

# MiaSolé

## FLEX SERIES—03

### OFF-GRID CUSTOM MODULE

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

#### KEY FEATURES

- ▶ Record efficiency levels in a CIGS flexible form factor
- ▶ Low installed weight at less than 2.2 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 62716
- ▶ UL 1703, cUL 1703

#### WARRANTY

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

#### 16V (32 CELLS PER STRING) DESIGN

ELECTRICAL PERFORMANCE AT STC <sup>1</sup>			16V(32 cells)	16V(64 cells)	16V(96 cells)	16V(128 cells)
Nominal Power	$P_{MPP}$	[W]	72	144	216	288
Aperture Efficiency	$\eta$	[%]	16.5%	16.5%	16.5%	16.5%
Power Output Tolerance		[W]	+5/-0	+5/-0	+5/-0	+5/-0
Maximum Power Voltage	$V_{MPP}$	[V]	17.22	17.22	17.22	17.22
Maximum Power Current	$I_{MPP}$	[A]	4.17	8.34	12.51	16.68
Open Circuit Voltage	$V_{OC}$	[V]	21.44	21.44	21.44	24.44
Short Circuit Current	$I_{SC}$	[A]	4.7	9.4	14.1	18.8
Dimensions		[mm]	1525 x 363	1525 x 677	1524 x 993	1525 x 1293

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

# MiaSolé FLEX SERIES- OFF-GRID CUSTOM MODULE

## FLEX-03 CIGS MODULE

### 32V (32 CELLS PER STRING) DESIGN ELECTRICAL PERFORMANCE AT STC<sup>1</sup>

		32V (64 cells)	32V (128 cells)
Nominal Power	$P_{MPP}$	[W]	144
Aperture Efficiency	$\eta$	[%]	16.5%
Power Output Tolerance		[W]	+5/-0
Maximum Power Voltage	$V_{MPP}$	[V]	34.43
Maximum Power Current	$I_{MPP}$	[A]	4.17
Open Circuit Voltage	$V_{OC}$	[V]	42.88
Short Circuit Current	$I_{SC}$	[A]	4.7
Dimensions		[mm]	1525 x 677

### 48V (32 CELLS PER STRING DESIGN) ELECTRICAL PERFORMANCE AT STC<sup>1</sup>

		48V (96 cells)
Nominal Power	$P_{MPP}$	[W]
Aperture Efficiency	$\eta$	[%]
Power Output Tolerance		[W]
Maximum Power Voltage	$V_{MPP}$	[V]
Maximum Power Current	$I_{MPP}$	[A]
Open Circuit Voltage	$V_{OC}$	[V]
Short Circuit Current	$I_{SC}$	[A]
Dimensions		[mm]

### 64V (32 CELLS PER STRING) DESIGN ELECTRICAL PERFORMANCE AT STC<sup>1</sup>

		64V (128 cells)
Nominal Power	$P_{MPP}$	[W]
Aperture Efficiency	$\eta$	[%]
Power Output Tolerance		[W]
Maximum Power Voltage	$V_{MPP}$	[V]
Maximum Power Current	$I_{MPP}$	[A]
Open Circuit Voltage	$V_{OC}$	[V]
Short Circuit Current	$I_{SC}$	[A]
Dimensions		[mm]

<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	2935 mm
Width	120 mm
Thickness, Maximum at J-Box*, Module	17 mm (0.7 in), 2.5 mm (0.1 in)
Weight/Area (Module without adhesive)	1.8 kg/m <sup>2</sup> (0.4 lb/ft <sup>2</sup> )
Weight/Area (Module with adhesive)	2.2 kg/m <sup>2</sup> (0.5 lb/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, IEC 61646, IEC 61730, cUL 1703, IEC 62716,

\*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

Made in the USA



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