

Original size

## CDTE THIN FILM SOLAR MODULE CX3

The Calyxo CX series is a series of cost-efficient high performance modules. Based on innovative and patented CdTe thin film solar technology, the solar modules are designed to provide a significant reduction in the overall costs of electricity generation.

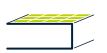
### APPLICATION



RESIDENTIAL ROOFTOP  
INSTALLATION



COMMERCIAL AND INDUSTRIAL  
INSTALLATION



ROOF-PARALLEL AND FLAT-ROOF  
INSTALLATION



GROUND MOUNTED  
INSTALLATION

### THE ALLROUNDER

- 1200 x 600 mm module area
- Low temperature coefficients
- High performance ratio
- Positive sorting +2.5 W / -0 W
- Mounting options for every inclination - from roof top to ground mounted

### WARRANTY

- 10-years product warranty
- 25-years performance warranty\*
- Free module recycling through membership in the PV Cycle Association\*\*

MECHANICAL SPECIFICATION		TECHNICAL DRAWING
Length x Width	1200 mm x 600 mm	
Thickness	6.9 mm (21.0 including junction box)	
Weight	12.0 kg	
Front Cover	3.2 mm glass	
Back Cover	3.2 mm glass	
Cell Type	Cadmium telluride / Cadmium sulfide [CdTe/CdS]	
Frame	None	
Junction Box	Protection Class IP65	
By-Pass Diode	None	
Cable Length	650 mm (+Cable), 850 mm (-Cable)	
Cable Type	Solar cable 1.5mm <sup>2</sup>	
Connector	Y-Sol4	

## ELECTRICAL CHARACTERISTICS

Performance at standard test conditions (STC: 1000W/m<sup>2</sup>, 25°C, AM 1.5 Spectrum)<sup>1</sup>

POWER CLASS	CX	75	77	80	82	85
Nominal Power (±5%)	P <sub>MPP</sub> [W]	75.0	77.5	80.0	82.5	85.0
Current at max. Power	I <sub>MPP</sub> [A]	1.65	1.68	1.72	1.75	1.78
Voltage at max. Power	V <sub>MPP</sub> [V]	46.3	46.7	47.0	47.3	47.8
Short Circuit Current	I <sub>SC</sub> [A]	1.95	1.98	2.01	2.04	2.06
Open Circuit Voltage	V <sub>OC</sub> [V]	62.0	62.5	62.8	63.2	63.6

Performance at normal operating cell temperature (NOCT: 800 W/m<sup>2</sup>, 40 ±2°C, AM 1.5 Spectrum)

Power Class	CX	75	77	80	82	85
Nominal Power	P <sub>MPP</sub> [W]	57.2	58.9	60.4	62.0	63.6
Current at maximum Power	I <sub>MPP</sub> [A]	1.32	1.35	1.38	1.40	1.43
Voltage at maximum Power	V <sub>MPP</sub> [V]	43.2	43.6	43.9	44.2	44.5
Short Circuit Current	I <sub>SC</sub> [A]	1.56	1.59	1.61	1.63	1.66
Open Circuit Voltage	V <sub>OC</sub> [V]	57.9	58.3	58.6	58.9	59.3

Performance at low irradiance

The typical relative change in module efficiency at an irradiance of 200W/m<sup>2</sup> in relation to 1000W/m<sup>2</sup> (both at 25°C and AM 1.5 spectrum) on request.

Temperature coefficients (at 1000W/m <sup>2</sup> , AM 1.5 Spectrum)			
Temperature Coefficients of I <sub>SC</sub>	α	[%/K]	+0.02
Temperature Coefficients of V <sub>OC</sub>	β	[%/K]	-0.24
Temperature Coefficients of P <sub>MPP</sub>	γ	[%/K]	-0.25

Properties for system design			
Maximum System Voltage	V <sub>sys</sub>	[V]	1000 (IEC) / 600 (UL1703)
Maximum Reverse Current	I <sub>r</sub>	[A]	4.0
Wind / Snow Load	p	[Pa]	2400
Safety Class			II
Fire Rating			B

<sup>1</sup>The power classes are defined by positive sorting (+2.5W/-0W) according to measured P<sub>MPP</sub> under STC. I<sub>MPP</sub>, V<sub>MPP</sub>, I<sub>SC</sub>, V<sub>OC</sub> are within ±10% of the indicated values under STC.  
Valid indoor measurement of STC performance is obtained by pretreating the module before measurement with 24 hour light soak (at approx. 1000W/m<sup>2</sup> in open circuit) followed by cool down to 25°C.

## YOUR DIRECT CONTACT TO THE SUN

### QUALIFICATIONS AND CERTIFICATES

IEC 61646; IEC 61730 Application Class A; MCS; ISO 9001:2008; ISO 14001:2004; OHSAS 18001:2007; PVCycle; CE-Mark; Safety Class II; UL 1703 (pending)



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