

## MODEL: FLEX-03WS-1M

### High Power Density in a Flexible Form Factor

#### KEY FEATURES:

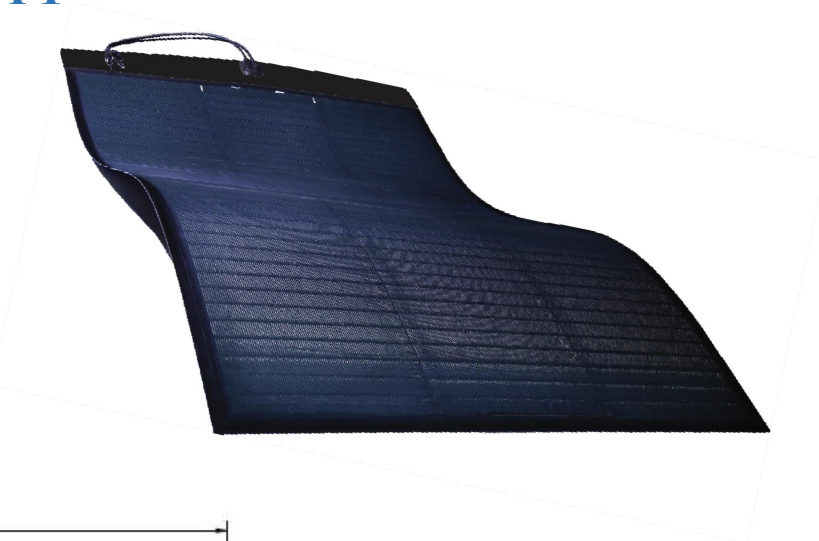
- Record efficiency levels in a CIGS flexible form factor
- Low installed weight at less than 2.0 kg/m2(<0.5 lb/ft2 )
- No penetrations, ballast or racking required
- Applicable for high wind load and high seismic hazard areas
- Bypass diodes reduce PV system shading losses
- Directly bonds to many approved surfaces

### RELIABILITY AND SAFETY

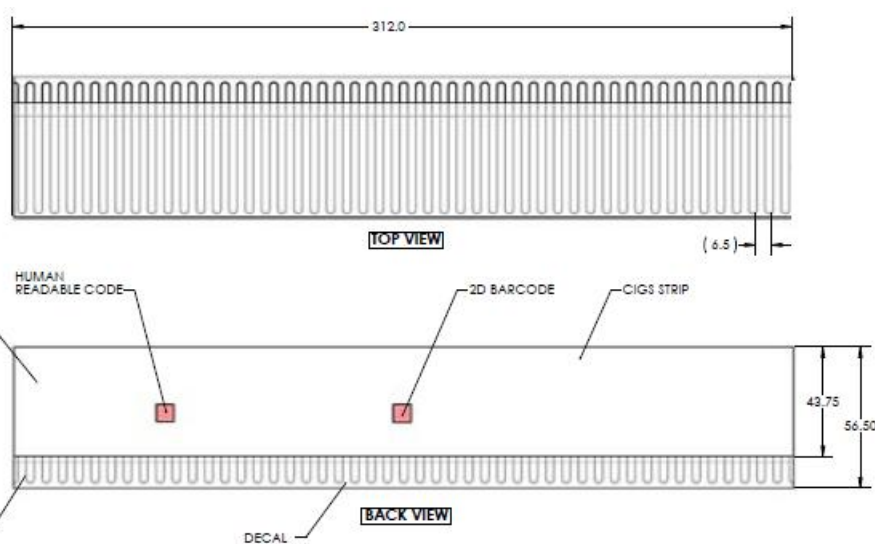
- IEC 61646 & IEC 61730
- UL 1703

### WARRANTY

- 5 years workmanship
- 5/10/25 years warranty against power loss



### CIGS SOLAR CELL



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

#### Cell Features:

- Efficiency level of up to 16.5% 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

### SINOLTECH COOPERATION WITH HANERGY:

SINOLTECH becomes authorized cooperator with Hanergy in year 2015.

Representing brand "Global Solar", "Miasole" and "Solibro" CIGS Modules in overseas market.

SINOLTECH keep regular stocks of Hanergy CIGS flex module and Solibro BIPV module.

Capable of prompt delivery within 5 working days.

SINOLTECH produce and represent High Quality Solar Products Only.

Our professional product knowledge, quick customer response, responsible after sale service will make your whole purchase process worry-free!

## MODEL: FLEX-03WS-1M

### Electrical Specifications

Capacity rating	Pmax	170W
Tolerance of Pmax	%	+10 / -0%
Module aperture area efficiency	%	16.5%
Maximum Power Voltage	V <sub>mpp</sub>	21.5V
Maximum Power Current	I <sub>mpp</sub>	7.93A
Open circuit voltage	V <sub>oc</sub>	26.9V
Short circuit current	I <sub>sc</sub>	9.17A

Standard Test Conditions (STC): Cell Temperature at 25° C; Solar irradiance intensity of 1000 W/m<sup>2</sup>; AM1.5 solar reference spectrum (ASTM E892)

### Thermal Characteristics

NOCT	[°C]	48
Temperature Coefficient of P <sub>MPP</sub>	V <sub>max</sub>	-0.38 %/°C
Temperature Coefficient of V <sub>OC</sub>	V <sub>oc</sub>	-0.28 %/°C
Temperature Coefficient of I <sub>SC</sub>	I <sub>sc</sub>	0.008 %/°C

Note: Relative to Standard Test Conditions(STC):  
Solar irradiance intensity of 100W/m<sup>2</sup>;  
AM1.5 Solar reference spectrum (ASTM E892)

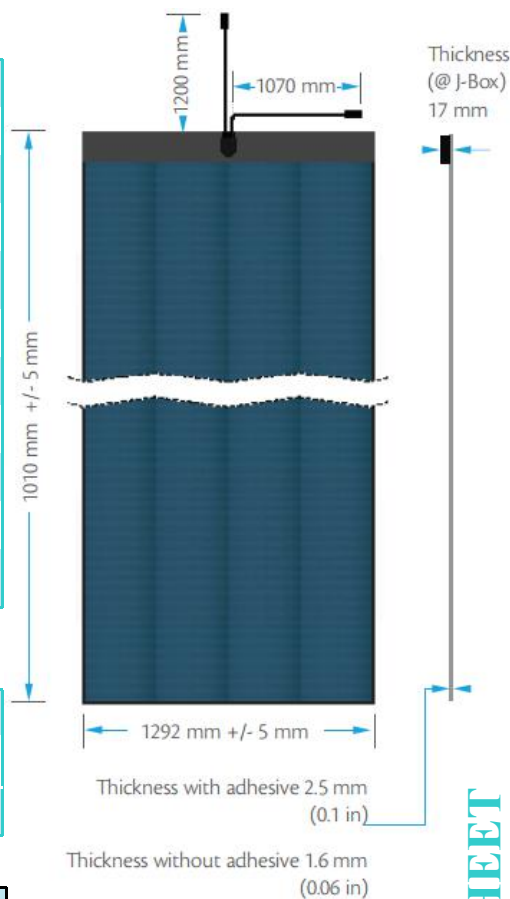
### Low-Light Performance

Intensity	Relative Efficiency
1000 W/m <sup>2</sup>	100%
500 W/m <sup>2</sup>	99%
200 W/m <sup>2</sup>	91%

Note: Relative to Standard Test Conditions(STC): Cell Temperature at 25°C; AM1.5 solar reference spectrum(ASTM E892)

### Mechanical Specifications

Model Numbers	FLEX-03WS-1M SERIES
Length	1010mm
Width	1292mm
Thickness, Maximum at J-Box*	17mm
Weight(Module without adhesive)	2.1 kg
Weight(Module with adhesive)	2.5 kg
Weight/Area(Module without adhesive)	1.6 kg/m <sup>2</sup>
Weight/Area(Module with adhesive)	1.9 kg/m <sup>2</sup>
Junction Box Type	IP68
Cable connections	MC4 Compatible
Cell type	Copper Indium Gallium Diselenide (CIGS)



### Operating Conditions

Temperature range	-40 to + 85 °C
Maximum System Voltage	1000 VDC IEC, 600VDC UL
Maximum Series Fuse Rating	10A

### Certifications and Warranty

EN 61646, EN 61730, UL 1703
Warranty: 5 years workmanship; (90% @10 yrs; 80% @ 25 yrs) Limited Guarantee

### Contact Us:

SINOLTECH ENERGY LIMITED  
Shandong Sinoltech International Co., Ltd  
TEL: +86-15318807707  
Address: A1-3-712, EAST 8 ENTERPRISE MANSION,  
DESIGN & CREATIVE INDUSTRIAL AREA, JINAN, CHINA  
POST CODE: 250100 Email: [Susan@sinoltech.com](mailto:Susan@sinoltech.com)  
SKYPE: Sinoltech  
Website: [www.sinoltech.com](http://www.sinoltech.com), [www.sinolsolar.com](http://www.sinolsolar.com)

