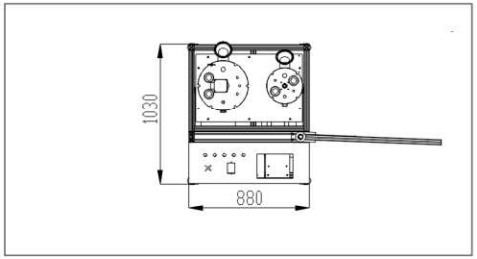
Glue Potting Machine for J-Box

Key Parameters

Quantity	1
Function	Automatically pour glue into the junction box to seal the junction box
AB glue proportion adjustment range	2:1 ~ 10 : 1
Mixing accuracy	±3%
Repeatability	±2%
Dynamic mixing or static mixing	static mixing
Measurement method	Gear pump, rotary pump metering
Glueing method	Quantitative glueing / continuous glueing
Humidity requirements	5-70%
Uptime	99.9%
Dimension	L1100mm*W900mm*H1250mm，总高1900mm
Rated power	1.5kW
Air consumption	10L/min
Weight	200kg

Equipment Picture



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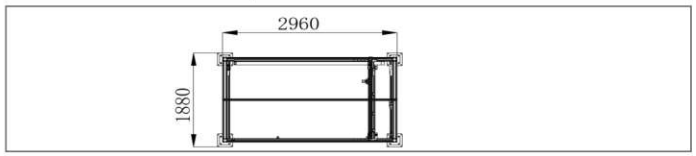
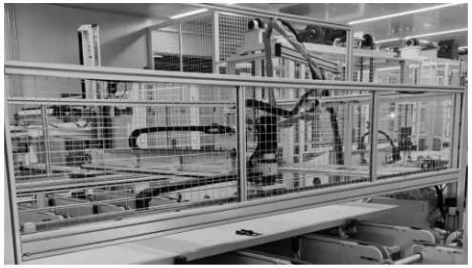
Glue Potting Manipulator

Key Parameters

Quantity	1
Function	Realize automatic mobile glue potting
Cycle	23±1s/module
Manipulartor operating	X2500mm * Y1400mm * Z 75 mm
Repeatability	±0.02mm
Motion platform	servo belt structure
Programmatically	handheld programmer
X/Y axis speed of the manipulator system	10-600mm/s
Uptime	99.9%
Dimension	L31000mm*W1900mm*H2000 mm
Rated power	1.2kW
Air consumption	8L/min
Weight	350kg



Equipment Picture



Equipment Overview

- The operating parameters of the manipulator motion system can be displayed, recorded and saved.
- Different trajectories can be edited, which can be used for points, straight lines, arcs and any irregular shapes of motion work.
- It has the functions of shifting speed and high-speed trajectory smoothing in motion, and custom-defined corner acceleration and deceleration processing.

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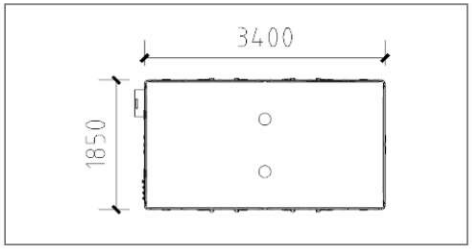
Auto J-box Soldering Machine

Key Parameters

Quantity	**1**
Function	Automatic soldering junction box
Cycle	23±1s/Module
Component dimension	L (2500-1640) mm ， W (1400-950) mm
Application scope of modules	**Typography:** 50, 60, 66, 72, 78 cell modules **Type of junction box:** conventional, three piece junction box at the head, middle and tail of the module, **Cell Grid line:** 5BB-12BB
Applicable specifications of junction box	Conventional, anti virtual welding box, second generation junction box(expandable to custom specifications)
Weld scar size	The effective welding area is more than 80%
Welding method	Automatic hot bar soldering
Solder joint positioning method	Mechanical alignment + machine vision feature point positioning, accuracy ± 0.5mm (repeated deviation of welding point)
Inspection after welding	Visual inspection after welding: Welding spot shape + Welding spot area Visual inspection such as welding height should be added to the welding technology of amorphous tin Automatic identification and alarm of defective products
Missed detection rate	≤0.01%
Uptime	99%
Dimension	L3400mm*W1850mm*H2100mm
Rated power	60/20 kW
Air consumption	400L/min
Weight	2000kg

Equipment Picture



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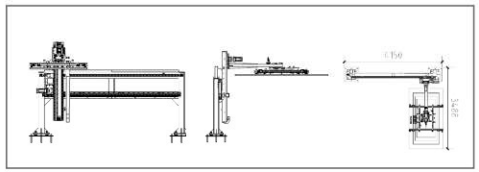
Curing Manipulator

Key Parameters

Quantity	2
Function	Before and after curing,complete fetching and placing of PV module
Cycle	24s(within stroke of 3000)
Component dimension	L (2500-1640) mm ， W (1400-950) mm
Lifting range	0-1400mm (customizable)
Longitudinal range	0-3000mm (customizable)
Yield	≥99.9%
Uptime	98%
Dimension	L3700mm*W2600mm*H(Max)2750mm
Rated power	5kW
Air consumption	50L/min
Weight	1300kg

Equipment Picture



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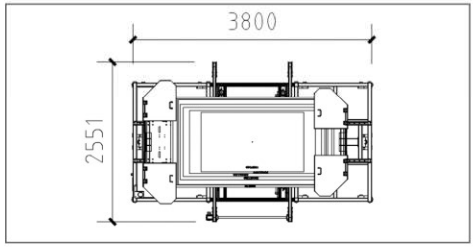
Auto Filing Machine

Key Parameters

Quantity	1
Function	Realize automatic chamfering on the four sides of the modules
Cycle	24s/module (including feeding and discharging time)
Component dimension	L (2500-1640) mm ， W (1400-950) mm
Feeding and grinding mode	Long side of component (horizontal) is delivered to the assembly line and corrected by correction mechanism, and the motor drives the abrasive belt to grind corners
Quality requirements for grinded corner	Quality requirements for grinded corner Grinded corner should be smooth and free from residue and should not scratch component frame
Dust control requirements	Dust can neither contaminate component surface nor block and damage mobile parts of the assembly line
Yield	≥99.9%
Uptime	98%
Dimension	L3800mm*W2550mm*H(Max)1750mm
Rated power	5kW
Air consumption	50L/min
Weight	800KG

Equipment Picture



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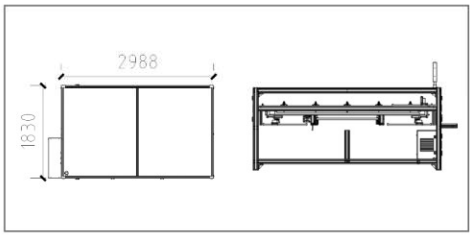
Hi-Pot testing Unit

Key Parameters

Quantity	**1**
Function	Auto-complete the PV module Hi-pot test
Cycle	23±1s (Two units)
Component dimension	L (2500-1640) mm ， W (1400-950) mm
Module transportation direction	Long side in, long side out
Conveyor height	950±40mm
Yield	≥99.9%
Production data management	Data can be saved and searched by bar code
Uptime	≥98%
Dimension	L3230mm*W1830mm*H1400mm
Air consumption	5L/min
Rated power	3kW
Weight	1000kg

Equipment Picture



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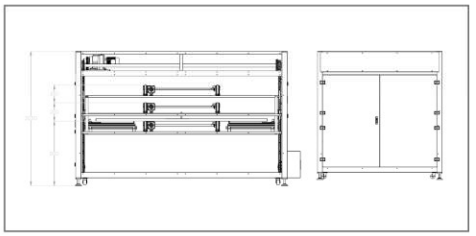
Auto Calibration Machine

Key Parameters

Quantity	1
Function	Realize the function of comparing production line modules with standard modules
Cycle	28s
Component dimension	L (2500-1640) mm, W (1400-950) mm
Module transportation direction	Long side in, Long side out
Conveyor height	980±30mm
Yield	≥99.9%
Uptime	≥98%
Dimension	L3320mm*W1970mm*H2050mm
Air consumption	50L/min
Rated power	3kW
Weight	1600kg

Equipment Picture



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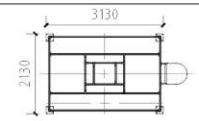
IV Tester

Key Parameters

Quantity	**1**
Function	Automatically complete the PV module power test
Irradiance range	700-1200W/㎡
Spectral range	300nm~1200nm （Grade A+）
Long-term irradiance instability	<1%（Grade A+）
pectral matching degree	0.875~1.125（Grade A+）
Irradiance nonuniformity	<1%（Grade A+）
Repeatability precision	The same solar cell module is tested for 50 times continuously: ≤0.15% Under the STC condition, the same solar cell module is tested for 1000 times continuously: < 0.3%
Incidence Angle	Direct light ≤15°
Range of gear	Voltage 5V ~ 30V ~ 60V ~ 150V Current 3A ~ 6A ~ 12A ~ 20A (selected by the software)
Measurement error	Voltage ≤0.2% Current ≤0.2%
Test resolution:	Voltage: 0.003%, Current: 0.003%
Uptime	99.8%
Dimension	Test darkroom: 3085mm*2580mm*5500mm Equipment size: 800mm*750mm*1700mm
Rated power	3kW
Weight	2840kg



Equipment Picture

Equipment Overview

- Measurable parameters: I-V curve, P-V curve, irradiance line, short circuit current, open circuit voltage, peak power, voltage and current at the peak power point, current at the constant voltage point, filling factor, conversion efficiency, series resistance, parallel resistance, etc.
- The test is fast, the single test takes less than 1 second, the 10ms pulse width test interval is less than 5 seconds, and the 100ms pulse width test interval is less than 20 seconds.
- The longer pulse width selection can be compatible with the tests, such as the conventional solar cell modules, single-crystal PERC, N-type, TopCon, HIT, HJT, IBC and other efficient solar cell modules.

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EL Tester

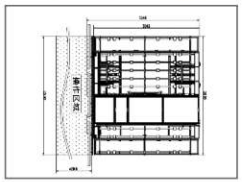
Key Parameters

Quantity	1
Function	Automatic inspection of modules such as virtual soldering, cracking, partial soldering, etc.
Cycle	23±1s/moudle
Cell Type	156-210mm，5BB\6BB\MBB 156-210mm，5BB\6BB\MBB Half cell ：6*20/6*24/6*26（156-166mm/18Xmm） 1/3 cell：5*30(210mm)
Maximum dimensions of module	L（2500-1640）mm， W（1400-950）mm
Camera resolution	4M*4*3
Shooting mode	Downlighting, direct lighting, three-group scanning type(equal to 12 camera shooting)
Module transfer	Long side forward(transverse transmission)
Uptime	99%
Dimension	L3240mm*W2950mm*H950mm
Rated power	4kW
Air consumption	12L/min
Weight	770kg

Equipment Picture

Equipment Overview

- The display system adopts AD accelerator card, fast imaging, multi-camera (4*3) to overcome the difference in depth of field and meet the layout of short-side single junction box, three-part junction box and middle three-part junction box
- Support AI-assisted defect determination, can mark cracks, fragments, virtual soldering, black spots, scratches, detection rate ≥ 95%
- The modules transmission method adopts dense roller plane transmission, and multi-point bearing modules are not deformed.



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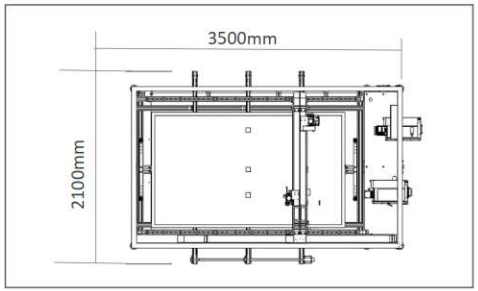
Auto Labeling Machine

Key Parameters

Quantity	**1**
Function	Automatically complete the PV module labeling
Cycle	23±1s/module
Component dimension	L (2500-1640) mm ， W (1400-950) mm
Application scope of modules	P60, p72, large wafer assembly Conventional, double glass, half piece, split junction box components 4BB, 5bb, 6bB, MBB
Label type	Conventional online printing of name plate + barcode Name plate + barcode
Labeling combination	Name plate + barcode
Repeat position accuracy	±1mm
Surface requirements	Label: no missing, no defect, no bubble Printer: clear printing, no broken needle, flat surface, no fold, defect rate ≤ 0.2
Label size	The conventional square name plate is (100～120) mm in length and (50～150) mm in width The length of double glass strip name plate is (110～170) mm and the width is (20～30) mm The bar code range is (50～70) mm in length and (8～20) mm in width
Uptime	99.5%
Dimension	L3600mm x W2100mm x H1800mm
Rated power	3.5kW
Air consumption	100L/min
Weight	1500kg

Equipment Picture



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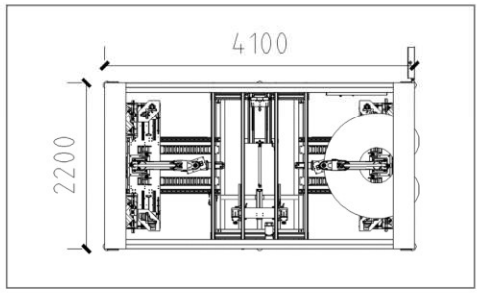
Auto Angle Protection Machine

Key Parameters

Quantity	1
Function	Automatically completes the wrapping of the four corners of the modules
Cycle	23±1s
Component dimension	L (2500-1640) mm ， W (1400-950) mm
Accuracy	±1mm
Border height	25~45mm
Protect horn material	tri-wall corrugated paper
Corner protector thickness	1.5±0.2mm
The corner guard box stores the number of corner protector	≤370pcs
Angangle time for each warehouse	≤180s
Uptime	99%
Dimension	L4100mm*W2200mm*H2200mm
Rated power	7.5kW
Air consumption	800L/min
Weight	2800Kg

Equipment Picture



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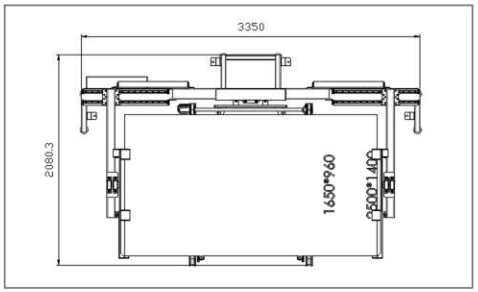
180 Deg.Flipper

Key Parameters

Quantity	**2**
Function	Flip the modules 180° for easy manual inspection
Component dimension	L (2500-1640) mm, W (1400-950) mm
Transport mode	Belt
Conveyor height	980mm±50mm
Uptime	98%
Dimension	L3380mm*W2050mm*H1050mm
Rated power	1.5kW
Air consumption	50L/min
Weight	500kg

Equipment Picture



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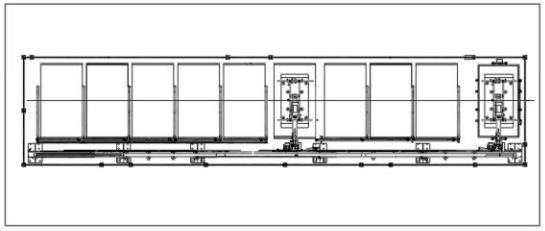
Auto Sorter

Key Parameters

Quantity	**1**
Function	Used for PV Module handling, stacking, unstacking and classified stacking.
Cycle	28s(within stroke of 4000)
Component dimension	L (2500-1640) mm ， W (1400-950) mm
robot arm running error	≤0.5mm
module placement accuracy	≤3mm
Standard configuration	7 grades (customizable)
layout	horizontal or vertical
Yield	≥99.9%
Uptime	≥98%
Dimension	meet the site layout
Rated power	12kW

Equipment Picture



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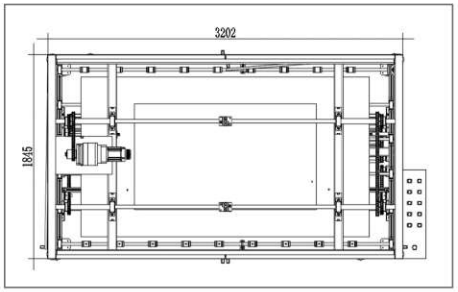
Buffer

Key Parameters

Quantity	**7**
Function	Modules buffering mechanism to prevent modules from accumulating in the production line
Cycle	24±1s/Module
Component dimension	L (2500-1640) mm, W (1400-950) mm
Transmission height	Horizontal transmission: 980±40mm Longitudinal transmission: 950±40mm
Spacing between piles	42mm
Number of piles	≤17
Yield	99.9%
Uptime	98%
Dimension	Horizontal stack: L3200mm*W1840mm*H2650mm Longitudinal stack: L2940mm*W2050mm*H2650mm
Rated power	1.0kW
Weight	2000kg

Equipment Picture



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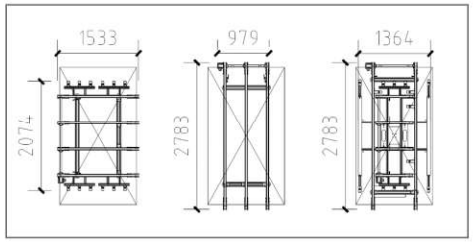
Conveyor

Key Parameters

Quantity	**68**
Function	Automatic conveying unit for glass and PV module
Cycle	28s
Component dimension	L (2500-1640) mm ， W (1400-950) mm
Conveyor height	Horizontal transportation 980±40mm longitudinal transportation 950±40mm
Yield	≥99.9%
Transfer unit type	Horizontal transportation, longitudinal transportation, double direction transportation, alignment station, pneumatic folding channel, manual folding channel, lifting station and material rack.
Uptime	≥98%
Weight	100kgs-400kgs

Equipment Picture



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Project Quotation List

Pre-lamination Equipment

Num	Model	Name	Quantity	Unit price (USD)	Subtotal (USD)	Note
1	ULC-4000	Non-destructive Cutting Machine	1			
2	AGL-120-IV	Auto Glass Loader	1			
3	AMS-L4000	Auto MBB Cell Stringer	1			
4	ACL-480-Ⅱ	Auto Layup Machine	1			
5	ABM-180-Ⅲ	Auto Bussing Machine	1			
6	YRD-TB9016-2600	Auto Taping Machine	1			
7	GC-1200-D	Auto EVA Cutting and Layup Machine	1			
8	GC-1200-H	Auto EVA/TPT Cutting and Layup Machine	1			
9	ADL-120-Ⅱ	Auto Glass2 Loader	1			
10	RMP252A	Double-glass Repair Manipulator	1			
11	EVR-J12	EL-VI Tester	1			
12	YRD-FB9566-2600	Automatic Edge Sealing Machine	1			
	Total(Pre-lamination)		**12**			

Laminating Equipment

Num	Model	Name	Quantity	Unit price (USD)	Subtotal (USD)	Note
1	BGKJ-Q5827×2	Laminator	1			include FOB charges
	Total (Laminating)		**1**			

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Project Quotation List

After lamination Equipment

Num	Model	Name	Quantity	Unit price (USD)	Subtotal (USD)	Note
1	PAM-120-Ⅱ	Auto Trimming Machine	1			
2	ARI-240-Ⅳ	90 Deg.Flipper	1			
3	HGG-120-V	Auto Framing Machine	1			
4	EJ-32MSX	Auto Dispensing Machine for Frames	1			
5	EJ-400M	Glue Dispensing Machine for J-box on backside	1			
6	EJ-AB10	Glue Potting Machine for J-Box	1			
7	EJ-2600	Glue Potting Manipulator	1			
8	KS-01B	Auto J-box Soldering Machine	1			
9	AMH-107-Ⅰ	Curing Manipulator	2			
10	AFA-120-I	Auto Filing Machine	1			
11	HPT-120-IV	Hi-Pot testing Unit	1			
12	AMM-120-IV	Auto Calibration Machine	1			
13	DLSK-SOL9	IV Tester	1			
14	EL-J12	EL Tester	1			
15	BCR-FH4-KFW02	Auto Labeling Machine	1			
16	XB20063	Auto Angle Protection Machine	1			
17	PRM-240-V	180 Deg.Flipper	2			
18	ASR-700-Ⅰ	Auto Sorter(7-speed)	1			
	Total (After lamination)		**20**			
19	HBM-17-Ⅰ	Buffer	**7**			
20		Conveyor	**68**			Includes transverse, longitudinal, bi-directional drive, pneumatic and manual folding channels
	Total (buffer+Conveyor)					

Project Quotation List

Project total

Num	Model	Subtotal (USD)	Note
1	Pre-lamination		
2	laminating		FOB costs are included in the price of the laminators
3	After lamination		
4	buffer+Conveyor		
	Sub-total		
5	packaging costs		
6	FOB		FOB costs for equipment other than laminators
7	Installation and commissioning costs		
	Project total		

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About us

CONFIRMWARE

- Founded in 2005 and locates in Binjiang District, Hangzhou
- A national high-tech enterprise specializing in R&D and manufacturing of intelligent equipment
- Professional provider of intelligent equipment products and automatic integrated solutions
- Enterprise technology center(Hangzhou), high-tech R&D center
- Excellent R&D team with the core of "thousand people plan" expert, domestic and overseas professors
- Perfect sale and after-sale service, market is in dozens of countries and regions around the world
- 25,000 square meters of intelligent production workshops, machining centres, implementation of the whole process of traceability

lines of business

PV intelligent equipment

logistics storge intelligent equipment

Sales Market

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District

Canada	U.A.E	Indonesia
USA	India	Austria
Mexico	Thailand	Nigeria
Turkey	Cambodia	Syria
Korea	Vietnam	China

Based on China , Serve The World

Customer First , Attentively Service

Service and Typical Case

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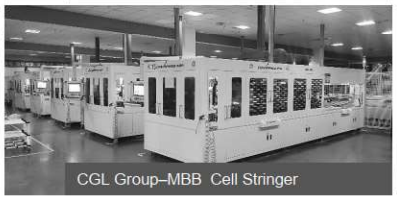
Perfect	1 year Warranty
Quick responding	20 days following up production process to ensure the equipment run stably
Industry-leading	1 vs 1 Each customer is equipped with personalized and exclusive after-sales service team


HT SOLAR - Stringer with Layup


OLIVE Solar - PV Module Production Line


Turkey-PV Module Production Line


Solargiga Energy – Stringer with Layup


CGL Group–MBB Cell Stringer


Cambidan-PV Module Production Line