

★Export and Import Corporation of People's Republic of China

★ISO9001:2000 Corporation of the system of Quality Control

★Hebei High-Tech Enterprise

★Hebei Software Enterprise

Company Introduction

Bootsolar Photovoltaic Equipment Co., Ltd is a high-tech enterprise of producing Solar Module Laminator, Solar Module Tester, Solar Cell Tester and Framing Machine. Bootsolar has been manufacturing solar module equipment since 2001.

Bootsolar has developed its own advantage on research, design production and sale.

Bootsolar is the pioneer of the solar manufacturing equipment industry and continues to be the first choice of more than 70% of the photovoltaic module manufactures in China.

Bootsolar owns some talented and professional engineers who can devote to research and develop more advanced solar photovoltaic equipments. Bootsolar offers a wide range of solar manufacturing equipment, on-site installation, complete training and unparalleled customer's support. You can purchase individual pieces of manufacturing equipment from Bootsolar, or an entire product line that provides all the equipments, supplies and training needed to establish a photovoltaic manufacturing line.

Company has strong development technique and may design solar module product line according to different demands of customers and markets. We would like to cooperate with customers to develop more widely usage, better quality and more advanced solar photovoltaic equipment.



Product Information

(1) BSLBIII Solar Module Laminator



Automatic Solar Module Laminator

Solar Module Laminator

I Uses

Laminate solar module of single-crystal silicon, multi-crystal silicon and amorphous silicon.

II Main Performance

Name	Automatic Solar Module Laminator	Solar Module Laminator
Laminated Size	1.8m×3.2m—2.2m×3.6m	1.1m×1.8m—2.2m×2.2m
Working Mode	Automatically Transfer and Laminate Module.	Manual In-and-out Module. Automatically Laminate.
Work Efficiency	Laminated 3-5 pieces of 170-300W module at the same time.	Laminated 1-2 pieces of 170-300W module at the same time.
Temperature Uniformity	±1℃, PID Automated intelligence temperature control, 5 point temperature measurement.	
Controller	PLC control system is flexible and credible.	
Proof-drape Design	The design can lengthen available service life of rubber, improve laminating smoothness.	
Cavity Welding	It adopts high quality argon arc welding. Low vacuum leak. High degree of vacuum.	
Open Cover System	Open cover system with two-pass and high-stability operates stably and reliably, maintains conveniently.	
Safety System	Emergency stop as power cut, raster protection, upper cover self-locking, operation monitoring, auto-alarm device.	
Performance	It can operate 24 hours continuously in high temperature, which is applicable in industry and laboratory.	

III Model and Main Parameters

Automatic Solar Module Laminator

Parameter Model	Laminated Size (M ²)	Outline Size (M)	Equipment Weight (T)	Power (KW)		Vacuum Pump Speed (L/S)	Annual Output (MW)
				Max.	Working		
BSL1832OAC	1.8×3.2 3 pieces of module(125 cell 72 pcs)	10.74×2.84×1.5	14	65	20	70	7-8 MW
BSL1836OAC	1.8×3.6 4 pieces of module(125 cell 72 pcs)	11.94×2.84×1.5	15	65	20	70	9-10.6MW
BSL2234OAC	2.2×3.4 3 pieces of module(156 cell 72 pcs) 3 pieces of module(125 cell 72 pcs)	11.34×3.24×1.5	18	65	20	70	7-12.5MW
BSL2236OAC	2.2×3.6 3 pieces of module(156 cell 72 pcs) 4 pieces of module(125 cell 72 pcs)	11.94×3.24×1.5	20	65	20	70	9-12.5MW
BSL2245OAC	2.2×4.5 4 pieces of module(156 cell 72 pcs) 5 pieces of module(125 cell 72 pcs)	15.245×3.24×1.5	25	70	20	70	11.5-17MW

Note: Annual output is calculated by laminating 20 minutes one time, 3 times per hour, working 16 hours per day and 300 workdays every year.

Solar Module Laminator

Parameter Model	Laminated Size (M ²)	Outline Size (M)	Equipme nt Weight (T)	Power (KW)		Vacuum Pump Speed (L/S)	Annual Output
				Max.	Working		
BSL1118OB (Panel Control)	1.1×1.8 1 piece of module(125 cell 72 pcs)	2.07× 1.7×1.2	2.4	40	12	15	2.3-2.6MW
BSL1118OC (Touch-screen Control)							
BSL1122OB (Panel Control)	1.1×2.2 1 piece of module(156 cell 72 pcs)	2.48× 1.57×1.2	2.6	40	15	15	3.7-4.3MW
BSL1122OC (Touch-screen Control)							
BSL1822OB (Panel Control)	1.8×2.2 2 pieces of module(125 cell 72 pcs)	2.48× 2.3×1.29	4	45	15	70	4.6-5.2MW
BSL1822OC (Touch-screen Control)							
BSL2222OB (Panel Control)	2.2×2.2 2 pieces of module(156 cell 72 pcs)	2.48× 2.7×1.29	5	45	16	70	7.4-8.6MW
BSL2222OC (Touch-screen Control)							

Note: Annual output is calculated by laminating 20 minutes one time, 3 times per hour, working 16 hours per day and 300 workdays every year.

IV Product Qualification

BOOSTSOLAR takes the lead in exciting advanced Automated Photovoltaic Module Laminator Heated by oil in China. This type laminator adopts automated operation mode and in and out modules automated. It has some advantages for example good produce efficiency, low work intensity, etc.

Automated Photovoltaic Module Laminator Heated by oil is identified on 'high technique product' on July 1, 2005. It is identified on 'software product' again on Aug. 3, 2005. Automated Photovoltaic Module Laminator Heated by oil is identified on 'international advanced level' on May 14, 2006.



(2) BSSA60 Photovoltaic Electrical Performance Analysis



Solar Module Tester



Solar Cell Tester

I Uses

Test solar module (monolithic) of single-crystal silicon, multi-crystal silicon and amorphous silicon.

II Main Performance

Name	Solar Module Tester	Solar Cell Tester
Model	BSMT204	BSCT102
Temperature Calibration	Infrared Measurement	Infrared Measurement
Test Plate Size	1000mm×1800mm	160mm×160mm
Test Speed	1s/plant	2s/plate
Max. Current	10A	10A
Max. Voltage	80V	1V
Max. Power	250W	8W
Repeat precision error	≤±0.5%	≤±0.5%
Light Intensity Ununiformity	≤±3%	≤±3%
I-V Curve	I-V Curve (3000 data points) Voc, Isc, Pm, Im, Vm, FF, Rs, Rp	
Light Source	Pulse Xenon Lamp of High-power	Light intensity 1000W/M ²

III Model and Main Parameter

Name \ Parameters	Model	Outline Size (mm)	Equipment Weight (KG)
Solar Cell Tester	BSCT102(Infrared Measurement)	600×850×1600	200
Solar Module Tester	BSMT204(Infrared Measurement)	2100×1500×900	250

IV Production Qualification

BOOSTSOLAR take the lead in excoigating Solar Cell Tester, Inverted Photovoltaic Module Tester and Simulator for module test. Products have enter the international market

BOOSTSOLAR BSSA60 Photovoltaic Electrical performance Analysis System is identified on 'software product' on Aug. 3, 2005. BOOSTSOLAR designs a suit of non- crystal silicon photovoltaic electrical performance analysis system for user.

BOOSTSOLAR may design photovoltaic electrical performance analysis system according to user's different requirement.



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