

**MS-SERIES**  
**330-380 WATT**  
**MONOCRYSTALLINE MODULE**  
 POSITIVE POWER  
 TOLERANCE OF 0/+3%  
 IEC61215, IEC61730  
 CERTIFIED PRODUCTS

*Fully  
 Automatic  
 Manufacturing  
 Facility*



**OUR APPROACH**

Msquare Energy believes high quality solar power should be produced locally at globally competitive pricing. Meticulous manufacturing, testing and quality assurance standards, TÜV certified raw materials and developed QMS system ensures consistent quality and traceability.



**AUSTRALIAN QUALITY STANDARD**

- Excellent mechanical loads 3600 PA positive & 1600PA negative
- High temperature operation
- Easy module replacement
- Quality control and traceability by stringent QMS system

**CERTIFICATIONS**

- TÜV & SÜD
- CSA, IEC 61730 and IEC 61215
- State of ART fully automatic facility
- Earth leakage tested to 3600V DC
- Double Electro-Luminescence (EL) tested
- Built to perform in low light condition
- Module exceeds the fire class C performance per UL790

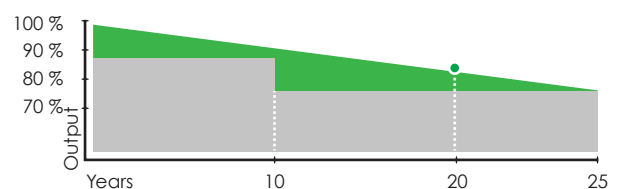


**PERFORMANCE WARRANTY**

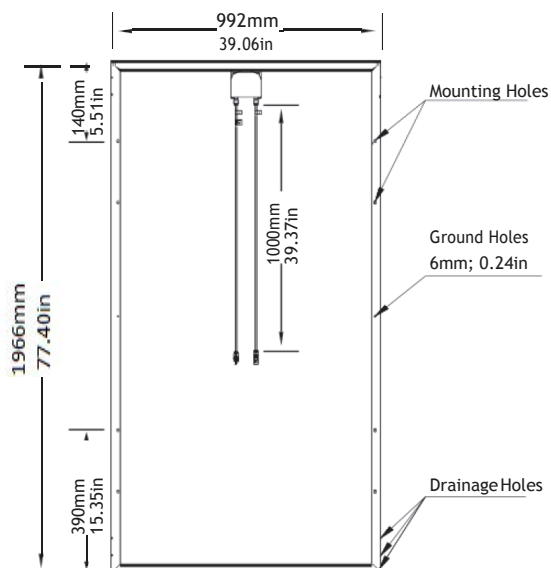
Max power decrease **0.5%/year**  
**97%** at the end of **first** year  
**90%** at the end of **20th** year  
**87%** at the end of **25th** year



Market Standard Performances  
 M-Series Performances



## MODULE DESIGN



PV Connector Model - TT01, 1000V, 30A, IP67

## SPECIFICATIONS

Solar Cells: 5 bus-bar, Mono Perc

Solar Glass: 3.2mm, tempered, low iron, high transparency solar safety glass.

Encapsulation: EVA

Backsheet: White

Frame: Extruded, black anodized aluminum

Junction Box: IP67 rated, 900mm cable,

Weight : 18-24KG

External Dimension: 1966mm x 992mm x 40mm

Modules	MS-330-M72		MS-345-M72		MS-365-M72		MS-380-M72	
	STC	NOCT	STC	NOCT	STC	NOCT	STC	NOCT
Maximum Power (Pmax)	330Wp	244Wp	345Wp	256Wp	365Wp	271Wp	380Wp	282Wp
Maximum Power Voltage (Vmp)	37.3V	35.42V	37.9V	35.6V	38.7V	36.4V	39.4V	36.9V
Maximum Power Current (Imp)	8.85A	6.88A	9.11A	7.19A	9.44A	7.47A	9.65A	7.65A
Open-circuit Voltage (Voc)	46.1V	42.36V	46.8V	43.2V	47.6V	44.0V	48.3V	44.6V
Short-circuit Current (Isc)	9.14A	7.38A	9.43A	7.64A	9.78A	7.90A	10.02A	8.11A
Module Efficiency STC (%)	18.6%		18.9%		19.3%		19.7%	
Operating Temperature (°C)	-40°C ~+85°C							
Maximum System Voltage	1000VDC (UL and IEC)							
Maximum Series Fuse Rating	20A							
Power Tolerance	0~+3%							

Short Circuit Current Tolerance - +/-4%

Open Circuit Voltage Tolerance - +/-2%

NOCT : Irradiance at 800 W/m<sup>2</sup>, Ambient Temperature 20°C, Wind Speed 1 m/s

STC : Irradiance 1000 W/m<sup>2</sup>, Cell Temperature 25°C, Air Mass AM1.5 according to EN 60904-3

## TEMPERATURE RATINGS

Nominal Operating Cell Temp	45°C (±2°C)
Tempcoefficient of Pmax	-0.31%/°C
Tempcoefficient of Voc	-0.31%/°C
Tempcoefficient of Isc	0.03%/°C

## MAXIMUM RATINGS

Operational Temp	-40 to +85°C
Max system Voltage	1000V DC (IEC)
Max Series Fuse Rating	20A
Mechanical Load	3600pa

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