

CIGS THIN FILM SOLAR MODULE SL2

The New Power Module



- 0.94 m² AREA FOR INCREASED POWER UP TO 110 W_p
- EXCELLENT ENERGY YIELD IN A WIDE RANGE OF APPLICATIONS
- QUALITY „MADE IN GERMANY“ FOR SAFETY AND LONG TERM STABILITY
- PRE-FINANCED END-OF-LIFE MODULE TAKE-BACK THROUGH PV CYCLE

MECHANICAL SPECIFICATION

Thickness	7.4 mm (22 mm including junction box)
Weight	16.5 kg
Front Cover	4 mm tempered low iron glass
Back Cover	3 mm float glass
Frame	None
Cell Type	CIGS [Cu(In, Ga) Se ₂]
Junction Box	Protection class IP 65 with by-pass diode
Cable Length	730 mm (+ cable) / 635 mm (- cable)
Connector	Multicontact MC4

ELECTRICAL CHARACTERISTICS

PERFORMANCE AT STANDARD TEST CONDITIONS (STC: 1000 W / m², 25°C, AM 1.5 SPECTRUM)¹⁾

PRODUCT NAME			SL2-90	SL2-95	SL2-100	SL2-105	SL2-110
Nominal Efficiency	η	[%]	9.6	10.1	10.6	11.2	11.7
Nominal Power (+5/-0 W)	P_{max}	[W]	90	95	100	105	110
Short Circuit Current	I_{sc}	[A]	1.58	1.58	1.58	1.60	1.60
Open Circuit Voltage	V_{oc}	[V]	89.7	90.9	92.0	92.7	93.6
Current at Maximum Power	I_{mp}	[A]	1.32	1.35	1.38	1.42	1.46
Voltage at Maximum Power	V_{mp}	[V]	68.2	70.4	72.4	73.7	75.5

PERFORMANCE AT NORMAL OPERATING CELL TEMPERATURE (NOCT: 800 W/m², 51± 2°C, AM 1.5 SPECTRUM)

PRODUCT NAME			SL2-90	SL2-95	SL2-100	SL2-105	SL2-110
Nominal Efficiency	η	[%]	8.7	9.1	9.6	10.1	10.6
Nominal Power	P_{max}	[W]	65.1	68.8	72.4	76.0	79.6
Short Circuit Current	I_{sc}	[A]	1.26	1.26	1.26	1.28	1.28
Open Circuit Voltage	V_{oc}	[V]	81.5	82.6	83.6	84.3	85.1
Current at Maximum Power	I_{mp}	[A]	1.05	1.07	1.10	1.13	1.16
Voltage at Maximum Power	V_{mp}	[V]	61.9	63.9	65.7	66.9	68.4

PERFORMANCE AT LOW IRRADIANCE

The typical relative change in module efficiency at an irradiance of 200 W/m² in relation to 1000 W/m² (both at 25°C and AM 1.5 spectrum) is -7%.

TEMPERATURE COEFFICIENTS (AT 1000 W / m², AM 1.5 SPECTRUM)

Temperature Coefficient of I_{sc}	α	[%/K]	-0.01 ± 0.04
Temperature Coefficient of V_{oc}	β	[%/K]	-0.30 ± 0.04
Temperature Coefficient of P_{max}	γ	[%/K]	-0.38 ± 0.04

¹⁾ The power classes are defined by positive sorting (+5/-0 W) according to measured Pmax under STC. The accuracy of this measurement is ±3%. I_{sc} , V_{oc} , I_{mp} , V_{mp} are within ±10% of the indicated values under STC. Valid indoor measurement of STC performance is obtained by pretreating the modules before measurement with 1 hour light soak (at approx. 1000 W/m² in open circuit) followed by cool down to 25°C.

PROPERTIES FOR SYSTEM DESIGN

Safety Class	II	
Maximum System Voltage	V_{sys}	[V] 1000 (IEC) / 600 (UL 1703)
Maximum Reverse Current	I_R	[A] 5.0
Wind/Snow Load	[Pa]	2400
Fire Rating	C	

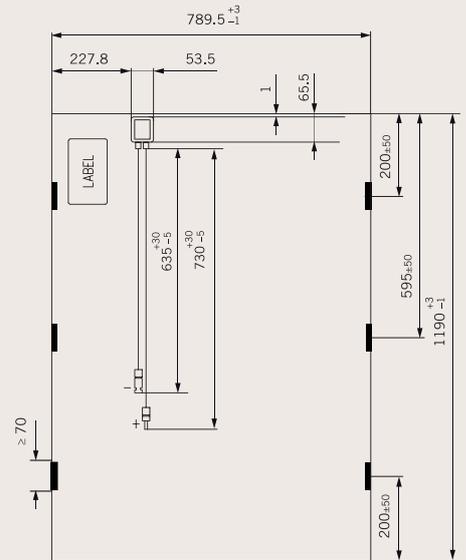
See the Installation and Operating Manual or contact the Technical Service for further information on approved installation and use of this product.

QUALIFICATIONS AND CERTIFICATES

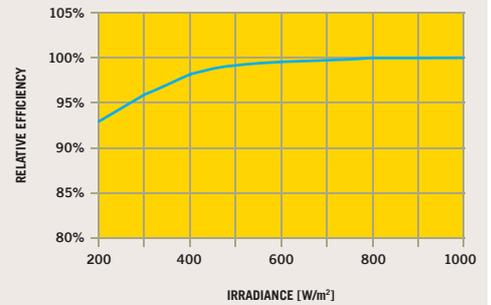
IEC 61646, IEC 61730 Application Class A, UL 1703 (pending), ISO 9001:2008



MECHANICAL DRAWING



PERFORMANCE AT LOW IRRADIANCE



CHARACTERISTICS AT DIFFERENT TEMPERATURES AND IRRADIANCES (FOR SL2-95)



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