

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:15:45.923316

**Defect Class:** Normal

**Confidence Score:** 0.9993

**Defect Percentage:** 36.47%

**Reason:** Defect Percentage: 36.47% (<=40% threshold), Defect Class: Normal, Confidence: 99.93%

### ***Wafer 469 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0001

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:15:45.924322

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 36.68%

**Reason:** Defect Percentage: 36.68% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 470 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0001

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:15:45.925326

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 34.78%

**Reason:** Defect Percentage: 34.78% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 471 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0002

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:15:51.359359

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 29.05%

**Reason:** Defect Percentage: 29.05% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 472 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0002

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:15:51.441963

**Defect Class:** Edge-Ring

**Confidence Score:** 0.9911

**Defect Percentage:** 56.43%

**Reason:** Defect Percentage: 56.43% (>40% threshold), Defect Class: Edge-Ring, Confidence: 99.11%

### ***Wafer 473 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0002

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:15:51.783241

**Defect Class:** Scratch

**Confidence Score:** 1.0000  
**Defect Percentage:** 44.04%

**Reason:** Defect Percentage: 44.04% (>40% threshold), Defect Class: Scratch, Confidence: 100.00%

### ***Wafer 474 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0002  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:15:52.578913

**Defect Class:** Normal  
**Confidence Score:** 0.9995  
**Defect Percentage:** 39.51%

**Reason:** Defect Percentage: 39.51% (<=40% threshold), Defect Class: Normal, Confidence: 99.95%

### ***Wafer 475 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0002  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_02  
**Timestamp:** 2025-12-27T12:15:54.918851

**Defect Class:** Normal  
**Confidence Score:** 0.9997  
**Defect Percentage:** 34.20%

**Reason:** Defect Percentage: 34.2% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 476 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0001  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:16:22.777137

**Defect Class:** Normal  
**Confidence Score:** 0.9997  
**Defect Percentage:** 34.83%

**Reason:** Defect Percentage: 34.83% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 477 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0001  
**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:16:22.778150

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 31.07%

**Reason:** Defect Percentage: 31.07% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 478 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0001

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:16:22.778150

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 34.89%

**Reason:** Defect Percentage: 34.89% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 479 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0001

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:16:22.779653

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 35.54%

**Reason:** Defect Percentage: 35.54% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 480 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0001

**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:16:22.780656

**Defect Class:** Edge-Loc

**Confidence Score:** 0.9999

**Defect Percentage:** 50.55%

**Reason:** Defect Percentage: 50.55% (>40% threshold), Defect Class: Edge-Loc, Confidence: 99.99%

### ***Wafer 481 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0001

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:16:22.781160

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 33.38%

**Reason:** Defect Percentage: 33.38% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 482 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0002

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:16:28.073142

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 31.73%

**Reason:** Defect Percentage: 31.73% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 483 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0002

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:16:28.224129

**Defect Class:** Random

**Confidence Score:** 1.0000

**Defect Percentage:** 0.35%

**Reason:** Defect Percentage: 0.35% (<=40% threshold), Defect Class: Random, Confidence: 100.00%

### ***Wafer 484 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0002

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:16:28.339758

**Defect Class:** Random

**Confidence Score:** 1.0000

**Defect Percentage:** 74.25%

**Reason:** Defect Percentage: 74.25% (>40% threshold), Defect Class: Random, Confidence: 100.00%

### ***Wafer 485 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0002

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:16:28.505505

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 35.92%

**Reason:** Defect Percentage: 35.92% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 486 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0002

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:16:28.511722

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 33.33%

**Reason:** Defect Percentage: 33.33% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 487 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0002

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:16:30.790590

**Defect Class:** Scratch

**Confidence Score:** 1.0000

**Defect Percentage:** 42.94%

**Reason:** Defect Percentage: 42.94% (>40% threshold), Defect Class: Scratch, Confidence: 100.00%

### ***Wafer 488 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0001

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:17:29.074866

**Defect Class:** Edge-Ring

**Confidence Score:** 0.9938  
**Defect Percentage:** 55.89%

**Reason:** Defect Percentage: 55.89% (>40% threshold), Defect Class: Edge-Ring, Confidence: 99.38%

### ***Wafer 489 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0001  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:17:29.075987

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 35.70%

**Reason:** Defect Percentage: 35.7% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 490 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0001  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:17:29.075987

**Defect Class:** Normal  
**Confidence Score:** 0.9995  
**Defect Percentage:** 35.78%

**Reason:** Defect Percentage: 35.78% (<=40% threshold), Defect Class: Normal, Confidence: 99.95%

### ***Wafer 491 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0001  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_02  
**Timestamp:** 2025-12-27T12:17:29.077015

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 38.27%

**Reason:** Defect Percentage: 38.27% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 492 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0001  
**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:17:29.077015

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 38.11%

**Reason:** Defect Percentage: 38.11% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 493 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0001  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:17:29.077015

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 37.49%

**Reason:** Defect Percentage: 37.49% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 494 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0002  
**Decision:** FAIL

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:17:34.487849

**Defect Class:** Center  
**Confidence Score:** 1.0000  
**Defect Percentage:** 49.72%

**Reason:** Defect Percentage: 49.72% (>40% threshold), Defect Class: Center, Confidence: 100.00%

### ***Wafer 495 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0002  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:17:35.009703

**Defect Class:** Normal  
**Confidence Score:** 0.9991  
**Defect Percentage:** 38.98%

**Reason:** Defect Percentage: 38.98% (<=40% threshold), Defect Class: Normal, Confidence: 99.91%

### ***Wafer 496 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0002

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:17:35.771813

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 36.69%

**Reason:** Defect Percentage: 36.69% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 497 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0002

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:17:35.955836

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 33.52%

**Reason:** Defect Percentage: 33.52% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 498 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0002

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:17:36.588540

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 38.11%

**Reason:** Defect Percentage: 38.11% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 499 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0002

**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:17:39.264760

**Defect Class:** Near-Full

**Confidence Score:** 0.9381

**Defect Percentage:** 84.72%

**Reason:** Defect Percentage: 84.72% (>40% threshold), Defect Class: Near-Full, Confidence: 93.81%

### ***Wafer 500 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0003

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:17:40.421515

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 30.44%

**Reason:** Defect Percentage: 30.44% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 501 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0003

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:17:40.568856

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 34.89%

**Reason:** Defect Percentage: 34.89% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 502 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0003

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:17:41.053857

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 36.69%

**Reason:** Defect Percentage: 36.69% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 503 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0003

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:17:41.464627

**Defect Class:** Normal

**Confidence Score:** 0.9999  
**Defect Percentage:** 33.69%

**Reason:** Defect Percentage: 33.69% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 504 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0003  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:17:43.531803

**Defect Class:** Random  
**Confidence Score:** 0.9999  
**Defect Percentage:** 0.14%

**Reason:** Defect Percentage: 0.14% (<=40% threshold), Defect Class: Random, Confidence: 99.99%

### ***Wafer 505 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0004  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:17:45.924863

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 33.45%

**Reason:** Defect Percentage: 33.45% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 506 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0004  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:17:46.529911

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 33.33%

**Reason:** Defect Percentage: 33.33% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 507 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0004  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:17:47.415744

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 35.60%

**Reason:** Defect Percentage: 35.6% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 508 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0003  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_02  
**Timestamp:** 2025-12-27T12:17:47.805077

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 39.16%

**Reason:** Defect Percentage: 39.16% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 509 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0004  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:17:47.864212

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 33.33%

**Reason:** Defect Percentage: 33.33% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 510 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0005  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:17:51.945534

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 29.98%

**Reason:** Defect Percentage: 29.98% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 511 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0005

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:17:52.200521

**Defect Class:** Local

**Confidence Score:** 0.9995

**Defect Percentage:** 44.99%

**Reason:** Defect Percentage: 44.99% (>40% threshold), Defect Class: Local, Confidence: 99.95%

### ***Wafer 512 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0004

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:17:53.719580

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 34.23%

**Reason:** Defect Percentage: 34.23% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 513 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0005

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:17:54.247092

**Defect Class:** Normal

**Confidence Score:** 0.9995

**Defect Percentage:** 39.46%

**Reason:** Defect Percentage: 39.46% (<=40% threshold), Defect Class: Normal, Confidence: 99.95%

### ***Wafer 514 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0005

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:17:54.304110

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 30.04%

**Reason:** Defect Percentage: 30.04% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 515 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0006

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:17:57.104817

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 34.71%

**Reason:** Defect Percentage: 34.71% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 516 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0004

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:17:57.746237

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 34.71%

**Reason:** Defect Percentage: 34.71% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 517 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0006

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:17:58.217660

**Defect Class:** Local

**Confidence Score:** 1.0000

**Defect Percentage:** 51.32%

**Reason:** Defect Percentage: 51.32% (>40% threshold), Defect Class: Local, Confidence: 100.00%

### ***Wafer 518 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0006

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:17:59.823142

**Defect Class:** Normal

**Confidence Score:** 0.9996

**Defect Percentage:** 35.18%

**Reason:** Defect Percentage: 35.18% (<=40% threshold), Defect Class: Normal, Confidence: 99.96%

### ***Wafer 519 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0006

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:18:01.661528

**Defect Class:** Scratch

**Confidence Score:** 1.0000

**Defect Percentage:** 44.27%

**Reason:** Defect Percentage: 44.27% (>40% threshold), Defect Class: Scratch, Confidence: 100.00%

### ***Wafer 520 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0005

**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:18:01.852997

**Defect Class:** Center

**Confidence Score:** 0.9999

**Defect Percentage:** 48.77%

**Reason:** Defect Percentage: 48.77% (>40% threshold), Defect Class: Center, Confidence: 99.99%

### ***Wafer 521 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0007

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:18:02.386699

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 36.60%

**Reason:** Defect Percentage: 36.6% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 522 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0007

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:18:03.830777

**Defect Class:** Normal

**Confidence Score:** 0.9998  
**Defect Percentage:** 32.88%

**Reason:** Defect Percentage: 32.88% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 523 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0005  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_02  
**Timestamp:** 2025-12-27T12:18:04.635868

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 31.11%

**Reason:** Defect Percentage: 31.11% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 524 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0007  
**Decision:** FAIL

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:18:06.906444

**Defect Class:** Edge-Loc  
**Confidence Score:** 0.9946  
**Defect Percentage:** 51.50%

**Reason:** Defect Percentage: 51.5% (>40% threshold), Defect Class: Edge-Loc, Confidence: 99.46%

### ***Wafer 525 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0008  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:18:07.435857

**Defect Class:** Normal  
**Confidence Score:** 0.9997  
**Defect Percentage:** 32.51%

**Reason:** Defect Percentage: 32.51% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 526 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0007  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:18:08.055456

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 34.56%

**Reason:** Defect Percentage: 34.56% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 527 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0008

**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:18:08.925434

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 39.60%

**Reason:** Defect Percentage: 39.60% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 528 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0006

**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:18:10.746633

**Defect Class:** Normal  
**Confidence Score:** 0.9997  
**Defect Percentage:** 34.71%

**Reason:** Defect Percentage: 34.71% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 529 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0009

**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:18:12.761947

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 37.45%

**Reason:** Defect Percentage: 37.45% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 530 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0008

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:18:13.619503

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 38.44%

**Reason:** Defect Percentage: 38.44% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 531 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0009

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:18:14.084244

**Defect Class:** Donut

**Confidence Score:** 0.9999

**Defect Percentage:** 55.77%

**Reason:** Defect Percentage: 55.77% (>40% threshold), Defect Class: Donut, Confidence: 99.99%

### ***Wafer 532 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0008

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:18:14.340756

**Defect Class:** Donut

**Confidence Score:** 0.9998

**Defect Percentage:** 63.77%

**Reason:** Defect Percentage: 63.77% (>40% threshold), Defect Class: Donut, Confidence: 99.98%

### ***Wafer 533 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0006

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:18:15.591725

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 34.89%

**Reason:** Defect Percentage: 34.89% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 534 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0010  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:18:18.026491

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 32.51%

**Reason:** Defect Percentage: 32.51% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 535 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0009  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:18:18.955912

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 37.90%

**Reason:** Defect Percentage: 37.9% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 536 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0010  
**Decision:** FAIL

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:18:19.651837

**Defect Class:** Scratch  
**Confidence Score:** 1.0000  
**Defect Percentage:** 44.27%

**Reason:** Defect Percentage: 44.27% (>40% threshold), Defect Class: Scratch, Confidence: 100.00%

### ***Wafer 537 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0009  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:18:21.277339

**Defect Class:** Normal  
**Confidence Score:** 0.9997  
**Defect Percentage:** 35.54%

**Reason:** Defect Percentage: 35.54% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 538 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0007

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:18:22.566301

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 39.60%

**Reason:** Defect Percentage: 39.6% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 539 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0011

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:18:23.817867

**Defect Class:** Normal

**Confidence Score:** 0.9993

**Defect Percentage:** 36.47%

**Reason:** Defect Percentage: 36.47% (<=40% threshold), Defect Class: Normal, Confidence: 99.93%

### ***Wafer 540 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0007

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:18:24.783558

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 34.23%

**Reason:** Defect Percentage: 34.23% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 541 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0011

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:18:25.581131

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 34.89%

**Reason:** Defect Percentage: 34.89% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 542 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0010  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:18:25.907180

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 35.92%

**Reason:** Defect Percentage: 35.92% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 543 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0010  
**Decision:** FAIL

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:18:27.291942

**Defect Class:** Local  
**Confidence Score:** 0.9995  
**Defect Percentage:** 49.07%

**Reason:** Defect Percentage: 49.07% (>40% threshold), Defect Class: Local, Confidence: 99.95%

### ***Wafer 544 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0012  
**Decision:** FAIL

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:18:29.693956

**Defect Class:** Local  
**Confidence Score:** 0.9998  
**Defect Percentage:** 47.63%

**Reason:** Defect Percentage: 47.63% (>40% threshold), Defect Class: Local, Confidence: 99.98%

### ***Wafer 545 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0012  
**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:18:31.613408

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 29.98%

**Reason:** Defect Percentage: 29.98% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 546 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0011  
**Decision:** FAIL

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:18:32.093434

**Defect Class:** Scratch  
**Confidence Score:** 1.0000  
**Defect Percentage:** 43.80%

**Reason:** Defect Percentage: 43.8% (>40% threshold), Defect Class: Scratch, Confidence: 100.00%

### ***Wafer 547 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0008  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_01  
**Timestamp:** 2025-12-27T12:18:34.308513

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 33.56%

**Reason:** Defect Percentage: 33.56% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 548 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0011  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:18:34.639488

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 32.88%

**Reason:** Defect Percentage: 32.88% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 549 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0013

**Decision:** FAIL

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:18:34.764669

**Defect Class:** Scratch

**Confidence Score:** 0.9996

**Defect Percentage:** 45.38%

**Reason:** Defect Percentage: 45.38% (>40% threshold), Defect Class: Scratch, Confidence: 99.96%

### ***Wafer 550 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0008

**Decision:** FAIL

**Machine Type:** Thermal

**Machine ID:** THERM\_02

**Timestamp:** 2025-12-27T12:18:35.536811

**Defect Class:** Random

**Confidence Score:** 0.9999

**Defect Percentage:** 77.80%

**Reason:** Defect Percentage: 77.8% (>40% threshold), Defect Class: Random, Confidence: 99.99%

### ***Wafer 551 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0013

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:18:37.283350

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 34.83%

**Reason:** Defect Percentage: 34.83% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 552 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0012

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:18:39.925429

**Defect Class:** Normal

**Confidence Score:** 0.9993

**Defect Percentage:** 36.47%

**Reason:** Defect Percentage: 36.47% (<=40% threshold), Defect Class: Normal, Confidence: 99.93%

### ***Wafer 553 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0012  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:18:40.539821

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 35.83%

**Reason:** Defect Percentage: 35.83% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 554 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0014  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:18:40.670620

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 31.11%

**Reason:** Defect Percentage: 31.11% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 555 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0014  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:18:42.378792

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 37.49%

**Reason:** Defect Percentage: 37.49% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 556 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0009  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_02  
**Timestamp:** 2025-12-27T12:18:43.402936

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 34.97%

**Reason:** Defect Percentage: 34.97% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 557 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0009

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:18:45.180165

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 34.23%

**Reason:** Defect Percentage: 34.23% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 558 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0013

**Decision:** FAIL

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:18:45.184968

**Defect Class:** Random

**Confidence Score:** 1.0000

**Defect Percentage:** 73.00%

**Reason:** Defect Percentage: 73.0% (>40% threshold), Defect Class: Random, Confidence: 100.00%

### ***Wafer 559 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0015

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_01

**Timestamp:** 2025-12-27T12:18:45.892039

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 37.49%

**Reason:** Defect Percentage: 37.49% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 560 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0013

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:18:47.381897

**Defect Class:** Normal  
**Confidence Score:** 0.9993  
**Defect Percentage:** 36.47%

**Reason:** Defect Percentage: 36.47% (<=40% threshold), Defect Class: Normal, Confidence: 99.93%

### ***Wafer 561 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0015  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:18:48.297915

**Defect Class:** Normal  
**Confidence Score:** 0.9997  
**Defect Percentage:** 29.05%

**Reason:** Defect Percentage: 29.05% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 562 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0010  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_02  
**Timestamp:** 2025-12-27T12:18:50.322752

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 35.92%

**Reason:** Defect Percentage: 35.92% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 563 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0016  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:18:51.575575

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 30.04%

**Reason:** Defect Percentage: 30.04% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 564 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0014

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_01

**Timestamp:** 2025-12-27T12:18:51.726818

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 33.56%

**Reason:** Defect Percentage: 33.56% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 565 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0014

**Decision:** PASS

**Machine Type:** Mechanical

**Machine ID:** MECH\_02

**Timestamp:** 2025-12-27T12:18:53.879653

**Defect Class:** Normal

**Confidence Score:** 0.9997

**Defect Percentage:** 35.54%

**Reason:** Defect Percentage: 35.54% (<=40% threshold), Defect Class: Normal, Confidence: 99.97%

### ***Wafer 566 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0016

**Decision:** PASS

**Machine Type:** Electrical

**Machine ID:** ELEC\_02

**Timestamp:** 2025-12-27T12:18:54.327865

**Defect Class:** Normal

**Confidence Score:** 0.9999

**Defect Percentage:** 32.13%

**Reason:** Defect Percentage: 32.13% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 567 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_01\_W0010

**Decision:** PASS

**Machine Type:** Thermal

**Machine ID:** THERM\_01

**Timestamp:** 2025-12-27T12:18:56.617853

**Defect Class:** Normal

**Confidence Score:** 0.9998

**Defect Percentage:** 34.66%

**Reason:** Defect Percentage: 34.66% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 568 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0015  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:18:57.141944

**Defect Class:** Normal  
**Confidence Score:** 0.9991  
**Defect Percentage:** 38.98%

**Reason:** Defect Percentage: 38.98% (<=40% threshold), Defect Class: Normal, Confidence: 99.91%

### ***Wafer 569 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0017  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:18:57.474252

**Defect Class:** Normal  
**Confidence Score:** 0.9993  
**Defect Percentage:** 36.47%

**Reason:** Defect Percentage: 36.47% (<=40% threshold), Defect Class: Normal, Confidence: 99.93%

### ***Wafer 570 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_02\_W0017  
**Decision:** FAIL

**Machine Type:** Electrical  
**Machine ID:** ELEC\_02  
**Timestamp:** 2025-12-27T12:18:59.796567

**Defect Class:** Donut  
**Confidence Score:** 0.9998  
**Defect Percentage:** 59.32%

**Reason:** Defect Percentage: 59.32% (>40% threshold), Defect Class: Donut, Confidence: 99.98%

### ***Wafer 571 Inspection Decision***

**Wafer ID:** Thermal\_THERM\_02\_W0011  
**Decision:** PASS

**Machine Type:** Thermal  
**Machine ID:** THERM\_02  
**Timestamp:** 2025-12-27T12:19:00.565501

**Defect Class:** Normal  
**Confidence Score:** 0.9976  
**Defect Percentage:** 37.70%

**Reason:** Defect Percentage: 37.7% (<=40% threshold), Defect Class: Normal, Confidence: 99.76%

### ***Wafer 572 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_02\_W0015  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_02  
**Timestamp:** 2025-12-27T12:19:01.465466

**Defect Class:** Normal  
**Confidence Score:** 0.9999  
**Defect Percentage:** 36.60%

**Reason:** Defect Percentage: 36.6% (<=40% threshold), Defect Class: Normal, Confidence: 99.99%

### ***Wafer 573 Inspection Decision***

**Wafer ID:** Mechanical\_MECH\_01\_W0016  
**Decision:** PASS

**Machine Type:** Mechanical  
**Machine ID:** MECH\_01  
**Timestamp:** 2025-12-27T12:19:02.868824

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 32.88%

**Reason:** Defect Percentage: 32.88% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

### ***Wafer 574 Inspection Decision***

**Wafer ID:** Electrical\_ELEC\_01\_W0018  
**Decision:** PASS

**Machine Type:** Electrical  
**Machine ID:** ELEC\_01  
**Timestamp:** 2025-12-27T12:19:03.298638

**Defect Class:** Normal  
**Confidence Score:** 0.9998  
**Defect Percentage:** 34.66%

**Reason:** Defect Percentage: 34.66% (<=40% threshold), Defect Class: Normal, Confidence: 99.98%

## Batch Summary

**Total wafers:** 574  
**PASS:** 401 | **FAIL:** 173  
**PASS rate:** 69.86%

### Top 5 Highest Defect Percentages

- Electrical\_ELEC\_02\_W0018 (Electrical): 98.04% [Near-Full]
- Thermal\_THERM\_01\_W0022 (Thermal): 94.31% [Near-Full]
- Thermal\_THERM\_02\_W0015 (Thermal): 93.20% [Near-Full]
- Electrical\_ELEC\_01\_W0044 (Electrical): 93.20% [Near-Full]
- Thermal\_THERM\_01\_W0022 (Thermal): 92.05% [Near-Full]

### Distribution by Machine Type

- Electrical: 229 wafers
- Mechanical: 197 wafers
- Thermal: 148 wafers

### Distribution by Defect Class

- Normal: 398 wafers
- Donut: 29 wafers
- Random: 27 wafers
- Edge-Ring: 26 wafers
- Local: 24 wafers
- Edge-Loc: 22 wafers
- Scratch: 18 wafers
- Center: 15 wafers
- Near-Full: 15 wafers

## AI-Enhanced Engineering Summary

The batch yield is currently at 69.86%, with a total of 574 wafers processed and 173 failures. The majority of defects are classified as 'Normal,' but a significant number of wafers exhibit 'Near-Full' defects, particularly from Electrical and Thermal machines. The top five worst wafers all show defect percentages above 90%, indicating severe contamination or process issues. This suggests a critical problem in the Electrical and Thermal processing steps that is impacting overall yield.

**Estimated batch yield impact:** High

### Key Risks

- High incidence of Near-Full defects
- Electrical and Thermal machines contributing most to severe defects
- Potential contamination or process drift in critical equipment
- Yield loss due to large number of failing wafers

### Recommended Actions

- Perform immediate root cause analysis on Electrical and Thermal machines

- Inspect and clean equipment to reduce contamination
- Review process parameters and adjust to mitigate defect formation
- Increase monitoring of wafers with Near-Full defect patterns