USL

Solar

Photovoltaic

Modules

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KL090 - KL100 - KL110

Polycrystalline Modules

USL Solar provides cost-effective photovoltaic power for general use, operating DC directly or, in an inverter-equipped system, AC loads. The 36/72 cells in series provides 90W, 100W & 110W of maximum power, it is used primarily in utility grid-supplemental systems, telecommunications, remote villages and clinics, pumping and load-based aids to navigation.

Proven Materials and Construction

USL Solar experience shows in every aspect of this module's construction and materials

- Anodized aluminum frame offers required strength and allows for quick and easy installation on standard array structures.
- 36/72 Crystalline silicon solar cells in series with by pass diodes installed.
- Modules are laminated in toughened low iron content PV grade glass – Ethyl Vinyl Acetate films – PV module back sheet.
- Optimized lamination process parameters ensure a stable laminate. Junction Box with PG Cable glands and bypass diodes are standard in all modules.
- Each module is flash tested in a Sun simulator to ensure conformity to specification.

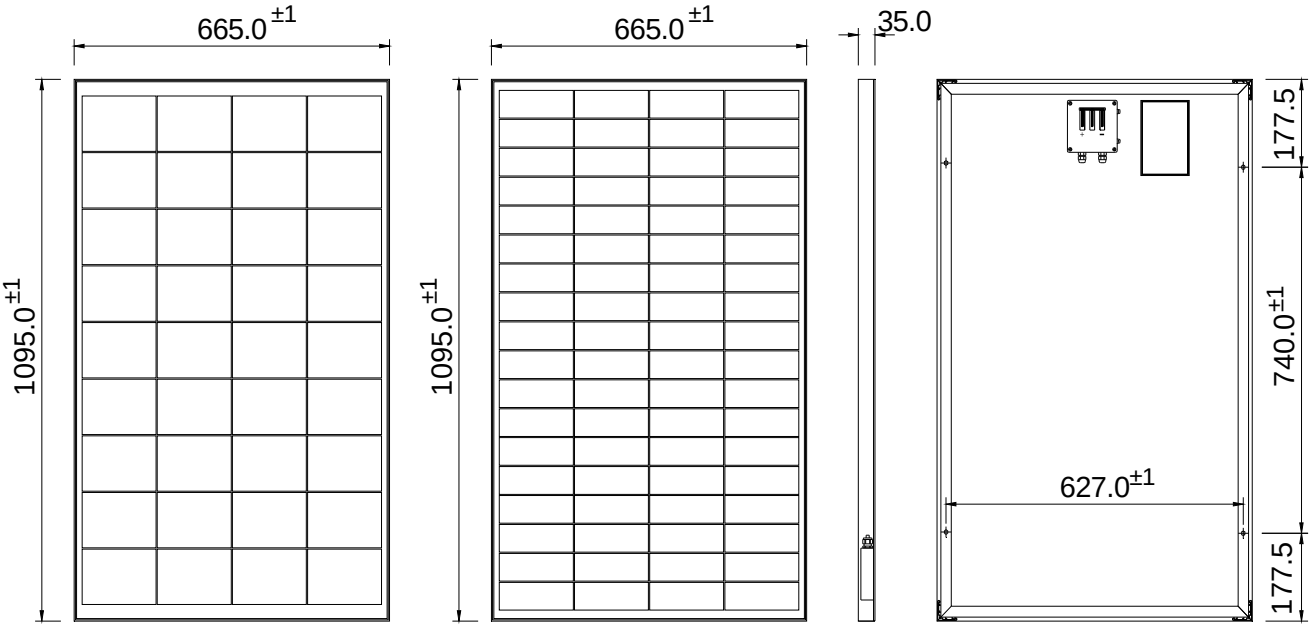
Electrical and Mechanical Data

Model	KL090		KL100		KL110	
Max. power (Pmax)	90Wp		100Wp		110Wp	
Type	12 V	24 V	12 V	24 V	12 V	24 V
Open Circuit Voltage (Voc)	21.75 V	43.5 V	21.75 V	43.5 V	21.75 V	43.5 V
Max. power point voltage (Vmpp)	17.1 V	34.2 V	17.1 V	34.2 V	17.1 V	34.2 V
Short circuit current (Isc)	5.79 A	2.89 A	6.43 A	3.22 A	7.08 A	3.54 A
Max. power point current (Impp)	5.26 A	2.63 A	5.85 A	2.93 A	6.43 A	3.22 A
Tolerance of Pmax	±10%	±10%	±10%	±10%	±10%	±10%
Cell Size (mm)	112 X 156	56 X 156	112 X 156	56 X 156	112 x 156	56 X 156
No. of cells	36	72	36	72	36	72
Dimensions (mm)	1095x665x35		1095x665x35		1095x665x35	
Max. system voltage	1000		1000		1000	
Module Efficiency	12.36%		13.76%		15.10%	
Weight (kgs)	10		10		10	

Standard Test Condition: Irradiance 1,000 W/sq.m, Temperature 25deg C Air mass 1.5 spectrum)

Performance of Thermal Characteristics

Temperature co-efficient	NOCT (^{O}C)45	Open-circuit voltage [Voc]	-0.36 %/K
Power [Pmax]	-0.43 %/K	Short circuit current (Isc)	+0.06 %/K



All dimensions are in mm

Qualification and certificates

The Photovoltaic Modules certified to IEC61215 & EN IEC 61730 Class A, Safety Class II

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