

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 $\leq 5\%$ 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_{MPP}	[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_{MPP}	[A]	4.04	4.11	4.17	4.25
Open Circuit Voltage	V_{OC}	[V]	0.661	0.664	0.670	0.673
Short Circuit Current	I_{SC}	[A]	4.70	4.70	4.70	4.70

THERMAL CHARACTERISTICS*

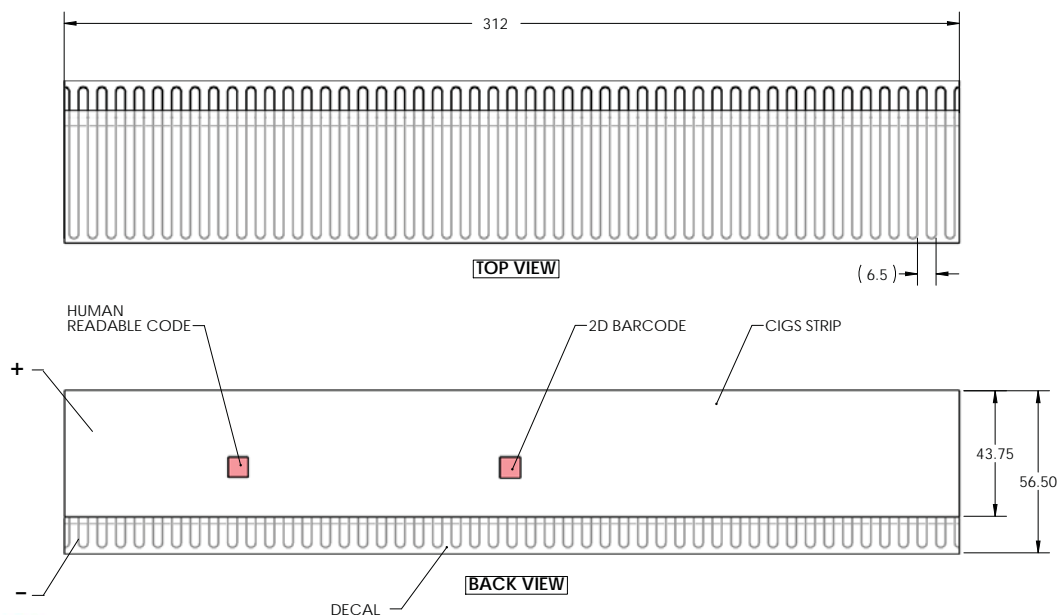
NOCT	[°C]	48
Temperature Coefficient of P_{MPP}	[%/°C]	-0.38
Temperature Coefficient of V_{OC}	[%/°C]	-0.28
Temperature Coefficient of I_{SC}	[%/°C]	0.008

*based on MiaSolé FLEX-02 module measurements

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



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

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