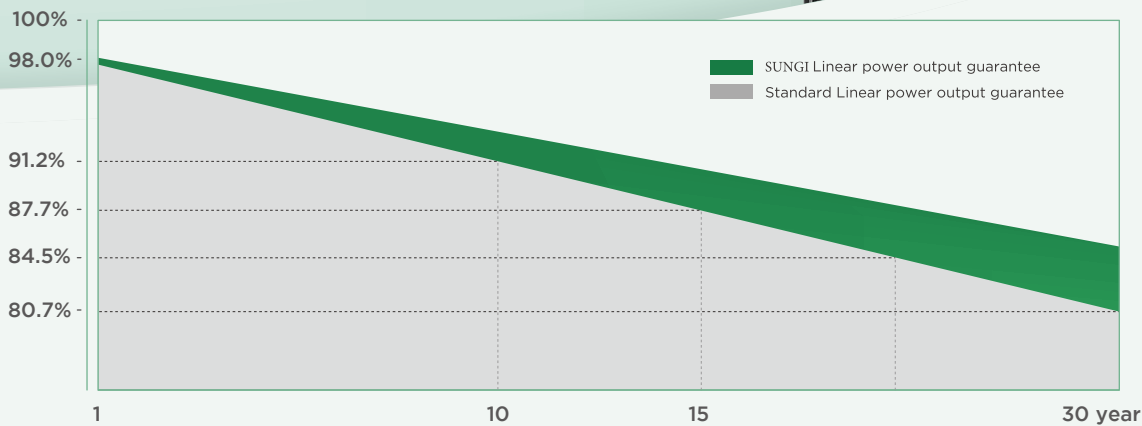
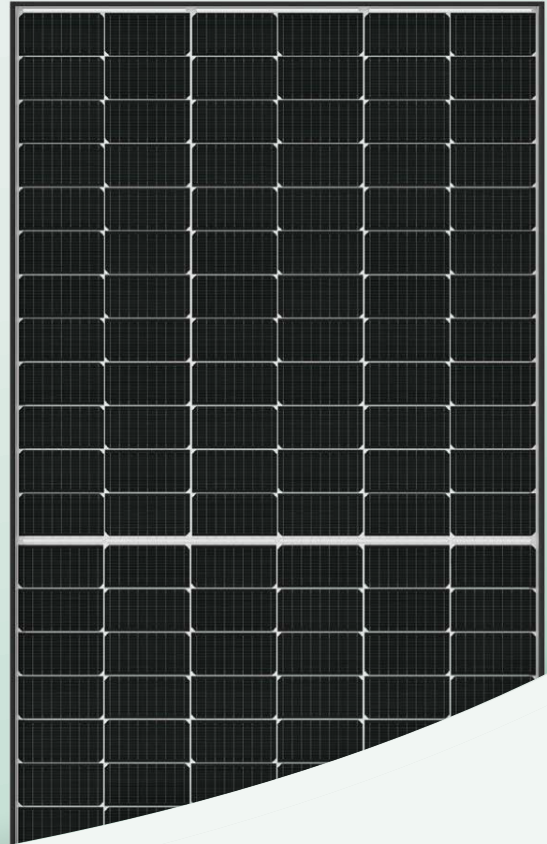


445~470W

**High Efficiency Low
LID Mono PERC with
MBB & Half-cut Technology**

Quality Guarantee

20-year Warranty for Materials and Processing
30-year Warranty for Extra Linear Power Output



21.2%
Max Module Eff.

0±5%
Positive Tolerance

Complete System and Product Certifications

IEC 61215, IEC 61730, UL 61730
ISO 9001:2008: ISO Quality Management System
ISO 14001: 2004: ISO Environment Management System
OHSAS 18001: 2007 Occupational Health and Safety



* Specifications subject to technical changes and tests. Solar reserves the right of interpretation.

Positive power tolerance (0±5%) guaranteed

High module conversion efficiency (up to 21.2%)

Slower power degradation enabled by Low LID Mono PERC technology: first year <2%, 0.55% year 2-25

Solid PID resistance ensured by solar cell process optimization and careful module BOM selection

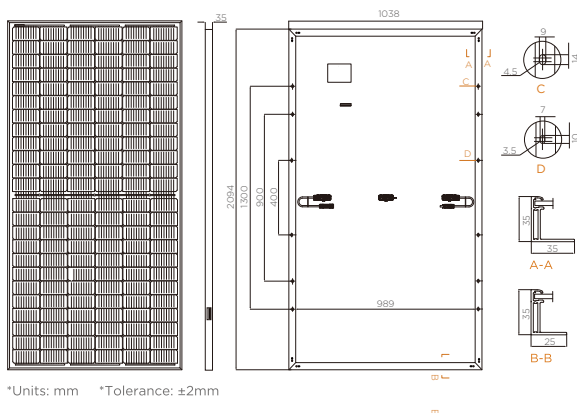
Reduced resistive loss with lower operating current

Higher energy yield with lower operating temperature

Reduced hot spot risk with optimized electrical design and lower operating current

445~470W

Design (mm)



Cell Orientation	144 (6x24)
Junction Box	IP68, three diodes
Output Cable	4mm ² , 300mm in length, length can be customized
Glass	Single glass 3.2mm coated tempered glass
Frame	Anodized aluminum alloy frame
Weight:	23.5kg
Dimension	2094x1038x35mm
Packaging	30pcs per pallet 150pcs per 20'GP 660pcs per 40'HC

Operational Temperature	-40°C~+85°C
Power Output Tolerance	0±5%
Voc & Isc Tolerance	±3%
Max. System Voltage	DC1500V(IEC/UL)
Max. Series Fuse Rating	20A
NOCT	45±2°C
Safety Class	II
Fire Rating	UL type 1 or 2
Max. Static Load(Front)	5400Pa
Max. Static Load(Back)	2400Pa

*Units: mm *Tolerance: ±2mm

Electrical Characteristics

Model Number	445M-72H		450M-72H		455M-72H		460M-72H		465M-72H		470M-72H	
Testing Condition	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax/W)	445	336	450	340	455	344	460	348	465	352	470	355
Open Circuit Voltage (Voc/V)	49.56	46.65	49.70	46.90	49.85	47.15	50.01	47.38	50.15	47.61	50.31	47.84
Short Circuit Current (Isc/A)	11.32	9.20	11.36	9.25	11.41	9.29	11.45	9.33	11.49	9.38	11.53	9.42
Voltage at Maximum Power (Vmp/V)	41.21	38.95	41.52	39.19	41.82	39.44	42.13	39.68	42.43	38.90	42.69	40.10
Current at Maximum Power (Imp/A)	10.80	8.64	10.84	8.68	10.88	8.72	10.92	8.76	10.96	8.81	11.01	8.86
Module Efficiency(%)	20.0		20.3		20.5		20.7		20.9		21.2	
Temperature Coefficient of Isc	+0.044%/°C											
Temperature Coefficient of Voc	-0.272%/°C											
Temperature Coefficient of Pmax	-0.350%/°C											

* STC (Standard Testing Conditions): Irradiance 1000W/m², Cell Temperature 25°C, Spectra at AM1.5

* NOCT (Nominal Operating Cell Temperature): Irradiance 800W/m², Ambient Temperature 20°C, Spectra at AM1.5, Wind at 1m/s

*Test uncertainty for Pmax: ±3%

I-V Curve

