



# MACRO-SOLAR

## MS-M-190W/200W/210W

### Cells

Cell Technology	Monocrystalline silicon
Number of cells per module	54
Cell dimensions	156x156mm

### Mechanical Data

Dimension of the module L x W x H	1470x996x50mm
Weight	18.5kg

### Electrical data

	MS-M-190W	MS-M-200W	MS-M-210W
Maximum power	190W	200W	210W
Open Circuit Voltage	32.40V	32.40V	32.40V
Maximum power point voltage	25.92V	25.92V	25.92V
Short circuit current	7.72A	8.13A	8.53A
Maximum power point current	7.34A	7.72A	8.10A

\* At Standard Conditions (STC) Irradiance 1000 watt/m<sup>2</sup>, spectrum AM 1,5 at a cell temperature of 25°C.

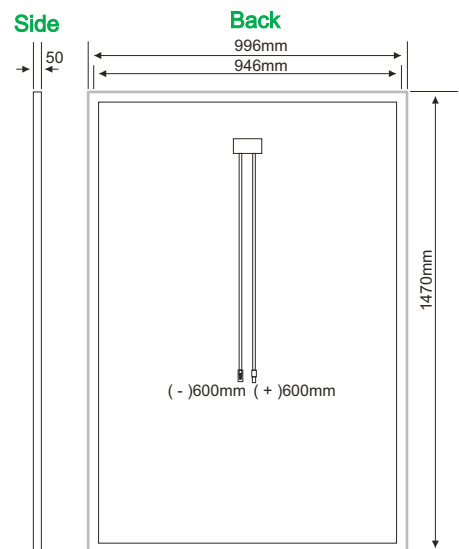
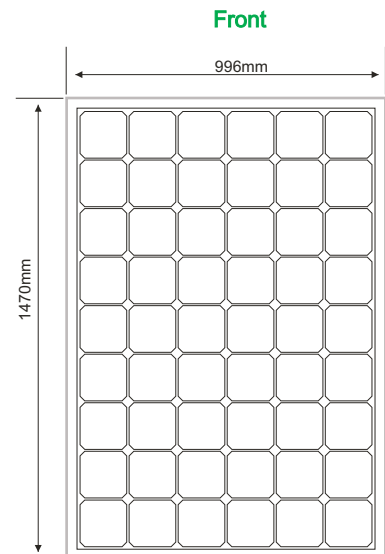
### Thermal data

NOCT	47°C ± 2°C
Temperature Coefficient of V <sub>oc</sub>	- (90 ± 5) mV / °C
Temperature Coefficient of I <sub>sc</sub>	+ (0.065 ± 0.015) % / °C
Temperature Coefficient of Power	- (0.5 ± 0.05) % / °C

\*NOCT: Normal Operational Temperature in Celsius

### Additional data

Junction box type	(TUV)
Cable type	(TUV)
Output tolerance	+(-)3%
Frame material	Anodized aluminium
Front glass	3.2mm tempered glass
By-pass diodes	3 pieces



### Module Construction

