

2024.12

ASHIN Optics

# COMPANY PROFILE



Ashin Optics (THAILAND) Co., LTD.  
129/4 Moo 5, Tumbon Nongbondaeng, Amphur Banbueng, Chonburi 20170

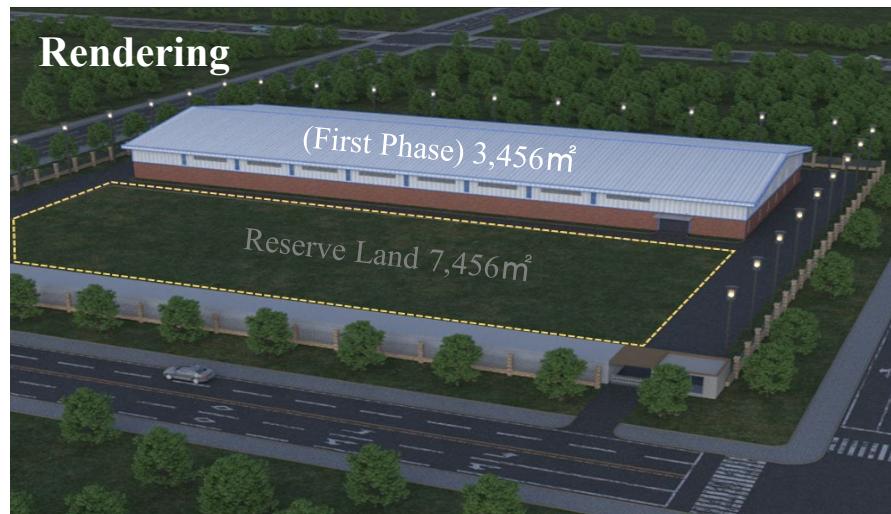


*A Glass lens Provider*

# ► Company Profile



24.12



## Company Name

Ashin Optics (Thailand) Co., Ltd.

## Address

129/4 Moo 5, Tumbon Nongbondaeng, Amphur Banbueng Chonburi 20170

## Representative

President of the Board: Wanzhu Piao

## Establishment

March / 2024

## Investment

1<sup>st</sup> Workshop 8M US\$

## Business Contents

Optical Lens ( Vehicle lenses / Mobile phones / AR / VR / Camera lenses, etc.)

## Workforce

Target number: 160 Current number: 60

## Area

1<sup>st</sup> 3,456m<sup>2</sup>

## Capacity

1<sup>st</sup> 2,000Kpcs/M

# ► Location

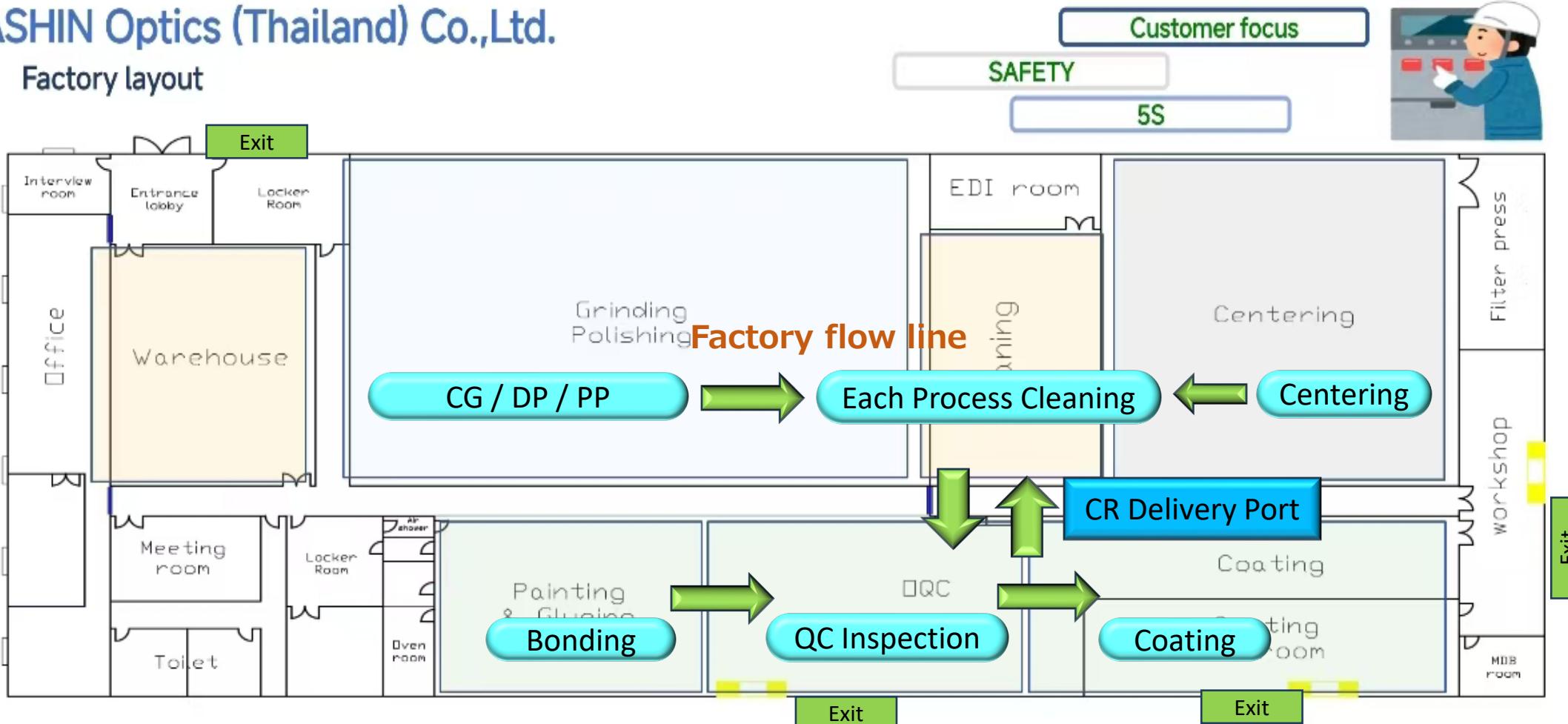


# Ashin Optics (Thailand) Factory Layout Diagram

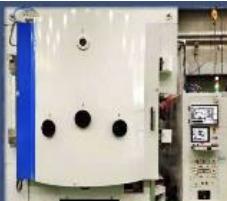
ASHIN Optics

ASHIN Optics (Thailand) Co.,Ltd.

Factory layout



# Ashin Optics (Thailand) List of Main Facilities

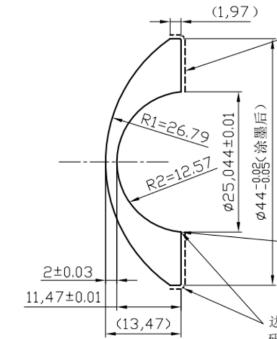
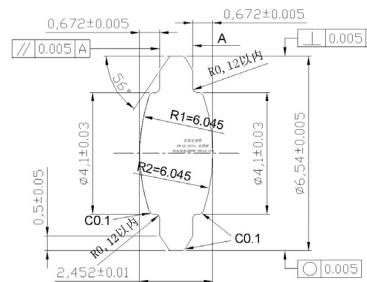
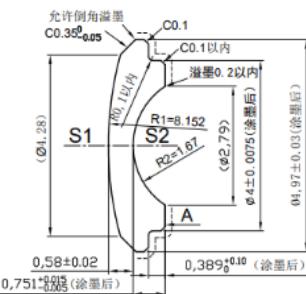
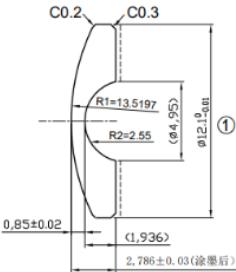
Ashin Optics (Thailand) List of Main Facilities							
<b>Lens surface and side cutting equipment ( lens blanks, polishing, centering )</b>							
Process	Curve Generator		Diamond Polishing & Powder Polishing		Cetering		
Machine	SA-Machine	FA-Machine	SA-Machine	FA-Machine	KJ-100H SA-Machine	TCH-2KS-TL3 FA-Machine	KWANGKJ-2-50B
Qty. (unit)	2	6	25	15	4	20	30
Scope	Φ2.5~Φ80	Φ2.5~Φ40	Φ2.5~Φ80	Φ2.5~Φ40	Φ2.5~Φ80	Φ2.5~Φ40	Φ2.5~Φ40
Photo							
<b>Lens surface and side decoration processing equipment (coating, bonding, painting, cleaning)</b>							
Process	Costing		Bonding	Painting	Cleaning		
Machine	SHINKLON MIC-1900TBN Vacuum Coating Machine	Showa Vacuum SGC-S1700JI Planetary Wheel Coating Machine	Automatic Bonding Machine	Automatic Painting Machine	Semi-automatic Ultrasonic Cleaning Machine		
Qty. (unit)	1	1	1	6	2		
Scope	Φ2~∞ (By jig design)	Φ2~∞ (By jig design)	Φ2.5~Φ40	Φ2.5~Φ40	Φ2~∞ (By jig design)		
Photo							

SA: Semi-automatic  
FA: Full-automatic

Processing Capacity Setting 2025 : 1000Kpcs~2000Kpcs ( Φ 10 ~ Φ 50 )

# Ashin Optics Optical Lens Production Case Study

**ASHIN** Optics



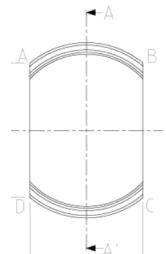
Use	Vehicle
Exterior Diameter	Φ12
Texture	H-ZLaF50B (CDGM)
Feature	R2 surface blacking, spectral demand

Use	VR
Exterior Diameter	Φ4.97
Texture	H-ZLaF50B (CDGM)
Feature	R2 surface sumi coating, small diameter

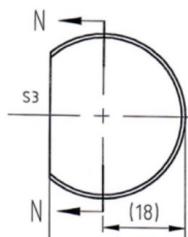
Use	Vehicle Lidar
Exterior Diameter	Φ6.5
Texture	H-ZLaF55D (CDGM)
Feature	Both with stairs

Use	Interchangeable Lenses
Exterior Diameter	Φ44
Texture	TAF3 (HOYA)
Feature	Large curvature (concave hemisphere)

[ I Cut Lenses ]

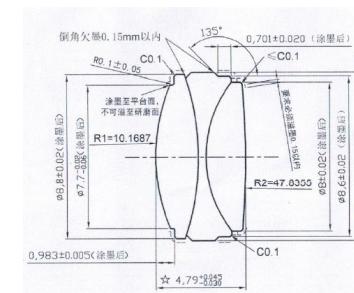


[ D Cut Lenses ]

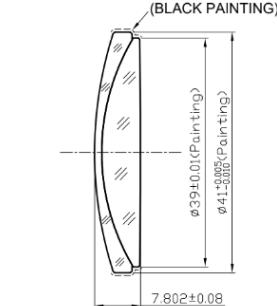


Use	Portable (Mobile Phone)
Exterior Diameter	Φ7.2
Texture	H-FK61 (CDGM)
Feature	I Cut

Use	Vehicle Lidar
Exterior Diameter	Φ30
Texture	H-ZF52 (CDGM)
Feature	D Cut



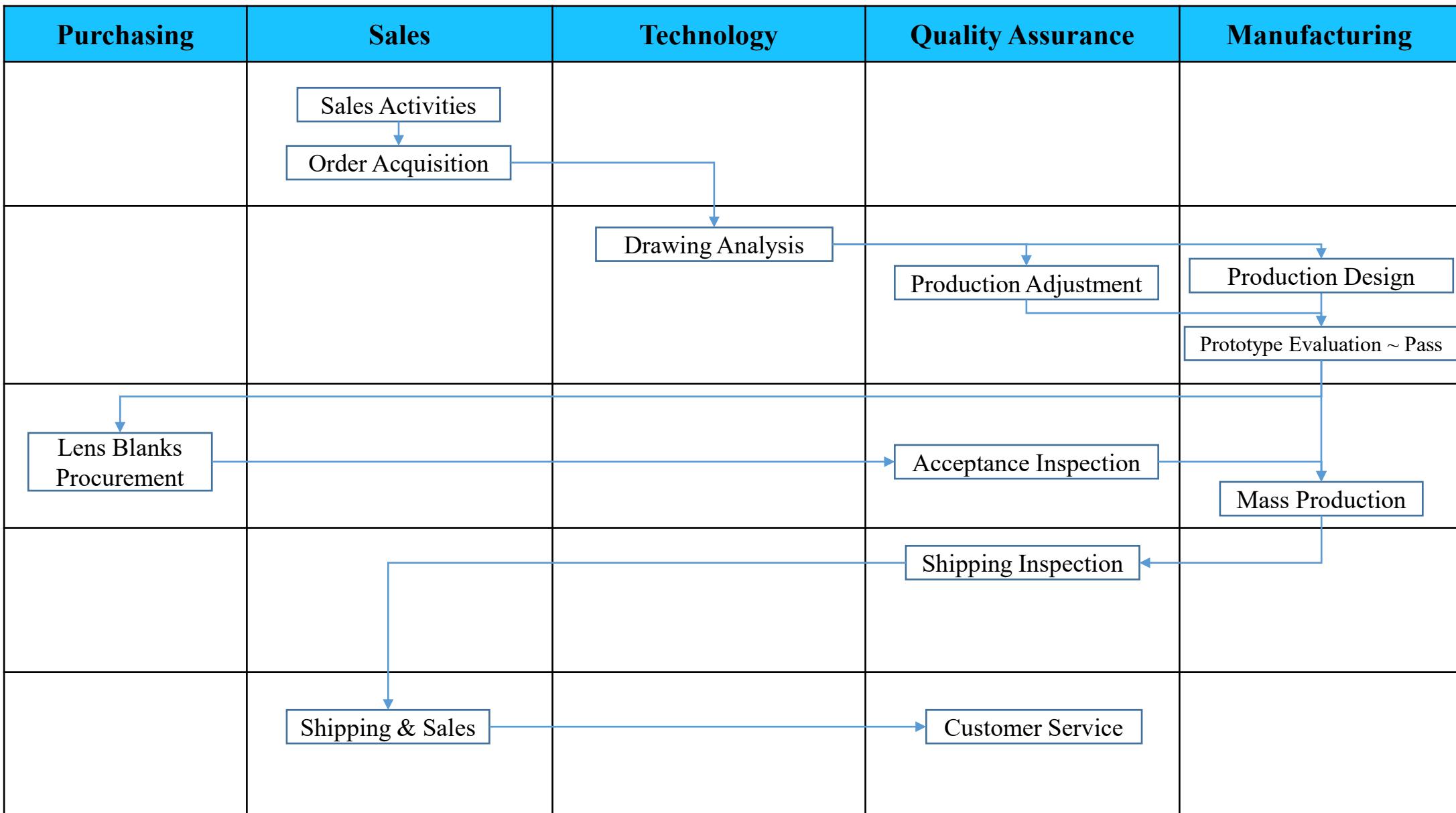
Use	Vehicle
Exterior Diameter	Φ9
Texture	FCD515+(HOYA)
Feature	Triadic bond



Use	Surveillance (CCTV)
Exterior Diameter	Φ39 Φ41
Texture	FCD1+FDS90
Feature	Bond

※ We have abundant production experience in each area with optical glass lenses of Φ50 or less.

# Ashin Optics Quality Assurance System



## ● Machine

Machine Name	Qty. (unit) SA-Machine	Qty. (unit) FA-Machine	Processing range
SJK-CG100C	2	6	Φ3mm~100mm
SJK-CG100R	0	2	Φ3mm~100mm
KJSC-2.0/1.5	17	13	Φ3mm~100mm
SJ-G4	3	0	Φ3mm~100mm
SJ-G6	5	0	Φ3mm~100mm
Plate Corrector	2		
<b>Total</b>	<b>29</b>	<b>21</b>	

〔 Total 50 units 〕

**SJK-CG100R 成盘CG机**  
Recess Curve Generator Machine



**SJK-CG100/100C 手动CG机**  
Curve Generator Machine



## ● Processing capacity

2000Kpcs / month

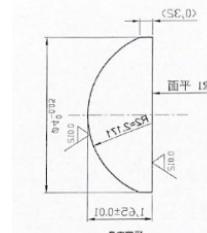
## ● Quality Control

- External Appearance: 100% inspection
- Stripes and Ashes: Sampling inspection
- Center Thickness: 100% inspection

## ● Specialized Lens Shapes



Center thickness: 0.3mm  
Center thin lens



Thickness: 0.3mm  
Lens with thin sides

**KJ-L/KJ-O/06&08&10&12 奥斯卡研磨机**  
Oskar Lapping & Polishing Machine



**KJSC-1.50/4P 球芯研磨机**  
Spherical Center Polishing Machine



**KJSC-2.0/4P 球芯研磨机**  
Spherical Center Polishing Machine



〔 Interferometer for surface accuracy inspection: 2 units 〕

Cleaning→Inspection

Inspection→Cleaning

Cleaning

Inspection→Cleaning

CG ► DP ► PP ► Centering ► Coating ► Painting ► Drying ► QA

(Bonding)

**ASHIN** Optics

## ● Machine

(Total 2 units)

Machine Name	Qty. (unit)
Polishing Use / Centering Use	1
Coating Use / Painting Use	1

## ● Cleaning Process

- Degreaser: 3 layers (exclusively for centering lens)
- Detergent: 3 layers (ordinary detergent + soft glass cleaning tank separation)
- Pure water: 4 tanks
- Drying: centrifugal dehydrator

## ● Daily Management

- Daily Inspection Chart  
(Detergent temperature/PH, ultrasonic intensity, pure water conductivity)
- Sub-materials replacement record  
(Detergent/filler replacement history)



## ● Ultrasonic Cleaning Machine

CG ► DP ► PP ► **Centering** ► Coating ► Painting ► Drying ► QA  
 (Bonding)

## ● Machine

[Total 54 units]

Machine Name	COO.	Qty. (unit)	Processing Scope
Tatano—TCH-2KS-TL3 Automatic Centering Machine	Japan	20	Φ2mm～50mm
Kwangjin KJ 2-50B Automatic Centering Machine	Korea	30	Φ2mm～40mm
Kwangjin KJ—100H Manual Machine	Korea	4	Φ10mm～100mm

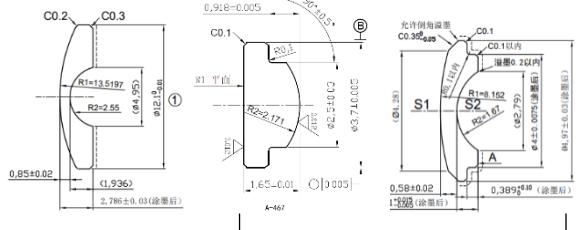
## ● Processing Capacity

2000Kpcs / month

## ● Quality Control

- External diameter / Surface centering / Decentering / H Dimensions: 3pcs / 2h
- Edge crack / Notch / Fixture damage visual inspection: 3pcs / 2h

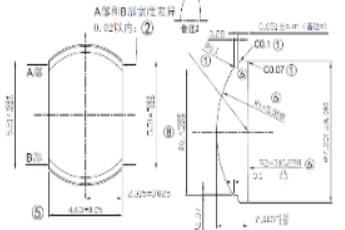
## ● Specialized Lens Shapes



[ cap-shaped ]



[ stepped ]



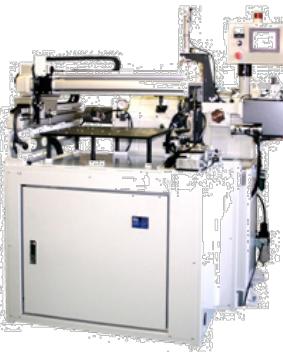
[ biconvex ]



[ D Cut I Cut ]

## ● Tatano Automatic Centering Machine

• TCH – 2 KS – TL3



[20 units]



[30 units]



## ● Kwangjin Centering Machine

• KJ -2-50B (Automatic)

CG ► DP ► PP ► Centering ► **Coating** ► Painting ► Drying ► QA

(Bonding)

## ● Machine

〔Total 2 units〕

Machine Name	POO.	Qty. (unit)
SHINKLON—MIC-1900TBN Vacuum Coating Machine	Japan	1
Showa Vacuum—SGC-S1700JI Planetary Wheel Coating Machine	Japan	1

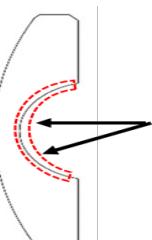
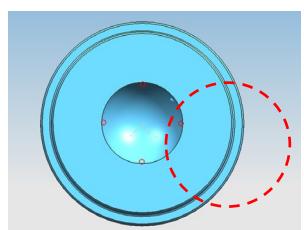
## ● Processing Capacity

1,000Kpcs ~ 2000Kpcs / month

(Capacity may vary depending on the size of the lens)

## ● Coating Types

AR / AF / IR / ...



### Planetary Wheel Coating Features

Reduction of reflectivity difference between center and edge of concave surface.

Reduction of film thickness difference between periphery and edge, film color homogenization

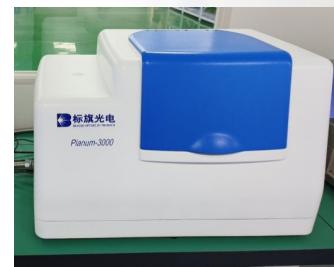
### Showa Vacuum—SGC-S1700JI Planetary Coating Machine (1 unit)



### SHINKLON—MIC-1900TBN Vacuum Coating Machine (1 unit)



## ● Inspection Equipment



● Spectral Optical Characteristics  
Machine ( P/S Measurement ): 1 set



● Shibuya MSP-100B Spectrometer  
For spectrophotometric measurement of  
360nm~800nm: 1 unit



● SDC-100 Water Angle Detector 1 set

※ Spectral measurement quantity: 3pcs/dome (one each for the top, middle, and bottom of the soma)

CG ► DP ► PP ► Centering ► Coating ► Bonding / Painting ► Drying ► QA ASHIN

## ● Machine

(Total 13 units)

Machine Name	POO.	Qty. (unit)
Automatic Painting Machine	China	6
Semi-automatic Bonding Machine	China	2
Automatic Bonding Machine	China	1
Bonded Benzene Hardening Furnace	China	2
Paint Drying Furnace	China	2

## ● Processing Capacity

Bonding Capacity : 500Kpcs / month

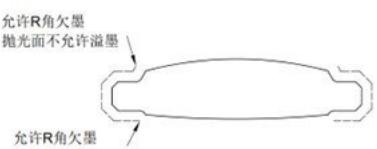
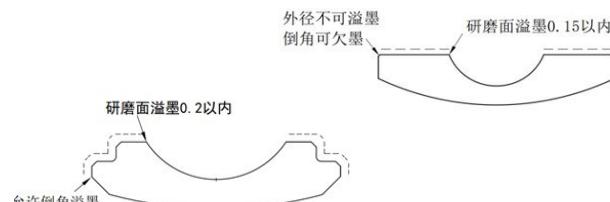
Painting Capacity : 1000Kpcs / month



## ● Quality Control

- Appearance sampling inspection of the lens surface during painting (amount of ink overspray / spots, etc.)
- Dimension sampling inspection ( external diameter / decentration / thickness ) of the lens surface after drying
- Paint strength inspection: Nichiban sellotape test

## ● Specialized Lens Shapes



## ● Bonded Benzene Hardening Furnace



## ● Paint Drying Furnace



## ● Automatic Painting Machine



## ● Automatic Bonding Machine



## ● Inspection Equipment (1<sup>st</sup> Part)

Machine Name	Qty. (unit)
Interferometer	2
Reflective Eccentricity Measuring Machine	1
Transmission Decentering Microscope	2
Spectral Optical Characteristics Machine ( P/S Measurement )	1
Microscope for Appearance Inspection	5
Micrometer	12
Center Thickness Measurement	1
Water Repellent Angle Measuring Instruments	1
High Temperature and High Humidity Tester	1
Salt Spray Tester	1

## ● Quality Control

- Appearance inspection
- Polished surface film color/scratches/spots/burns, etc., painting defects, centering burrs, flash, etc.
- Dimensional accuracy: removal inspection (10%~30%)
- External diameter/ Decentration/ Center thickness/ Film strength/ Paint strength

### [ For Reliability Tests ]

● High temperature and high humidity tester



● Salt Spray Tester



● Membrane Hardness Test Pen



● Transmission Decentering Microscope



● Micrometer



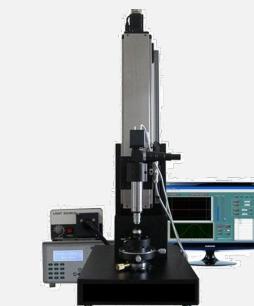
● Microscope



● SDC-100 Water Repellent Angle Measuring Instruments



● Reflective Eccentricity Measuring Machine



● Spectral Optical Characteristics Machine ( P/S Measurement )



# Ashin Optics (Thailand) Factory Construction Schedule

**ASHIN** Optics

Address : 129/4 Moo 5, Tumbon Nongbondaeng, Amphur Banbueng, Chonburi, Thailand 20170

Dec. 2024

New Factory Start-up Schedule																
NO.	Construction Overview	Responsible Person	Planned Schedule	Status of Progress	Feb.	Mar.	Apr.	May.	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Jan./25
1	Factory Registration	PIAO President	23/2/2024	100%	→End											
2	Land purchase, building procedures, etc.	PIAO President	30/3/2024	100%	→	→End										
3	Construction of factory building, etc.	PIAO President	4/24~7/24	100%			→	→	→	→End						
4	BOI application and acquisition	YONG GM	7/24~21/8/24	100%							→End					
5	Application for and acquisition of industrial license	YONG GM	7/24~14/8/24	100%							→End					
6	Interior construction	FU Engineer	18/7/24~10/10/24	100%								→End				
7	Equipment delivery and installation	FU Engineer	20/9/24~20/12/24	80%								→End		→On Process		
8	Phased personnel recruitment	YONG GM	8/24~12/24	50%							→End			→On Process		
9	Thai OPs to train at Chinese factory, practice technical skills, etc.	KENG GM	30/8/24~21/9/24	100%							→End					
10	Optical engineers: 30 expected to arrive	PIAO President	8/11/2024	100%									→End			
11	Start-up trial run	KENG GM	15/11/24~20/12/24	80%										→On Process		
12	Start of mass production	KENG GM	12/24~1/25	0%											→Plan	
13	ISO9001 certificate to be acquired, Thai OPs training	KENG GM	11/24~3/25	20%									→End	→On Process		
14	IATF 16949 certificate to be acquired	KENG GM	12/24~12/25	10%										→On Process		

## Visual Management

- 1) Promotion of visualization management in each process. (Identification of products, visualization of equipment operation, visualization of standardization, visualization of abnormalities, etc.)
- 2) Processing conditions, work standards, and inspection standards are prepared by each process section.

## Productivity Management

- 1) Operation target-setting management: developing skills of skilled workers and fostering the skills of new workers.
- 2) L/T, delivery management, elimination of wasteful work, and training development.

## Quality Management

- 1) QC Inspector Inspection Competence Certification Deployment : Customer-specific inspection standard learning and in-kind inspection test certification.
- 2) Development of standardization of quality control in processing and QC monitoring system.

## Safety 5S Management

- 1) TPM inspection, monthly/yearly scheduled maintenance, and early prevention of facility accidents.
- 2) 5S daily routine management, promotion and visualization management, and deployment of on-site standardization and exhaustive management.

**Thank you for your attention.**



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