

# MiaSolé FLEX SERIES -02WS

## CIGS Flexible Modules: High Power Density in a Flexible Form Factor

### KEY FEATURES

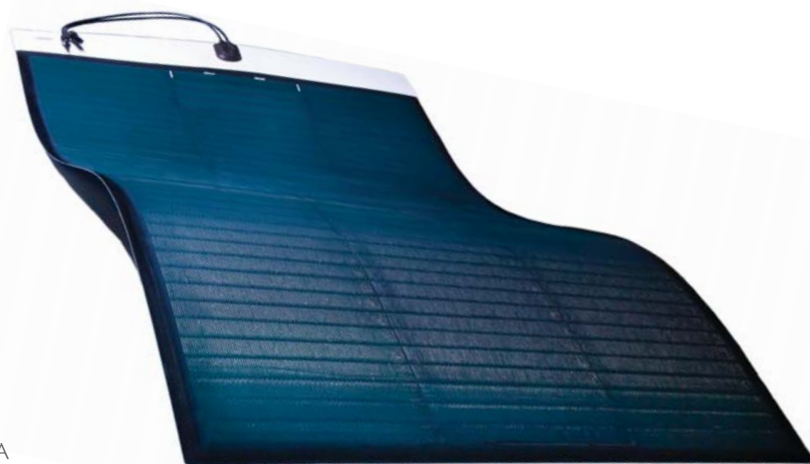
- ▶ Record efficiency levels in a flexible form factor
- ▶ Low installed weight at less than 2.9 kg/m<sup>2</sup> (<0.6 lb/ft<sup>2</sup>)
- ▶ No penetrations, ballast or racking required
- ▶ Applicable for high wind load and high seismic hazard areas
- ▶ Bypass diodes reduce PV system shading losses
- ▶ Directly bonds to many approved surfaces

### RELIABILITY AND SAFETY

- ▶ IEC 61646, IEC 61730-1 & -2, IEC 61701, IEC 62716, DEWA
- ▶ UL 1703, ULC ORD C1703, UL 2703
- ▶ UL Class A over TPO - slope up to 2.5"

### WARRANTY

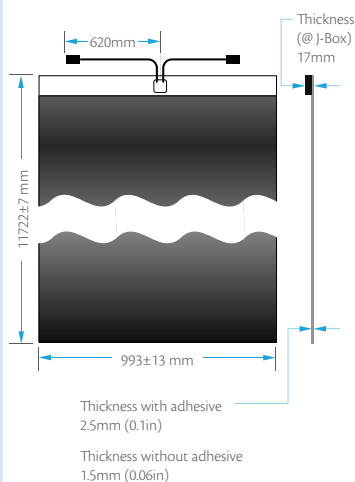
- ▶ 5 year workmanship
- ▶ 10/25 year warranty against power loss



# MiaSolé FLEX SERIES

## FLEX-02WS SERIES CIGS MODULE

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



			FLEX-02 210WS	FLEX-02 220WS	FLEX-02 230WS	FLEX-02 240WS	FLEX-02 250WS
Nominal Power	$P_{MPP}$	[W]	210	220	230	240	250
Aperature Efficiency	$\eta$	[%]	14.2%	14.9%	15.6%	16.3%	17.0%
Power Output Tolerance		[W]	+10/-0	+10/-0	+10/-0	+10/-0	+10/-0
Maximum Power Voltage	$V_{MPP}$	[V]	18.4	18.9	19.5	20.0	20.6
Maximum Power Current	$I_{MPP}$	[A]	11.43	11.63	11.81	11.98	12.16
Open Circuit Voltage	$V_{OC}$	[V]	23.8	24.2	24.5	24.9	25.3
Short Circuit Current	$I_{SC}$	[A]	13.53	13.55	13.56	13.57	13.58
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

### THERMAL CHARACTERISTICS

NOCT	[°C]	48
Temperature Coefficient of $P_{MPP}$	[%/°C]	-0.38
Temperature Coefficient of $V_{OC}$	[%/°C]	-0.28
Temperature Coefficient of $I_{SC}$	[%/°C]	0.008

### PHYSICAL AND MECHANICAL SPECIFICATIONS

Length	1722±7 mm (67.8±.3in)
Width	993±13 mm (39.1±.5 in)
Thickness, Maximum at J-Box*, Module	17 mm (0.7 in), 2.5mm (.1 in)
Weight (Module without adhesive)	3.4 kg (7.5lb)
Weight (Module with adhesive)	4.2 kg (9.2 lb)
Weight/Area (Module without adhesive)	2.0 kg/m <sup>2</sup> (0.4lb/ft <sup>2</sup> )
Weight/Area (Module with adhesive)	2.9 kg/m <sup>2</sup> (0.5lb/ft <sup>2</sup> )
Junction Box Type	IP68
Cable Connections	Amphenol Technology Shenzhen (E346053)
Cell Type	Copper Indium Gallium Diselenide (CIGS)
Warranty**	5 year workmanship; 10/25 year power output
Certifications	UL 1703, ULC ORD C1703, UL 2703, UL Class A over TPO - slope up to 2.5" IEC 61646, IEC 61730-1 & -2, IEC 61701, IEC 62716, DEWA
Packaging Information	15 modules per crate, 75 modules per pallet, 750 modules per 20' ISO container, 1650 modules per 40' ISO container

\*2.5 mm (0.1 in) for the rest of the module with adhesive

\*\*1.5 mm (0.06 in) for the rest of module without adhesive

\*\*Please see full warranty for details

FLEX modules are manufactured in the United States and China



2590 Walsh Avenue, Santa Clara, California 95051, USA  
1.408.919.5700 sales@miasole.com www.miasole.com

MiaSolé and the MiaSolé logo are registered trademarks.  
©2018 MiaSolé. All rights reserved. Specifications included in this datasheet are subject to change without notice.  
MiaSolé Approved for Public Release.  
Part Number 990-187764-00\_6