

# MiaSolé FLEX SERIES—03WS

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

### KEY FEATURES

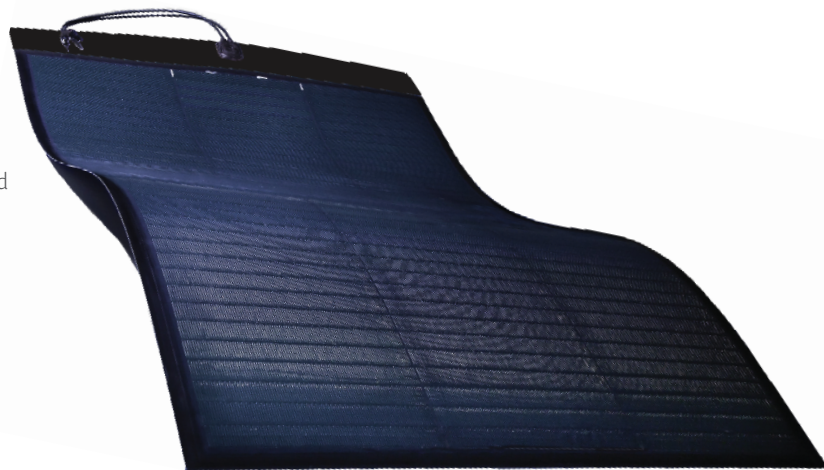
- ▶ Record efficiency levels in a flexible form factor
- ▶ Low installed weight at less than 2.0 kg/m<sup>2</sup> (<0.5 lb/ft<sup>2</sup>)
- ▶ No penetrations, ballast or racking required
- ▶ Applicable for high wind load and high seismic hazard areas
- ▶ Bypass diodes reduce PV system shading losses
- ▶ Directly bonds to many approved surfaces

### RELIABILITY AND SAFETY

- ▶ IEC 61646, IEC 61730, IEC 61701 (Salt Spray)
- ▶ UL 1703
- ▶ UL Class A over TPO - slope up to 2.5°

### WARRANTY

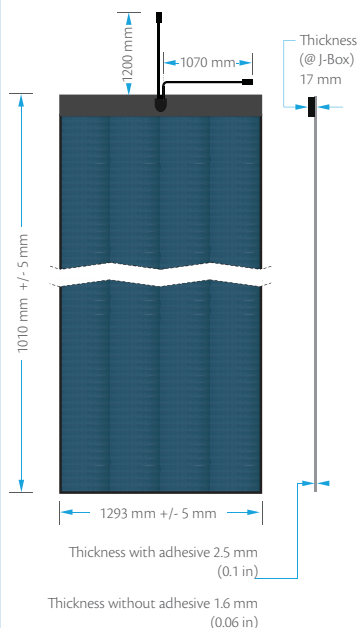
- ▶ 5 year workmanship
- ▶ 10/25 year warranty against power loss



# MiaSolé FLEX SERIES

## FLEX-03WS SERIES CIGS MODULE

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



			FLEX-03 160WS <sup>1</sup>	FLEX-03 170WS <sup>2</sup>	FLEX-03 180WS <sup>3</sup>	FLEX-03 190WS <sup>4</sup>
Nominal Power	$P_{MPP}$	[W]	160	170	180	190
Aperature Efficiency	$\eta$	[%]	14.7%	15.6%	16.5%	17.4%
Power Output Tolerance		[W]	+10/-0	+10/-0	+10/-0	+10/-0
Maximum Power Voltage	$V_{MPP}$	[V]	20.5	21.0	21.5	22.0
Maximum Power Current	$I_{MPP}$	[A]	7.82	8.09	8.37	8.64
Open Circuit Voltage	$V_{OC}$	[V]	26.2	26.5	26.7	27.0
Short Circuit Current	$I_{SC}$	[A]	9.40	9.40	9.40	9.40
Maximum Series Fuse Rating		[A]	25			
Maximum System Voltage (IEC/UL)		[V]	1000/1000			

<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	1010 mm (39.8 in)
Width	1293 mm (50.9 in)
Thickness, Maximum at J-Box*, Module	17 mm (0.7 in), 2.5 mm (0.1 in)
Weight (Module without adhesive)	2.1 kg (4.7 lb)
Weight (Module with adhesive)	2.5 kg (5.6 lb)
Weight/Area (Module without adhesive)	1.6 kg/m <sup>2</sup> (0.3 lb/ft <sup>2</sup> )
Weight/Area (Module with adhesive)	1.9 kg/m <sup>2</sup> (0.4 lb/ft <sup>2</sup> )
Junction Box Type	IP68
Cable Connections	Amphenol H <sub>4</sub>
Cell Type	Copper Indium Gallium Diselenide (CIGS)
Warranty**	5 year workmanship; 10/25 year power output
Certifications	UL 1703, IEC 61646, IEC 61730, UL Class A over TPO - slope up to 1", IEC 61701 (Salt Spray)

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

\*\*1.6 mm (0.06 in) for the rest of module without adhesive

\*\*Please see full warranty for details

#### Corresponding UL/IEC Model Numbers:

<sup>1</sup>FLEX-03 160W

<sup>2</sup>FLEX-03 170W

<sup>3</sup>FLEX-03 180W

<sup>4</sup>FLEX-03 190W



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