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Solar Panel Guide Specification Data Sheet

Union Solar Energy Tech Co., Ltd.

Mono 50W 12V

Mono 50W 12V

Also available on the web at
EnergyPal.com/union-solar-energy-tech-co-ltd-solar-panels/mono-50w-12v

UNM-50A

High Efficiency, High Quality PV Module



Electrical Characteristics	UNM-50A
Maximum power (Pmax)	50W
Voltage at Pmax (Vmp)	18.1V
Current at Pmax (Imp)	2.78A
Open-circuit voltage (Voc)	22.2V
Short-circuit current (Isc)	2.96A
Temperature coefficient of Voc	$-(0.40 \pm 0.05)\% / ^\circ\text{C}$
Temperature coefficient of Isc	$(0.065 \pm 0.01)\% / ^\circ\text{C}$
Temperature coefficient of power	$-(0.5 \pm 0.05)\% / ^\circ\text{C}$
NOCT (Air 20°C; Sun 0.8kW/m ² wind 1m/s)	47±2°C
Operating temperature	-40°C to 85°C
Maximum system voltage	600V DC
Power tolerance	+ 3%
Cells	monocrystalline silicon solar cell
No. of cells and connections	36(4X9)
Module Dimension	670mm[26.38in.]x530mm[20.87in.]x30mm[1.18in.]
Weight	4.2kg[9.24lbs]

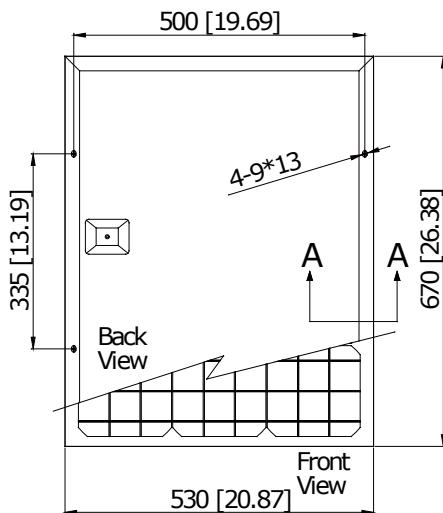
* STC: Irradiance 1000W/m², AM1.5 spectrum, module temperature 25°C
 * Specifications are subject to change without notice at any time.



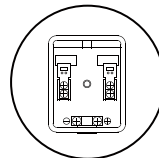
Key Features:

- High module efficiency and stable power output
- Based on leading process technology
- Outstanding electrical performance under high temperature conditions or low irradiance conditions
- Easy of installation and all-weather applications
- 5 years product warranty(materials and workmanship)
- 20 years module power output warranty
- Peak power of single module is guaranteed in +3% power tolerance
- Strong framed module, passing loaded test of 5400 Pa (IEC61215 2nd)
- The manufacture is certified for ISO 9001:2008

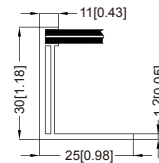
Module Diagram



Dimensions in brackets are in inches.
 Un-bracketed dimensions are in millimeters.
 Unit:mm[in.]



Junction Box
 Top View (Lid open)



Section A-A

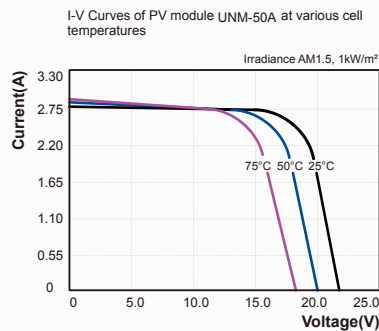
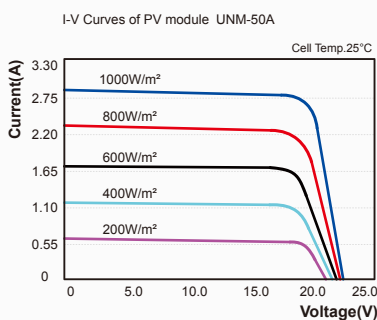
Product's Guarantee

- 5 years products life warranty
- 15 years module power output no less 90%
- 20 years module power output no less 80%

Applications

- Off grid residential roof-tops
- Off grid commercial/industrial roof-tops
- Rural area applications
- Solar power system
- Other off-grid applications

I-V Curves



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