

SERIES 4 435-455W Mono

M6/166mm Cell . 144 Half-Cell Layout

Assembled with the M6 wafer based high efficiency cells, Series 4 solar modules feature the innovative twin-panel design and the advanced technologies of half-cut cell, 9 busbars and round wire ribbon interconnection reducing the hot spot risk and shading effect, increasing the power output and resulting in higher reliability and performance than conventional modules.



Half Cut Cell Technology



MBB Technology



Anti-PID
Low-LID
Performance



Less Hot Spot
Shading Effects

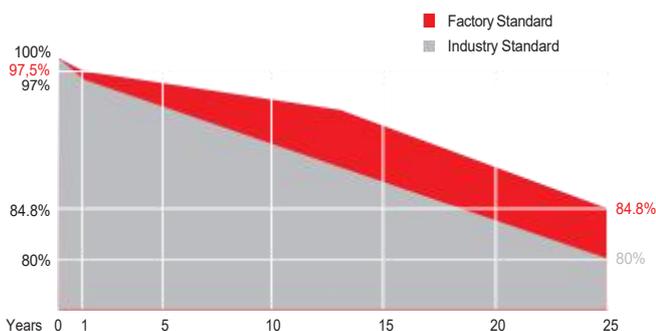


Low Power
Temperature Coefficient



Lower BOS & LCOE

Linear performance Warranty



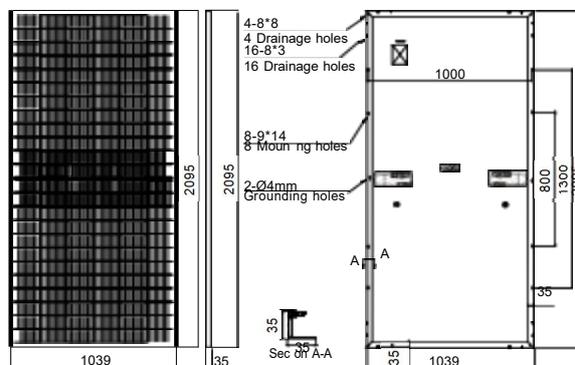
Comprehensive Certificates

- ISO9001:2015 QMS
- ISO14001:2015 EMS
- ISO45001:2018 OHSMS
- IEC61215/IEC61730 Standard quality



MECHANICAL CHARACTERISTICS

Solar Cells	Mono
No. of Cells	144 (6x24)
Dimensions	2095 x 1039 x 35mm
Weight	23.0kgs
Front Glass	3.2mm coated tempered glass
Frame	Anodized aluminium alloy
Junc on Box	Ip68 rated (3 by pass diodes)
	4.0mm ²
Output Cables	300mm (+) / 300mm (-)
	Length can be customized
Connectors	Mc4 compa ble
Mechanical load test	5400Pa



ELECTRICAL PARAMETERS

POWER CLASS	435M		440M		445M		450M		455M	
	STC	NOCT								
Maximum power (Pmax)	435W	321W	440W	324W	445W	327W	450W	330W	455W	333W
Open Circuit Voltage (Voc)	49.40V	45.48V	49.60V	45.51V	49.79V	45.54V	49.98V	45.56V	50.17V	45.59V
Short Circuit Current (Isc)	11.36A	9.09A	11.42A	9.16A	11.48A	9.22A	11.54A	9.29A	11.60A	9.35A
Voltage at Maximum power (Vmpp)	40.81V	37.56V	41.01V	37.67V	41.20V	37.77V	41.40V	37.88V	41.59V	37.98V
Current Maximum Power (Impp)	10.66A	8.55A	10.73A	8.60A	10.80A	8.66A	10.87A	8.71A	10.94A	8.77A
MODULE EFFICIENCY (%)	19.98%		20.21%		20.44%		20.67%		20.90%	

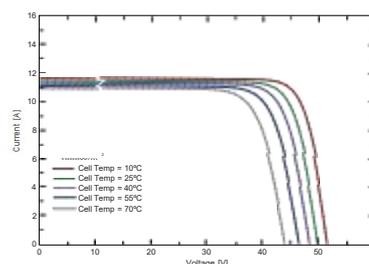
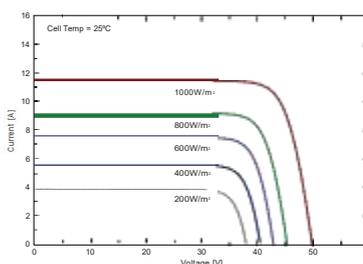
STC: Irradiance 1000W/m², cell temperature 25°C, AM1.5G NOCT: Irradiance 800W/m², ambient temperature 20°C, wind speed 1m/s, AM1.5G

PACKING CONFIGURATION

Container	20'GP	40'HQ
Pieces per pallet	31	31
Pallets per container	5	22
Pieces per container	155	682

I-V CURVE

LNSU-450M/I-V



OPERATING CHARACTERISTICS

Operating Module Temperature	-40°C to + 85°C
Maximum System Voltage	1500 DC (IEC)
Maximum Series Fuse Rating	20A
Power Tolerance	0/+5W

TEMPERATURE CHARACTERISTICS

Nominal Operating Temperature (Noct)	45±2°C
Temperature Coefficient of Pmax	-0.36%/°C
Temperature Coefficient of Voc	-0.28%/°C
Temperature Coefficient of Isc	+0.05%/°C

Note: Due to continuous technical innovation, R&D and improvement, technical data above mentioned may be of modification accordingly. HAOTECH NEW ENERGY have the sole right to make such modification at anytime without further notice.