Sr.No.	Stage	Check point	Quantum of Check Sample Size | Frequency	Shift Acceptance Criteria	Monitoring Result	Remarks,If any
1	Shop Floor	Temperature	once per shift	Temp. ≤53°C	Time: 08:00 AM - 25.82°C	Within Limit
		Humidity	once per shift	RH ≤60%	Time: 08:00 AM - 57% RH	OK
2	Glass Loader	Glass dimension(L*W*T)	once per shift	As Per PO	2375.31mm x 1128.73mm x 1.98mm	—
		Appearance(Visual)	once per shift	Glass Broken, Crack, Scratches and Line mark not allowed	No Defects Found	OK
3	EVA/EPE Cutting	EVA/EPE Type	once per shift	As per approved BOM	EPE304	As per BOM
		EVA/EPE dimension(L*W*T)	once per shift	As per Specification	2377.96mm x 1124.27mm x 0.72mm	OK
		EVA/EPE Status	once per shift	Not allowed dust & foreign particle/Cut & non Uniform Embossing /Mfg Date	Clean Surface	—
4	Eva/EPE Soldering at edge(If Applicable)	Soldering Temperature and Quality of Soldering	Once per shift	As per specification and Should be properly soldered (400 ± 20°C)	Time: 08:15 AM - Temp: 385.3°C	Within Limit
5	Cell Loading	Cell Manufacturer & Eff.	once per shift	Refer Process Card	Solar Space	Pass
		Cell Size(*W)	once per shift	Refer Process Card	182.6mm x 105.04mm	Pass
		Cell Condition	once per shift	Free From dust,finger spot,color variation	No Damage/Cracks	OK
		Cleanliness of Cell Loading Area	once per shift	No unwanted or waste material should be at Cell Loading Area	Clean Surface	OK
		Verification of Process Parameter	once per shift	ATW Stringer Specification	No Shift	—
		Cell Cross cutting	once per shift	Both side cutting should be equal.	-0.03mm	Pass
		Verification of Process Parameter	once Month	ATW Stringer Specification	Auto Bussing	Good

6	Tabber & stringer	Visual Check after Stringing	once 1 String/T5 shift	TS Visual Criteria	TS01A: OIC TS01B: OIC TS02A: OIC TS02B: OIC TS03A: OIC TS03B: OIC TS04A: OIC TS04B: OIC	No defects
		EL Image of Strings	once 1 String/T5 shift	TS EL Criteria	TS01A: OIC TS01B: OIC TS02A: OIC TS02B: OIC TS03A: OIC TS03B: OIC	OK
		String length	once 1 String/Stringer/ shift	Refer Process Card	TS01A: 1162.3mm TS01B: 1163.2mm TS02A: 1163.4mm TS02B: 1163.8mm TS03A: 1162.7mm TS03B: 1162.7mm TS04A: 1163.2mm	Within tolerance
		Cell to Cell Gap	once 1 String/Stringer/ shift	Refer Process Card	TS01A: OIC TS01B: OIC TS02A: OIC TS02B: OIC TS03A: OIC TS03B: OIC	No defects
		Verification of Soldering Peel Strength	2 cell each stringer Front & Back. per shift	Peel Strength ≥1N	TS01A: OIC TS01B: OIC TS02A: OIC TS02B: OIC TS03A: OIC TS03B: OIC	Clear
		String to String Gap	once per shift		As per spec	—
		Cell edge to Glass edge distance (Top,bottom & sides)	once per shift	Refer Process Card & Module Drawing	TS01A: OIC TS01B: OIC TS02A: OIC TS02B: OIC TS03A: OIC TS03B: OIC	No defects
		Soldering Peel Strength b/w Ribbon to busbar interconnector	once per shift	≥2N	TS01A: OIC TS01B: OIC TS02A: OIC TS02B: OIC TS03A: OIC TS03B: OIC	OK

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Sr.No.	Stage	Check point	Quantum of Check Sample Size | Frequency	Shift Acceptance Criteria	Monitoring Result	Remarks,If any
7	Auto bussing , layup & Tapping	Terminal busbar to edge of Cell	once per shift	132 Cell module drawing, Refer Module Drawing- GSPL/N144/G/001	Refer Module Drawing	OK
		Soldering Quality of Ribbon to busbar	Every 4h per shift	No Dry/Poor Soldering	Busbar Peel: 22.09N	—
		Top & Bottom Creepage Distance/Terminal busbar to Glass Edge.	Every 4h per shift	Creepage distance should be as per process card/Drawing	Top: 12.15mm | Bottom: 12.34mm	OK
		Verification of Process Parameter	once per shift	Specification for Auto Bussing	No Shift	OK
		Quality of auto taping	Every 4h per shift	Taping should be proper,no Cell Shifting allowed	Proper	Good
8	Auto RFID Logo/Barcode placing (If Applicable)	Position verification of RFIDs Logo /Barcode placing	Every 4h per shift	Should not be tilt	Tilt: -0.06mm	Pass
9	EVA/EPE cutting	EVA/EPE Type	once per shift	EVA	EVA PLASTOMER	As per BOM
		EVA/EPE dimension(L*W*T)	once per shift	As per Specification	2378.52mm x 1124.44mm x 0.72mm	Within tolerance
		EVA/EPE Status	once per shift	Not allowed dust & foreign particle/Cut & non Uniform Embossing /Mfg Date	Uniform Embossing	OK
10	Back Glass Loader	Glass dimension(L*W*T)	once Per shift	As per PO	2376.33mm x 1128.3mm x 2.0mm	Within tolerance
11	Auto Busbar Flatten (If Applicable)	No. of Holes/ Holes dimension	once Per shift	3 hole with dimension 12mm ± 0.5mm	As per spec	As per spec
		Visual Inspection	5 pieces per shift	No crack/ breaks in busbar & properly flattened without bending and twisting	S.No: 3198 S.No: 3201 S.No: 3215 S.No: 3217 S.No: 3246	Good

| 12 | Pre lamination EL & Visual Inspection | EL Inspection and Visual Inspection | 5 pieces per shift | Pre EL Inspection Criteria, Pre EL Visual Criteria | S.No: 3221
S.No: 3233
S.No: 3236
S.No: 3242
S.No: 3269 | OK |

Sr.No.	Stage	Check point	Quantum of Check Sample Size | Frequency	Shift Acceptance Criteria	Monitoring Result	Remarks,If any
13	String Rework Station	cleaning of rework station/Soldering iron and sponge	once per shift	Rework Station should be Clean/Sponge should be Wet	CLEAN - No EVA Residue	Good
		Soldering Iron Temp.	once per shift	400±30°C	Time: 08:00 - Temp: 24.15°C	—
14	Module Rework Station	Method of Rework	once per shift	As per WI (GSPL/P/WI/012)	As per spec	Acceptable
		Cleaning of Rework station/Soldering iron sponge	once per shift	Rework Station should be Clean/Sponge should be Wet	No Residue - CLEAN	Clean
		Soldering Iron Temp.	once per shift	400±30°C	Time: 08:00 - Temp: 22.81°C	—
15	Laminator	Monitoring of Laminator Process parameter	once per shift	Process Parameter of jinchen Laminator	As per spec	Acceptable
		Cleaning of Diaphragm/release sheet	once 24h	Diaphragm/Release sheet should be clean,No EVA residue is allowed	No Residue - CLEAN	Pass
16	Auto Tape Removing (If Applicable)	Peel of Test b/w: EVA/Backsheet EVA/EPE/POE to Glass	All position All laminators to be covered in a month	E/G ≥60N/cm E /Bs≥60N/cm	As per spec	Clear
		Gel Content Test		75to 95%	As per spec	OK
		Visual Check after Lamination	5 pieces per shift	Check Tape Removing Should be smooth and No visual bubble Should be found.	S.No: 3183 S.No: 3201 S.No: 3233 S.No: 3257 S.No: 3268	Pass
17	Auto Edge Trimming	Trimming Quality	5 pieces per shift	Excess layer from the glass edge should be removed,Uneven Trimming not allowed	Even Trim: 0.71mm deviation	Good
		Trimming Blade life cycle	once per month	Worn out not allowed	Even Trim: -0.16mm deviation	Good

| 18 | 90° Visual Inspection | Visual Inspection | 5 pieces per shift | Post Lam Visual Inspection Criteria | S.No: 3180
S.No: 3182
S.No: 3184
S.No: 3227
S.No: 3264 | Good |

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Sr.No.	Stage	Check point	Quantum of Check Sample Size | Frequency	Shift Acceptance Criteria	Monitoring Result	Remarks,If any
19	Framing	Glue uniformity & continuity in frame groove	1 set per shift	Should be uniform,Back sealing should be proper	As per spec	Pass
		Short Side Glue Weight	once Per shift	Till as per Specification	Potting Weight: 25.89g	Acceptable
		Long Side Glue Weight	once Per shift		Potting Weight: 20.91g	Good
		Anodizing Thickness	once Per shift	≥15 micron	As per spec	Pass
20	Junction Box Assembly	Junction Box(Connector Appearance & Cable Length)	once Per shift	As per Process Card & module drawing	JB Position: -0.36mm shift	As per spec
		Silicon Glue Weight on the bottom (g)	once Per shift	21±6 gm	Potting Weight: 25.94g	OK
		Max Welding time	once Per shift	As per Specification	As per spec	OK
21	Auto JB Soldering	Soldering current	once per shift	As per Specification	As per spec	—
		Soldering Quality	once per shift	Welding area should be fully covered & checked by twizzer,no yellowing allowed	As per spec	—
22	JB Potting	A/B Glue Ratio	once Per shift	As per Specification	As per spec	Good
		Potting material weight	once Per shift	21±6 gm	EPE304	Verified
		Nozzle Changing	once every 6h	Should be changed after 6 hours or when found issue of damage or extra amount dispensing.	As per spec	Good
23	OLE Potting Inspection (If Applicable)	Visual Check	once 5 piece	Potting should be properly filled, and mounting hole should be as per drawing.	As per spec	Pass

24	Curing	Temperature	once per shift	25±3■	Time: 08:00 - Temp: 27.17°C	Controlled
		Humidity	once per shift	≤50%	Time: 08:00 - RH: 41%	Within Limit
		Curing Time(H)	once Per shift	≥4 hours	As per spec	Acceptable

GAUTAM

SOLAR

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Sr.No.	Stage	Check point	Quantum of Check Sample Size | Frequency	Shift Acceptance Criteria	Monitoring Result	Remarks,If any
25	Buffing	Corner Edge-Buffing belt condition	5 pieces per shift	Should not be sharp & No worn out	FF: 78.87%	Pass
26	Cleaning	Module should be free from Tape,Dust,Dirt,EVA/Backs heet residue,Corner Burrs,Glue residue on glass,backsheet,JB,Wire etc.)	5 pieces per shift	Post Lam Visual Criteria	S.No: 3180 S.No: 3208 S.No: 3227 S.No: 3239 S.No: 3263	OK
27	Flash Tester	Ambient Temp.	once per shift	25±3■	Time: 08:00 - Temp: 24.09°C	OK
		Module Temp.	once per shift	25±3■	Time: 08:00 - Temp: 24.84°C	Acceptable
		Isc/simulator Calibration	once 12h	Isc/simulation should be calibrated at the start of the shift with Golden/Silver module(GSEN/QA/K/11)	Isc: 13.22A	Pass
		Validation	once every 4h	As per GSEN/QA/K/11	As per spec	Good
		Silver Reference Module Iv Check	once Two weeks	Should be same as original I-v picture	As per spec	OK
28	Hipot Test	DCW/IR/Ground continuity	5 pieces per shift	≤50µA , >40MΩ·m² , (0-100) mΩ	S.No: 3188 S.No: 3190 S.No: 3223 S.No: 3231 S.No: 3267	Acceptable
29	Post EL Test	Verification of current configuration in DC power supply	once Shift	As per WI (GSPL/P/WI/027)	Pmax: 626.98W	Within spec
		EL Inspection and Visual Inspection	5 pieces per shift	Post EL Inspection Criteria, Post EL Visual Criteria	S.No: 3205 S.No: 3217 S.No: 3218 S.No: 3224 S.No: 3242	Good

| 30 | RFID | RFID Position | once per shift | As per Process card | Tilt: -0.35mm | Pass |
| | | Cell & Module Make & Manufacturing Month Verification | once per shift | As per BOM and Process card | As per spec | OK |

Sr.No.	Stage	Check point	Quantum of Check Sample Size | Frequency	Shift Acceptance Criteria	Monitoring Result	Remarks,If any
31	Final Visual Inspection	Visual Inspection	5 pieces per shift	Post lam visual inspection criteria	S.No: 3185 S.No: 3189 S.No: 3207 S.No: 3209 S.No: 3235	Clear
		Re-label	5 pieces per shift	No bubble,Tilt,Align,no folded label not acceptable	Tilt: 0.16mm	Clear
32	Dimension measurement	L*W and Module Profile	once per shift	As per Module drawing (±1mm)	Refer Module Drawing	—
		Mounting Hole X & Y (H/L)	once Per shift		As per spec	—
		Diagonal Difference	once Per shift	≤3mm	FF: 77.83%	—
		Corner Gap	once Per shift	As per visual inspection criteria	As per spec	Acceptable
		JB Cable length	once Per shift	As per Process Card	Cable: 1185.43mm	Match PO
33	Packaging	Packaging Label	once Per shift	WI For Packaging	Tilt: -0.39mm	OK
		Content in Box	once Per shift		As per spec	Pass
		Box Condition	once Per shift	Damage,dull printing,wet boxes not allowed	As per spec	—
		Wooden Pallet dimension	once Per shift	should not be less than module dimension	As per spec	As per spec