

# MiaSolé MS SERIES

## CIGS Modules: Delivering c-Si Performance at Thin Film Cost

120W – 140W MODULES WITH EFFICIENCIES UP TO 13%

### SUPERIOR PROJECT RETURNS

- ▶ Low Voc enables up to 34 modules per 1000V string; 25A fuse rating allows two strings to be combined in parallel
- ▶ Corner junction boxes reduce install labor and eliminate cable tie downs
- ▶ Frameless design eliminates need for module grounding
- ▶ Better ground coverage ratios and increased energy in partial shading due to embedded bypass diodes
- ▶ Higher output due to +5/-0 watts positive binning

### RELIABLE PERFORMANCE

- ▶ Innovative UltraWire™ creates fault tolerant, low resistance interconnect
- ▶ Unique weather protection system provides optimum defense against adverse weather, humidity and mechanical damage
- ▶ Rigorous test-to-fail philosophy; thermal tested to 1400 cycles; damp heat tested to 7000 hours for moisture barrier
- ▶ Five-year product warranty and 5/10/25 year warranty against power loss
- ▶ Dual tempered glass ensures extremely low breakage

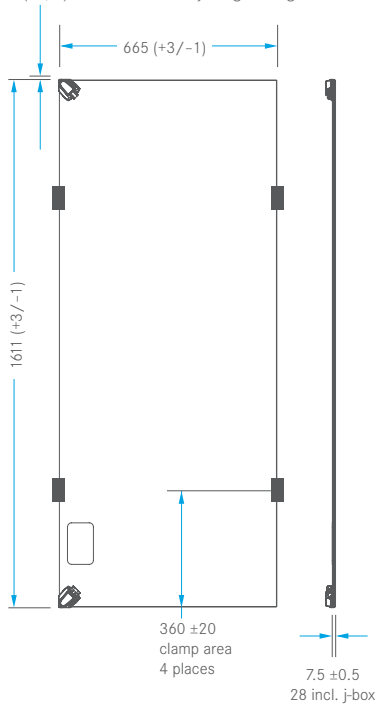
### SAFETY AND ENVIRONMENT

- ▶ Sophisticated and comprehensive quality management system
- ▶ Fully equipped UL certified internal test facilities
- ▶ Fully automated factory ensures repeatable build quality
- ▶ Three month energy payback

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2.4 (+2/-0) J-Box extension beyond glass edge



MiaSolé will evaluate alternate clamping solutions upon customer request. All dimensions in millimeters.

## ELECTRICAL PERFORMANCE AT STC<sup>1</sup>

			MS120GG	MS125GG	MS130GG	MS135GG	MS140GG
Nominal Power	$P_{MPP}$	[W]	120	125	130	135	140
Power Output Tolerance		[W]	+5/-0	+5/-0	+5/-0	+5/-0	+5/-0
Maximum Power Voltage	$V_{MPP}$	[V]	19.0	19.5	20.1	20.5	21.0
Maximum Power Current	$I_{MPP}$	[A]	6.29	6.41	6.48	6.58	6.67
Open Circuit Voltage	$V_{OC}$	[V]	24.9	25.2	25.4	25.6	25.8
Short Circuit Current	$I_{SC}$	[A]	7.35	7.35	7.35	7.35	7.35
Maximum Series Fuse Rating		[A]	25				
Maximum System Voltage (IEC/UL)		[V]	1000/600				

<sup>1</sup>Standard Test Conditions (STC): 1000 W/m<sup>2</sup>, 25°C cell temperature, AM 1.5 spectrum

## ELECTRICAL PERFORMANCE AT NOCT<sup>2</sup>

Nominal Power	$P_{MPP}$	[W]	84.1	87.3	90.6	93.9	97.3
Maximum Voltage	$V_{MPP}$	[V]	16.6	17.1	17.5	18.0	18.5
Maximum Current	$I_{MPP}$	[A]	5.05	5.11	5.17	5.21	5.26
Open Circuit Voltage	$V_{OC}$	[V]	21.9	22.2	22.6	23.0	23.3
Short Circuit Current	$I_{SC}$	[A]	5.78	5.82	5.86	5.91	5.95

<sup>2</sup>Nominal Operating Cell Temperature (NOCT): 800 w/m<sup>2</sup>, 20°C ambient temperature, 1 m/s wind speed

## THERMAL CHARACTERISTICS

NOCT	[°C]	49
Temperature Coefficient of $P_{MPP}$	[%/°C]	-0.45
Temperature Coefficient of $V_{OC}$	[%/°C]	-0.36
Temperature Coefficient of $I_{SC}$	[%/°C]	-0.003

## PHYSICAL AND MECHANICAL SPECIFICATIONS

Length	1611 mm (63.4 in)
Width	665 mm (26.2 in)
Depth	7.5 mm (0.3 in); 28 mm (1.1 in) including junction box
Weight	18 kg (39.7 lbs)
Junction Box / Output Terminal Type	2 corner connection boxes / MC4 type
Cell Type	Copper Indium Gallium Diselenide (CIGS)
Maximum Load	Tested snow load: 5400 N/m <sup>2</sup>
Warranty Term	5/10/25 year power output, 5 year workmanship <sup>3</sup>
Certifications	IEC 61646, IEC 61730 (Application Class A), UL 1703 (Fire Class A), CEC

<sup>3</sup>Please see full warranty for details.



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Silicon Valley, USA

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