

## CIGS Product information 6W, 9W, 15W, 30W, 45W, 60W



### 12V CIGS PHOTOVOLTAIC MODULES

#### Models:

ME06, ME09, ME15, ME30, ME45, ME60

#### General:

Solar cells directly convert sunlight into electricity by means of the photovoltaic effect. This occurs when photons are absorbed by a solar cell which generates a voltage across the terminals. Cells are connected in series within the module to provide sufficient voltage to operate your system or charge a battery. Modules can be connected in series and parallel to increase the system power. This solid state process provides a clean and silent, non-polluting and reliable power source of electrical energy.


ME<sup>2</sup> high efficiency photovoltaic modules are made of Copper Indium Gallium diSelenide, ("CIGS") which represents the latest advancement in thin film solar technology.

CIGS is a crystalline material, so provides consistent power and does not degrade when exposed to sunlight. Furthermore, studies have shown that CIGS material actually yields more energy per kW installed, compared to traditional crystalline products, due to better performance in low light. The tempered glass, along with a three layer Tedlar® backing, makes for a robust and lightweight solar module.



ME45-J14

#### Features:

- Ultra-tough 3.2 mm tempered and textured glass
- 3 layer Tedlar® with aluminum interlayer
- Reinforced anodized aluminum frame
- Pre-drilled frame for easy mounting
- High quality junction box with diode protection
- 10 year limited warranty < 10W\*
- 20 year limited warranty >10W\*
- Power tolerance +/- 10%
- Quality: Manufactured to IEC 61646 

#### Applications:

- Grid connect & building integrated
- Rural Electrification
- Water pumping
- Battery charging
- Lighting systems & lanterns
- Marine and Automotive
- Fence Charging



ME<sup>2</sup> CIGS module range

\*According to general warranty conditions

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### Specifications

	ME06	ME09	ME15	ME30	ME45	ME60
Cell	Crystalline CIGS (Copper Indium Gallium diSelenide) onto thin film stainless steel foil					
<b>Characteristics (+/- 10%)</b>						
Open circuit voltage (VOC)	27.5V	28.5V	28.0V	27.3	27.1	26.4
Optimum operating voltage (Vmp)	17.6V	18.9V	18.5V	18.10	17.9	17.6V
Short circuit current	0.48A	0.58A	1.05A	2.16	3.24	4.2A
Optimum operating current (Imp)	0.35A	0.47A	0.81A	1.69	2.49	3.42
Power at STC (Pmax)	6W	9W	15W	30W	45W	60W
Temperature coefficient for power & voltage %/°C	-0.6	-0.6	-0.6	-0.6	-0.6	-0.5
Note: Modules, when first used, need two days of full sun exposure before reaching optimum performance						

### Limits

Operating temperature	-40 to +85°C					
Maximum system voltage	48V DC	48V DC			500V DC	

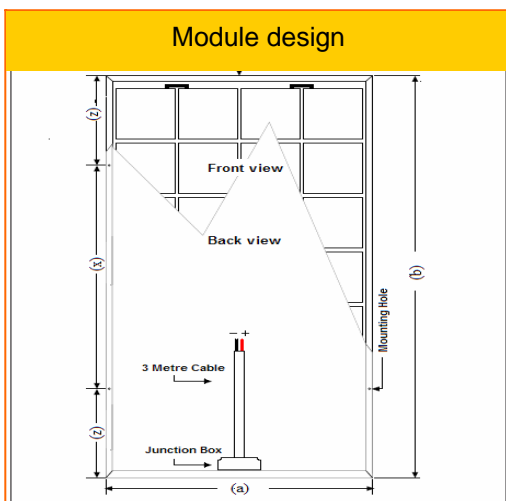
### Output

Type of output terminal	Potted junction box with 3 meter flying lead					Junction box
Cable	0.5 mm <sup>2</sup> - 4 amp - 1100V - 6.1mm overall diameter (red +) and (black -)					None
Cable length	3m					None
Connection	Stripped wire	Stripped wire	Stripped wire	Stripped wire	Stripped wire	To Junction box

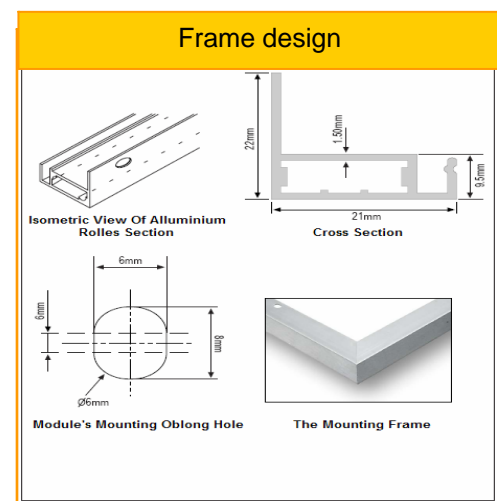
### Module Dimension

Dimension of module (a) x (b)	228 x 596 x 22 mm	228 x 596 x 22 mm	406 x 596 x 22 mm	602 x 788 x 34 mm	602 x 1186 x 34 mm	641 x 1186 x 34 mm
Mounting oblong hole	8 x 6 mm	8 x 6 mm	8 x 6 mm	8 x 7 mm	8 x 7 mm	8 x 7 mm
Dimension X (Distance between mounting holes)	300 mm	300 mm	300 mm	400 mm	600 mm	600 mm
Dimension Z (Distance from corner)	148 mm	148 mm	148 mm	194 mm	293 mm	293 mm
Weight	1.7 kg	1.7kg	2.7kg	5.3kg	7.8kg	8.9kg

STC: Irradiance 1000W/m<sup>2</sup>. Module temperature 25°C, AM=1.5



For dimensions & output for module range see table above



22 mm frame design and mounting holes (34 mm is the same design)

**CIGS solar cells made in U.S.A, modules assembled in India**

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