UNITED ENERGY | 安徽合纵

Delivering Easy and Secure Turnkey Energy Solutions

UNI S N-TYPE

UE480M-48H

Shingled Monofacial Ultra Black PV Module

Shingling Technology
Innovative Structure,low-temperature adhesive bonding, high-density layout.

Beautiful Appearance
Uniform layout, better aesthetic.

Superior Safety and Reliability
No hidden welding crack, low operating temperature, high pressure resistance.

Low System Cost
High module efficiency, reducing system cost.

Low Hot Spot Risk
Parallel circuit design reduces shading loss. module lifespan.

Eco-friendly
Adhering to green philosophy, no fluorine and low lead.

Low Shading Loss
Full parallel arrangement brings high effective power generation hours.

470-490W

Max Efficiency 25.2%

Quality Management System and Product Certification

IEC 61215, IEC 61730, UL 61730

ISO9001: 2015: ISO Quality Management System.

ISO14001: 2015:ISO Environmental Management System.

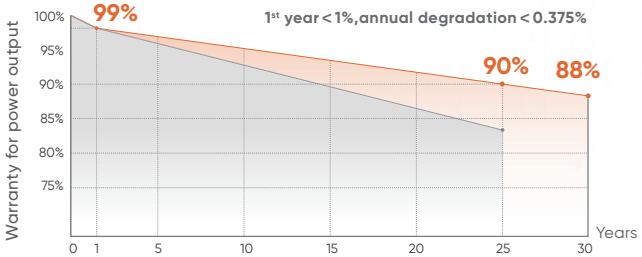
ISO45001: 2018: Occupation Health and Safety.

IEC62941:Guideline for module design qualification and type approval.

Quality Guarantee

15 Year Materials Warranty

30 Year Power Warranty



Less than 1% attenuation in the 1st year, the annual attenuation from the 2nd year is no more than 0.375%, and the power is no less than 88% until the 30th year.

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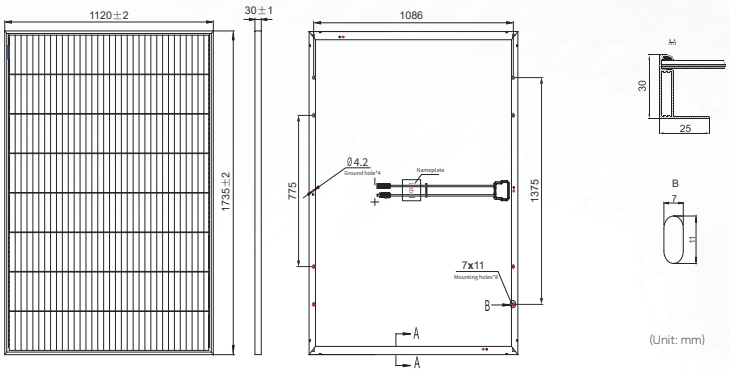
UNI S 470-490W

Drawings



Product Image

Mechanical Characteristics

Solar Cells	Mono-crystalline silicon
No. of Cells	256 (8×32)
Dimensions	1735 × 1120 × 30mm
Weight	21.4kg
Glass Thickness	3.2mm high transmittance tempered glass
Frame	Anodized aluminium alloy
Junction Box	IP68
Output Cables	4mm², +900/-900mm, length can be customized
Connectors	MC4 original /MC4 compatible
Withstanding Hail	Maximum diameter of 25 mm with impact speed of 23 m/s
Packaging	37pcs/box, 962pcs/40'container

Operating Characteristics

Maximum Surface Load Capacity [Pa]	Front 5400/ Back 2400
Maximun System Voltage	DC 1500V/1000V (IEC)
Maximun Series Fuse Rating	20A
Power Tolerance	0~+5W

Temperature Characteristics

Operating Module Temperature	-40°C ~ +85°C
Temperature Coefficient of Voc	-0.24%°C
Temperature Coefficient of Isc	+0.04%°C
Temperature Coefficient of Pmax	-0.26%°C

Electrical Parameters (STC*)

Module Type:	470	475	480	485	490
Maximum Power (Pmax/W)	470	475	480	485	490
Module Efficiency (%)	24.2	24.4	24.7	24.9	25.2
Optimum Operating Voltage (Vmp/V)	44.30	44.40	44.50	44.60	44.70
Optimum Operating Current (Imp/A)	13.56	13.67	13.78	13.89	13.99
Open Circuit Voltage (Voc/V)	34.90	37.00	37.10	37.20	37.30
Short Circuit Current (Isc/A)	12.74	12.84	12.95	13.05	13.15

Electrical Characteristics (NMOT*)

Maximum Power (Pmax/W)	355	359	363	367	371
Optimum Operating Voltage (Vmp/V)	42.30	42.40	42.50	42.60	42.70
Optimum Operating Current (Imp/A)	10.95	11.04	11.13	11.22	11.31
Open Circuit Voltage (Voc/V)	35.20	35.30	35.40	35.50	35.60
Short Circuit Current (Isc/A)	10.09	10.17	10.26	10.34	10.43

1. Standard Test Conditions [STC]: irradiance 1000W/m2; AM 1.5; ambient temperature 25°C according to EN 60904-3;
2. Nominal Module Operating Temperature (NMOT): Irradiance 800W/m2; wind speed 1m/s , ambient temperature 20°C.
3. Tolerance of Pm: 0~+5W, Measuring uncertainty of power: ±3%. Performance deviation of Voc [V], Isc [A], Vm [V] and Im [A]: ±3%.

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