# MiaSolé CIGS SOLAR CELL

Copper Indium Gallium Diselenide (CIGS) Solar Cells: High Power Density in a Flexible Form Factor

MiaSolé thin—film CIGS solar cells on stainless steel substrate have high efficiency levels and provide significant advantages over conventional, rigid solar cells.

### **KEY FEATURES**

- Aperture efficiency of up to 17% in a flexible form factor.
- ► Thin—**0.**33mm
- Lightweight—7.5 gm
- ► Ideal for many specialized uses. Versatile cell architecture means the size can be modified to suit various applications.
- ▶ Bendable and shatter—proof

### **HANDLING AND STORAGE NOTES**

- Cells are sensitive to temperature and humidity. They must be stored either in vacuum—sealed containers or in a dry box with ≤5% relative humidity. Cells should be kept between 20-25 °C.
- Cells require encapsulation before use to protect against moisture and the environment.





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### **ELECTRICAL PERFORMANCE BY 0.5% EFFICIENCY BINS**

Cell Efficiency			15.5%	16.0%	16.5%	17%
Nominal Power	P <sub>MPP</sub>	[W]	2.12	2.18	2.25	2.32
Power Output Tolerance		[W]	+0.1/-0	+0.1/-0	+0.1/-0	+0.1/-0
Maximum Power Voltage	$V_{MPP}$	[V]	0.526	0.531	0.538	0.545
Maximum Power Current	I <sub>MPP</sub>	[A]	4.04	4.11	4.17	4.25
Open Circuit Voltage	V <sub>oc</sub>	[V]	0.661	0.664	0.670	0.673
Short Circuit Current	I <sub>sc</sub>	[A]	4.70	4.70	4.70	4.70

# THERMAL CHARACTERISTICS\*

NOCT	[℃]	48
Temperature Coefficient of P <sub>MPP</sub>	[%/℃]	-0.38
Temperature Coefficient of V <sub>oc</sub>	[%/℃]	-0.28
Temperature Coefficient of I <sub>sc</sub>	[%/℃]	0.008

<sup>\*</sup>based on MiaSole FLEX-02 module measurements

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# PHYSICAL AND MECHANICAL SPECIFICATIONS

Length	312 mm +2/-4 mm
Width	43.75 mm ± .005 mm
Thickness	0.33 mm ± 0.1 mm
Weight	7.5 gm ± 0.1 gm
Cell Type	Copper Indium Gallium Diselenide (CIGS)

# **CELL DIAGRAM**

