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Solar Panel Guide
Specification Data Sheet

Baoding Billion Power Technology Co., Ltd.
BP-M-ST 80-90
BP-M-ST80

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BP-M-ST Series Semi-transparent Amorphous Thin Film Solar Module

BP-M-ST Series products represent the latest advancements in Amorphous Silicon Thin Film Photovoltaic Modules technology. These semi-transparent series allow light pass through the module showing a natural and comfortable mandarin color. With the same transparency, for the see-through module made by using laser drilling technology has less absorption area. BP-M-ST series semi-transparent Amorphous thin film solar module have a much higher nominal power output density (i.e. energy conversion efficiency). These series also provide various applications, especially for BIPV (Building Integrated Photovoltaic) applications, e.g. roof, and curtain wall, etc.

1. Product Features

• The mandarin color and semi-transparent characteristic provide wonderful visual comfort.

• PV module absorbs 99.9% UV light and is a perfect block to harmful UV light.

• Without active area loss by laser drilling, Sun Well Solar PV module features high power conversion efficiency than other see-through thin-film PV modules.

• The high transmittance of red light is favorable to plant growth and crop cultivation.

• The high light transmission in the infra-red region creates a greenhouse effect favorable to the cultivation of particular plants.

• Among all thin-film PV technologies, silicon thin-film PV is the only one technology containing without heavy metals.

• No opaque back electrode, thus extra power can be generated for receiving light at both front and rear sides.

2. Product Specifications

Model		BP-M-ST90	BP-M-ST85	BP-M-ST80
Nominal Power (W) (+4.99Wp/-0Wp)		90	85	80
Open Circuit Voltage (V)		137	137	136
Short Circuit Current (A)		1.15	1.11	1.09
Maximum Power Voltage (V)		103	103	99
Maximum Power Current (A)		0.90	0.85	0.83
Temperature Coefficients (%/° C)		Nominal Power (W): -0.20 %/ ° C		
		Open Circuit Voltage (V):-0.34%/° C		
		Short Circuit Current (A): +0.09%/° C		
Maximum System Voltage (V)		1000		
Dimensions	Length	1300 mm +2/ -1 mm		
	Width	1100 mm +2/ -1 mm		
	Thickness	7.0 +/- 0.5 mm (without junction box) ; 26 +/- 1.0 mm (with junction box)		
Connector Type		MC4/MC4 Compatible		
Weight (kg)		24		
Transparency (%)		Semi-transparent, average transmittance (T%) at 400~800nm: 20 +/- 3.5%		
Wind Pressure Resistance (Pa)		+4600 & -4600		

•All electrical ratings bear with a tolerance of 10% unless specified otherwise.

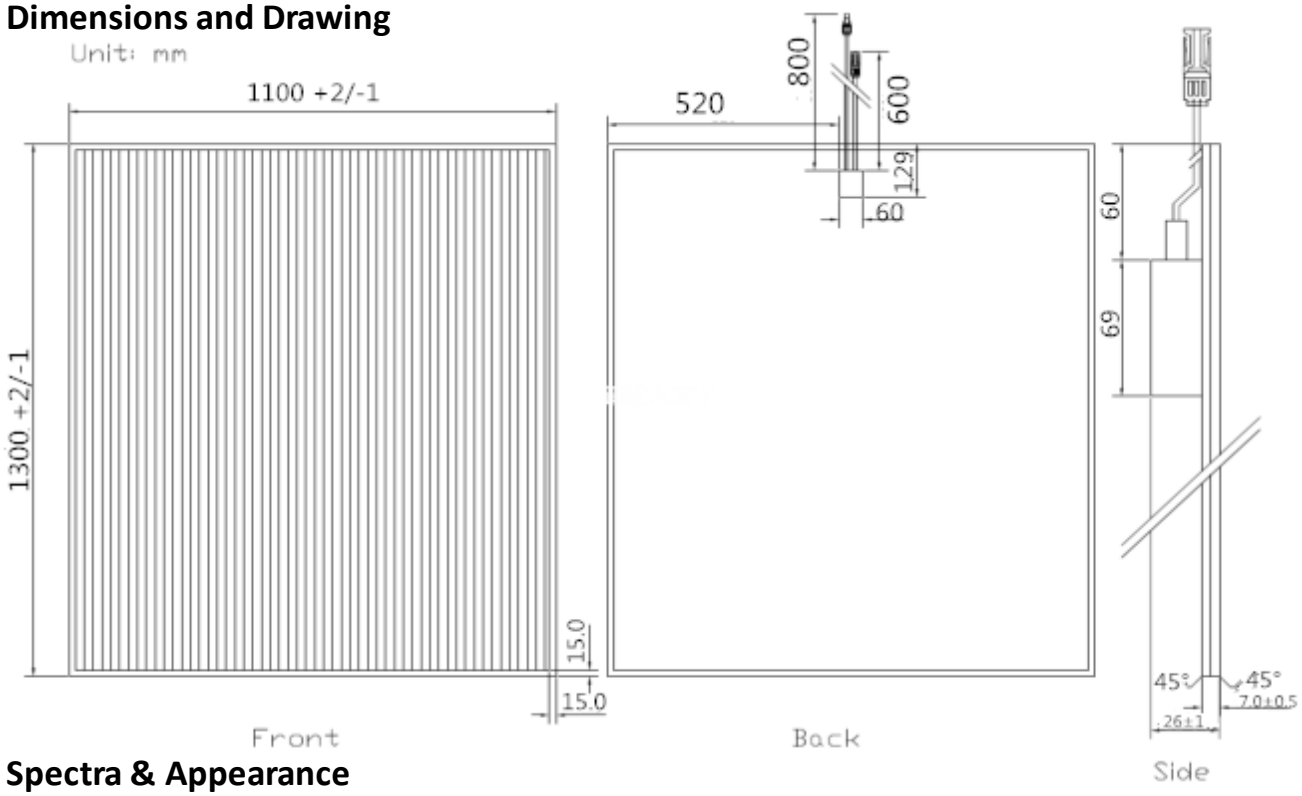
•BP-M-ST series are bifical modules. The powers shown in the table are tested at front side, and the power tested at rear side are about 85% of those of front side.

Physical Specifications		
Active Material of Cell		Amorphous Silicon
Junction Type of Cell		Single Junction
Material for Encapsulation		Polyvinylbutyral (PVB), thickness: 0.76 mm
Front Cover		Float glass, thickness: 3.2 mm
Back Cover		Float glass, thickness: 3.2 mm
Wiring Material		Tin & silver coated copper ribbon, thickness: 0.1 mm
Junction Box/IP Class	By pass Diode	Yes
	IP Class	IP 67
Junction Box Cable Length		Upward , 800 mm(+) / 600 mm(-)
Cable (mm ²)		2.5
Frame		No

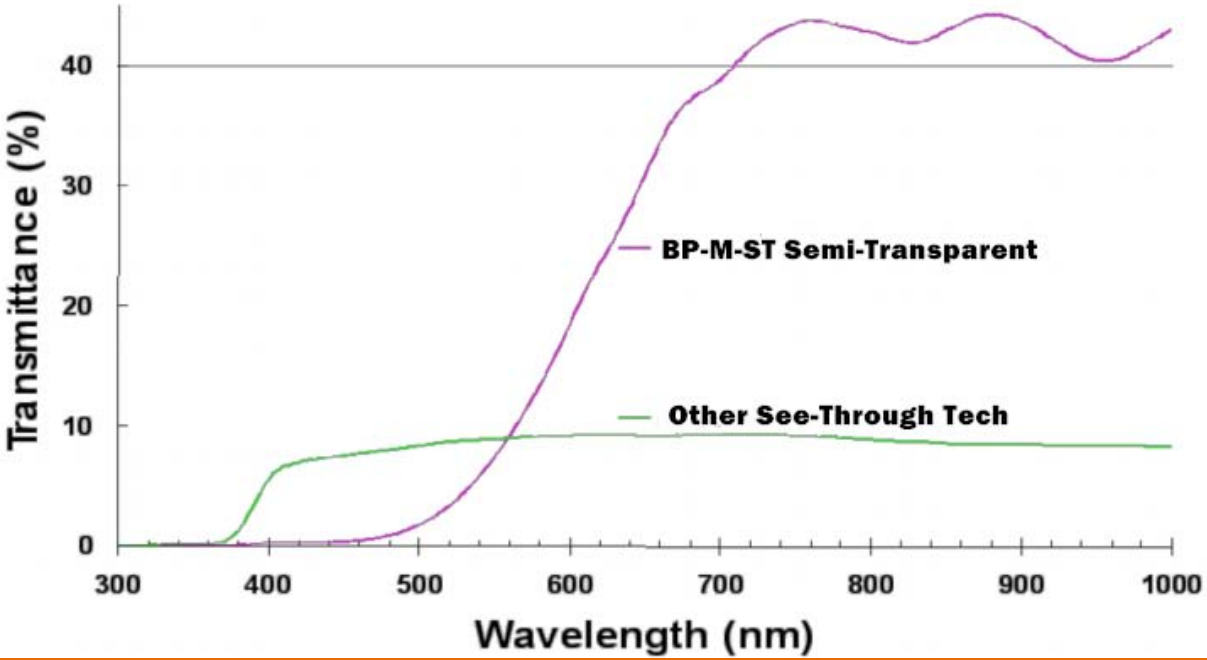
Certifications	
Certifications	TÜV ; CGC; MCS IEC 61701 / CNS 15159 UL790:2004; IEC 61646:2008; IEC 61730-2 / CNS 15118-2

Packing		
Wooden Box	Dimension	1480(L) X 1180(W) X 960(H)mm
	Net Weight	947KGs±2%
	Gross Weight	1010KGs±2%
Container	10 wooden boxes (i.e.400 pieces) for 20ft-GP	
	22 wooden boxes (i.e.880 pieces) for 40ft-GP	

3. Dimensions and Drawing



4. Spectra & Appearance



5.Application

➢BIPV Greenhouse & BIPV Plant Factory

➢BIPV Facades & Sky Garden & Motor-driven Windows

➢BIPV Bus Stop & Shelter & Car/Bicycle Port