

Mono Perc

MSMXXX

Half-Cell High Efficiency PV Module



Optimal Design Combination

166mm+9BB+Half-cut, higher power output



Super Performance & Stable Returns

Low current & low hot spot, to ensure module operation optimally



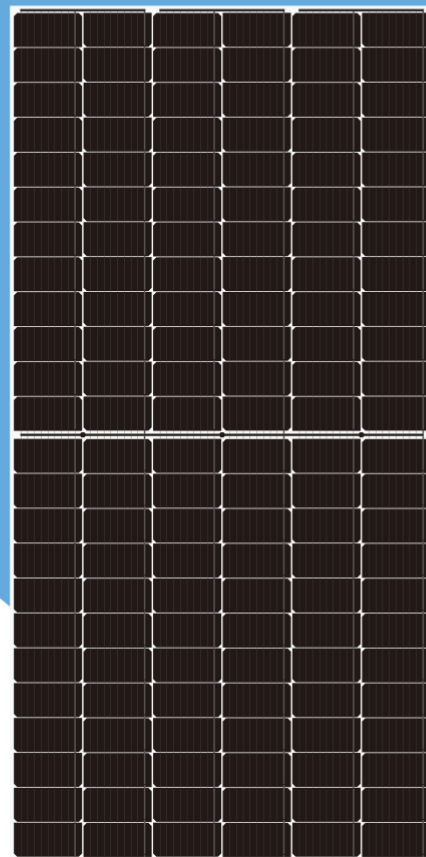
Diversified Application Scenarios

Strong weather-resistance, suitable for various roof installation



Lower LCOE

Lower BOS, less installation area



Comprehensive Products and System Certificates

IEC 61215 / IEC 61730 / CE / INMETRO

ISO 9001: 2015/Quality management system

ISO 14001: 2015/Standards for environmental management system

OHSAS 18001: 2007/International standards for occupational health & safety

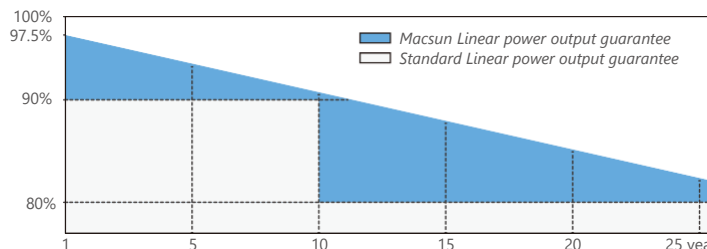
430~460W

Max
Module
Efficiency
-
21.16%

Quality Guarantee

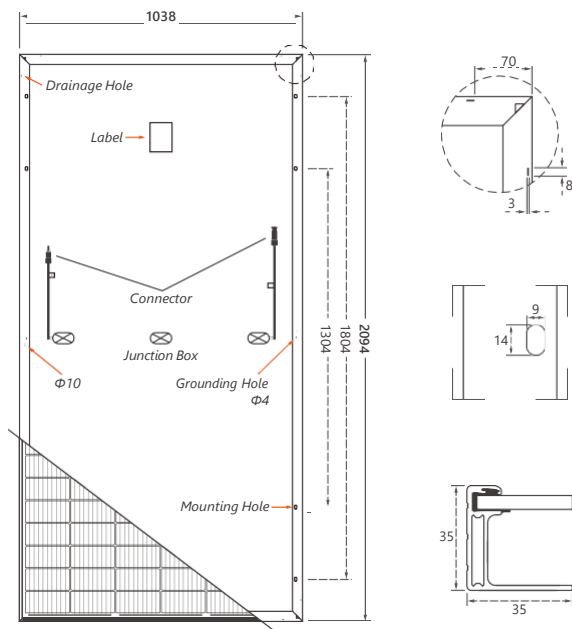
12-year Material & technology warranty

25-year Linear power output warranty



72L9 MSM430~460

DESIGN



MECHANICAL SPECIFICATION

Cells Type	Dimension (L×W×T)	Weight
Mono 166×83mm	2094×1038×35mm	23.5kg
Packing	31pcs/pallet, 682pcs/40HQ	
Cable (Including connector)	4.0mm ² , Portrait: 300mm(+)/400mm(-) Landscape: 1400mm(+)/1400mm(-)	
No. of Cells	144 (6×24)	
Glass	3.2mm High Transmission, Antireflection Coating	
Junction box	IP68, 3 Bypass Diodes	
Connector	MC4 Compatible	

OPERATING PARAMETERS

Maximum system voltage	1000V/1500V DC
Operating Temperature	-40 ~ +85°C
Maximum series fuse rating	20A
Snow load, frontside	5400Pa
Wind load, backside	2400Pa
Nominal operating cell temperature	45°C±2°C
Application level	Class A

ELECTRICAL CHARACTERISTICS(STC)

MODULE TYPE	MSM430	MSM435	MSM440	MSM445	MSM450	MSM455	MSM460
Maximum Power (P _{max})	430W	435W	440W	445W	450W	455W	460W
Open-circuit Voltage (V _{oc})	48.70V	48.85V	49.00V	49.15V	49.30V	49.45V	49.60V
Maximum Power Voltage (V _{mp})	41.51V	41.66V	41.81V	41.96V	42.11V	42.26V	42.41V
Short-circuit Current (I _{sc})	11.23A	11.26A	11.29A	11.32A	11.35A	11.38A	11.41A
Maximum Power Current (I _{mp})	10.36A	10.44A	10.52A	10.61A	10.69A	10.77A	10.85A
Module Efficiency (%)	19.78%	20.01%	20.24%	20.47%	20.70%	20.93%	21.16%
Power Tolerance	0 ~ +5W						
Temperature Coefficient of I _{sc}	0.05%/°C						
Temperature Coefficient of V _{oc}	-0.31%/°C						
Temperature Coefficient of P _{max}	-0.35%/°C						

Standard Test Environment : Irradiance 1000W/m², Cell temperature 25°C, Spectrum AM1.5

ELECTRICAL CHARACTERISTICS(NOCT)

MODULE TYPE	MSM430	MSM435	MSM440	MSM445	MSM450	MSM455	MSM460
Maximum Power (P _{max})	323W	327W	331W	334W	338W	342W	346W
Open-circuit Voltage (V _{oc})	46.09V	46.23V	46.37V	46.51V	46.66V	46.80V	46.94V
Maximum Power Voltage (V _{mp})	39.28V	39.43V	39.57V	39.71V	39.85V	39.99V	40.14V
Short-circuit Current (I _{sc})	9.06A	9.09A	9.11A	9.13A	9.16A	9.18A	9.21A
Maximum Power Current (I _{mp})	8.23A	8.29A	8.36A	8.42A	8.49A	8.55A	8.61A

Standard Test Environment : Irradiance 800W/m², Ambient temperature 20°C, Spectrum AM1.5, Wind speed 1m/s