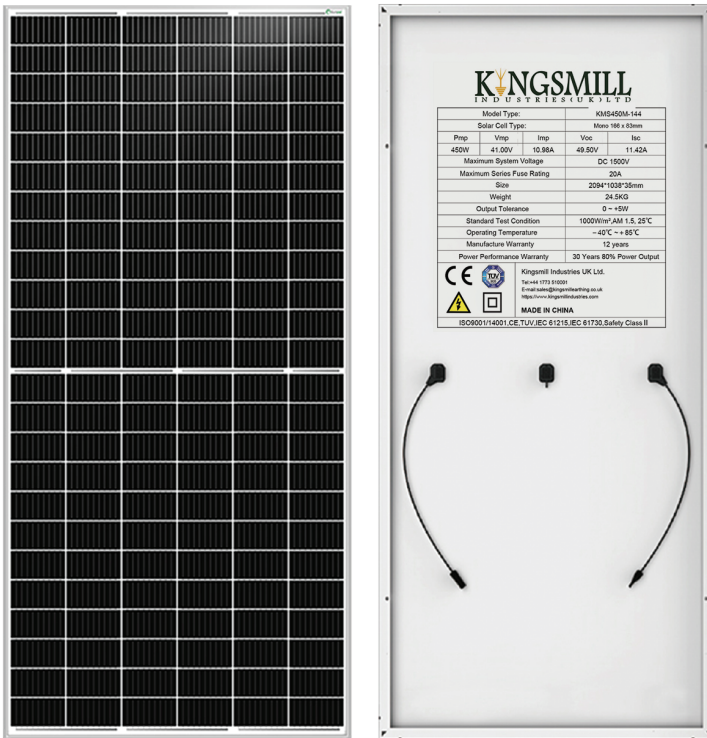








## Introduction

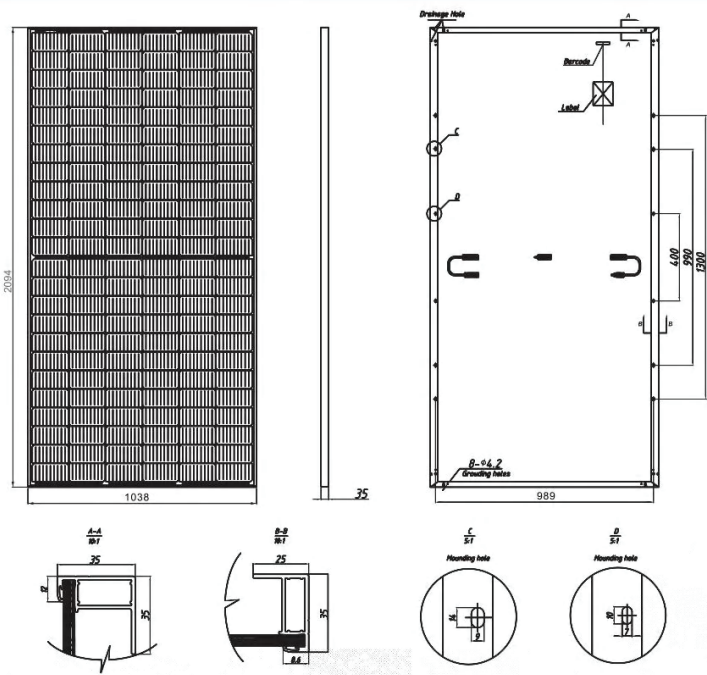
KMS450M-144 Photovoltaic Solar Panels are certified for the most challenging environmental conditions. This KMS450M-144. Photovoltaic high-power monocrystalline solar panel operates at 20.70% efficiency to maximize the light absorption area.

## Product Options



### Mono Solar Panel Features

-  Widely using of the most popular and mature type of modules for solar system
-  High power output and highest conversion efficiency of 20.70%
-  Anti-reflective and anti-soiling surface reduces power loss from dirt and dust
-  Outstanding Performance in low-light irradiance environments
-  Excellent mechanical load resistance: Certified to withstand high wind loads (2400Pa) and Snow loads (5400Pa)
-  Positive power tolerance: 0~+5W

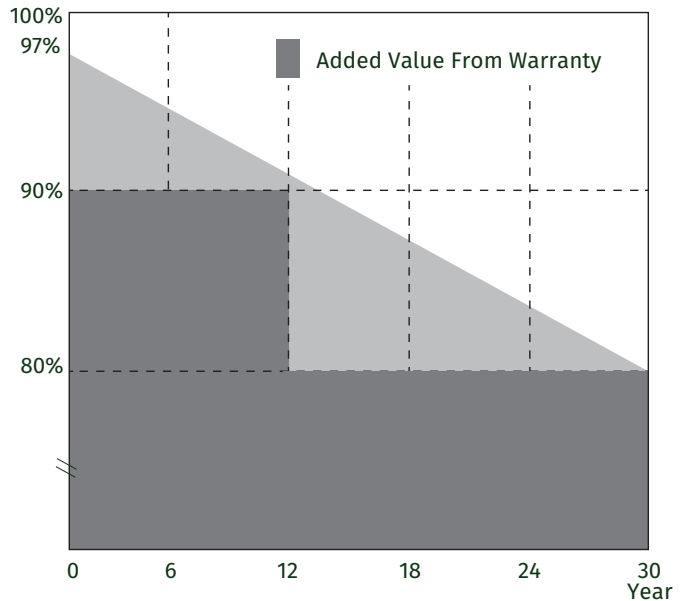


Electrical Characteristics(STC)	
Module Type	KMS450M-144
Maximum Power (Pmax)	450W
Maximum Power Voltage (Vmp)	41V
Maximum Power Current (Imp)	10.98
Open-circuit Voltage (Voc)	49.50
Short-circuit Current (Isc)	11.42
Module Efficiency (%)	20.70
Power Tolerance	0~+5W
Temperature Coefficient of Isc	+0.05%/°C
Temperature Coefficient of Voc	-0.29%/°C
Temperature Coefficient of Pmax	-0.37%/°C

Product Features

Warranty
12 years for product defects in materials & workmanship
12 years for 90% of warranted minimum power output
30 years for 80% of warranted minimum power output
30 years liner warranty

Reliable Quality
Positive power tolerance: 0~+5W
100% EL Double-inspection ensures modules are defects free
Modules Binned by Current to improve system performance
Potential induced Degradation (PID) Resistant

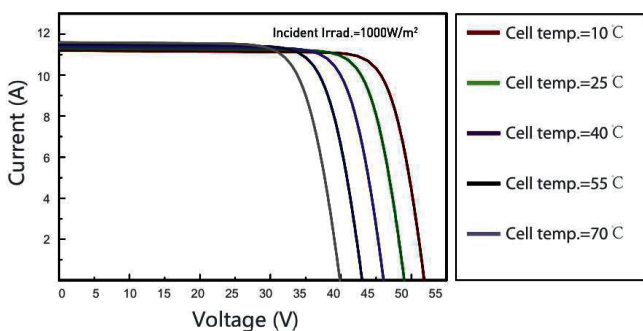


Mechanical Parameters	
Cell(mm)	9BB Mono 166*83
Weight(kg)	24.5kg
Glass Thickness	3.2mm,Low Iron Tempered Glass
Dimensions (L*W*H)(mm)	2094*1038*35mm
Cable Cross Section Size (mm <sup>2</sup> )	4
Cable Cross Section Length (mm)	300
No.of Cells and Connections	144(6*24)
Junction Box	IP67/68,3 Diodes
Connector	MC4 Compatiple

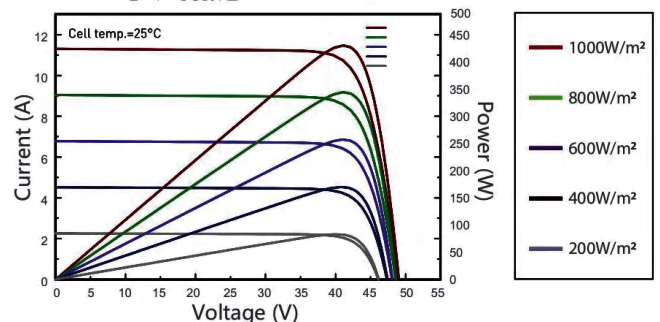
Working Conditions	
Maximum System Voltage	DC 1500V
Operating Temperature	-40°C~ +85°C
Maximum Series Fuse	20A
Maximum Static Load,Front (e.g.,snow and wind)	5400Pa (112 lb/ft <sup>2</sup> )
Maximum Static Load,Back (e.g.,wind)	2400Pa (50 lb/ft <sup>2</sup> )
NOCT	44±2°C
Positive power tolerance	0~ +5W
Application Class	Class A

I-V Curve

Current-Voltage curves



I-V CURVE



### Product Features

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#### GLASS

- Antireflective glass
- Translucency of normal luminance is increased by 2%
- Module efficiency is increased by 2%
- Self-cleaning option
- Service life as long as 25 years (30 years optional)



#### SOLAR CELL

- High efficiency PV cells
- Appearance consistency
- Color sorting ensure consistent appearance on each module
- Anti-PID



#### FRAME

- Conventional frame
- Boost bearing capability and prolong service life
- Serrated-clip design tensile strength
- Seal-lip design glue injection



#### JUNCTION BOX

- Conventional standalone edition and engineering custom edition
- Quality diode ensures module running safety
- IP67 protection level
- Heat dissipation
- Long service life



### More Information

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All with A Grade for on-grid & off-grid use for residential and public rooftop and ground mounting  
Solar panels are a clean source of energy that use the sun's rays to convert them into electricity or heat.

Our clean energy solutions provide electrical power as a way to decarbonize  
and transition to clean energy in our mission to combat climate change.