

BSDM550 (144BHM-DG)

BSDM550
BSDM540

BSDM545
BSDM535

550W

High power output

21.29%

Module Efficiency

2.0%

First-year degradation warranty

0.45%

Annual degradation over 30 years

About Big Shine Energy

Big Shine Energy is a distinguished manufacturer of PV modules, excelling in their manufacturing since 1994. Our commitment to excellence and sustainability is evident in our innovative designs, meticulous manufacturing processes, and consistent delivery of high-quality, efficient, and durable products. With a strong reputation, Big Shine Energy continues to be a leading force in the renewable energy sector.

Benefits of Bi-facial Modules

- **Increased Energy Production:** Bifacial modules capture sunlight from the front and rear sides, maximizing energy generation.
- **Enhanced Durability:** The durable glass backsheets protect solar cells, increasing module lifespan.
- **Flexible Installation:** Bifacial modules can be mounted in various orientations for optimal energy capture.
- **Environmental Adaptability:** They perform well in diverse environmental conditions, including high albedo surfaces.

PRODUCT CERTIFICATION



ELECTRICAL CHARACTERISTICS AT STANDARD TEST CONDITIONS (STC)

Module Type	550W	545W	540W	535W
Maximum Power - Pmax (W)	550	545	540	535
Open Circuit Voltage - Voc (V)	49.92	49.81	49.65	49.5
Short Circuit Current - Isc (A)	13.99	13.92	13.85	13.78
Maximum Power Voltage - Vmpp (V)	42	41.8	41.65	41.5
Maximum Power Current - Imp (A)	13.1	13.04	12.97	12.9
Module Efficiency	21.29%	21.10%	20.90%	20.71%

Standard Test Conditions (STC): irradiance 1,000 W/m²; module temperature 25°C. Pmax Sorting: 0~5W. Measuring Tolerance: ±3%.

ELECTRICAL CHARACTERISTICS WITH DIFFERENT REAR SIDE PER GAIN

Pmax (W)	Voc (V)	Isc (A)	Vmpp (V)	Imp (A)	Pmax gain
575	49.76	14.69	41.80	13.76	5%
602	49.76	15.39	41.80	14.41	10%
656	49.81	16.79	41.75	15.72	20%

MATERIAL CHARACTERISTICS

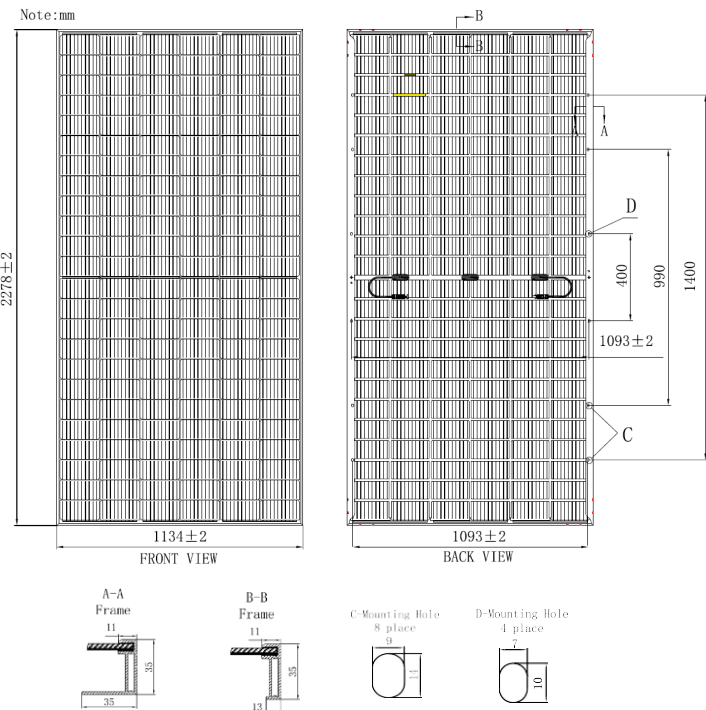
Dimensions	2278×1134×35mm (L×W×H)
Weight	32.7kg
Frame	Silver anodized aluminum profile
Front Glass	AR-coating Semi-toughened glass, 2.0mm EVA
Cell Encapsulation	(Ethylene-Vinyl-Acetate) or POE
Back Glass	Glazed & Semi-toughened glass, 2.0mm
Cells	12×12 pieces monocrystalline solar cells series strings
Junction Box	IP68, 3 diodes
Cable & Connector	Portrait: 500 mm (cable length can be customized), 1×4 mm ² or 12AWG

SYSTEM DESIGN

Maximum System Voltage [V]	1500
Series Fuse Rating [A]	30
Bifacial Front/Back	70%±10%
Fire Rating	Class C for IEC and TYPE 29 for US
PV module classification	Class II
Temperature Range	-40 °C to + 85 °C
Maximum Surface Load	5,400 Pa
Application class	Class A
Withstanding Hail	Maximum diameter of 25 mm with an impact speed of 23 m/s

DIMENSIONS

Dimensions(L×W×H) 2310×1125×1253mm



TEMPERATURE CHARACTERISTICS

NOCT	45°C(±2°C)
Voltage Temperature Coefficient	-0.27%/°C
Current Temperature Coefficient	+0.048%/°C
Power Temperature Coefficient	-0.32%/°C

IV CURVES

