

**QUALITY DESIGN
GREAT DURABILITY
EASY INSTALLATION**

HALF MONO 144PCS BIFACIAL SERIES MODULE

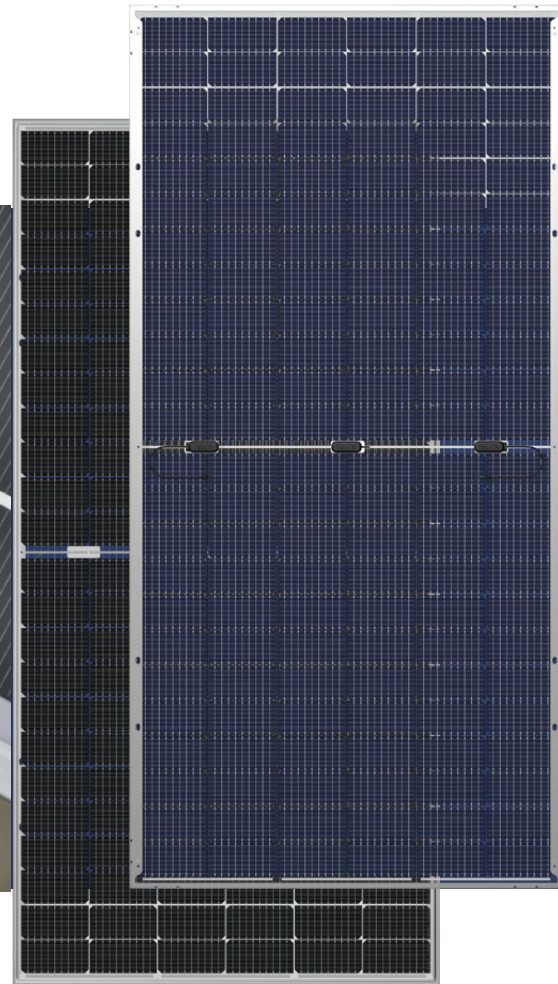
*Industry leading module power output warranty
International quality, safety and performance certifications.*

The backside makes use of the reflected and scattered light from the surroundings, the modules can yield up to 5%~30% power more, depending on the albedo.

*Manufacturing facility certified to ISO9001
quality management system standards.*

*Beautiful appearance, good durability & easy
installation.*

*Special design in accordance with requirements
of customers.*



5BB cell



MBB cell

* Both 5BB and MBB modules will be supplied.



**FOR PRODUCT DEFECTS IN
MATERIALS / WORKMANSHIP**



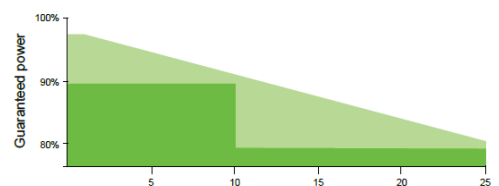
**FOR 90% OF WARRANTED
MINIMUM POWER OUTPUT**



**FOR 80% OF WARRANTED
MINIMUM POWER OUTPUT**



LINEAR WARRANTY

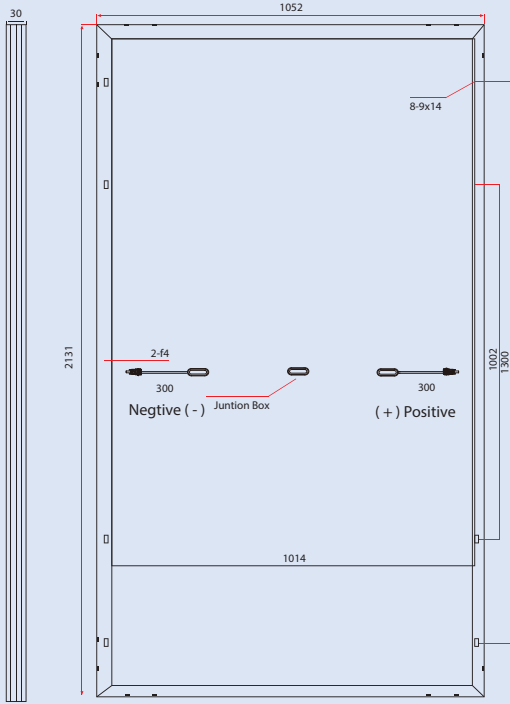




SR-450/445/440/435/-144M

Product Specification

DIMENSIONS AND STRUCTURE



ELECTRICAL PARAMETERS AT STANDARD TEST CONDITIONS (STC:AM=1.5, 1000W/M2, CELLS TEMPERATURE 25°C)

Typical type	450W		445W		440W		435W	
	Front	Back	Front	Back	Front	Back	Front	Back
Testing Condition	Front	Back	Front	Back	Front	Back	Front	Back
Max power (Pmax)	450	315	445	311	440	308	435	304
Max power voltage (Vmp)	41.59	42.28	41.36	42.03	41.12	41.85	40.85	41.64
Max power current (Imp)	10.82	7.45	10.76	7.40	10.70	7.36	10.65	7.30
Open circuit voltage (Voc)	49.78	48.25	49.44	47.99	49.11	47.83	48.90	47.56
Short circuit current (Isc)	11.30	8.16	11.25	8.10	11.20	8.05	11.12	7.99
Module Efficiency (%)	20.10	14.10	19.90	13.90	19.60	13.70	19.40	13.60
Max system voltage	DC 1500(TUV)							
Maximum Series Fuse Rating	20A							

ELECTRICAL PARAMETERS @ NOCT

Electrical characteristics with different rear power gain (reference to 440W)

Power Gains	Pmax	Vmp	Imp	Voc	Isc
5%	467WP	41.12V	11.36A	49.11V	11.81A
10%	489WP	41.12V	11.89A	49.11V	12.37A
15%	511WP	41.12V	12.43A	49.11V	12.93A
20%	534WP	41.02V	13.02A	49.21V	13.48A
25%	556WP	41.02V	13.55A	49.21V	14.04A

MECHANICAL DATA

Dimensions	2131×1052×30mm
Weight	29kgs
Front glass	2.0 mm tempered glass
Output cables	4 mm ² length 300 mm
Connectors	MC4 comootable ≥IP67
Cell type	Mono Cell 166*83 mm
Number of cells	144 cells in series

TEMPERATURE CHARACTERISTICS

Temp.Coeff.of Isc(TK Isc)	0.059% / °C
Temp.Coeff.of Voc(TK Voc) °C	Temp.Coeff.of (-0.30%) / °C
Pmax(TK Pmax)	(-0.39%) / °C
Operating temperature	(-40~+85%) °C
Normal operating cell temperature	45±2°C

PACKING CONFIGURATION

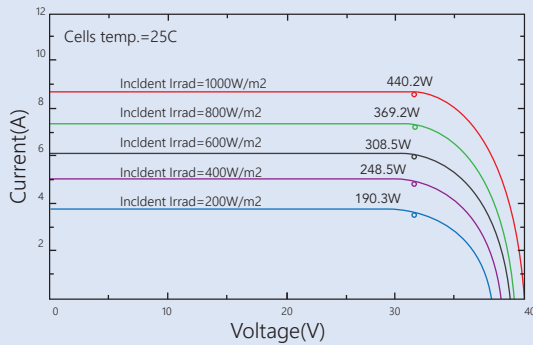
Container	20 GP	40 GP	40 HQ
Pieces per pallet	70	70	74
Pallets per container	5	11	11
Pieces per container	350	770	814

TESTS, CERTIFICATIONS

Standard tests	IEC 61215, IEC 61730
System certs	ISO 9001, ISO14001
Certifications	CQC, TUV, CE, MCS, CEC, CHUBB
Extreme wind and	Withstand extreme wind(2400 Pascal)
Snow loads testing	Snow loads(5400 Pascal)
Positive tolerance	0~+5W
Junction box	≥IP67

I-V CURVE

I-V CURVES AT DIFFERENT IRRADIANCE



I-V CURVES AT DIFFERENT TEMPERATURE

