

# Solar

## Photovoltaic

## Modules

### KL024/KL025/KL030

#### Polycrystalline Modules

USL provides cost-effective photovoltaic power for general use, operating DC directly or, in an inverter-equipped system, AC loads. The 36 cells in series provides 24W to 30Watts of maximum power, it is used primarily in utility grid-supplemental systems, telecommunications, remote villages and clinics, pumping and load-based aids to navigation.

## Series

# 6

TYPE - A



TYPE - B



#### Proven Materials and Construction

USL 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 Crystalline silicon solar cells in series.
- 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 are standard in all modules.
- Each module is flash tested in a Sun simulator to ensure conformity to specification.

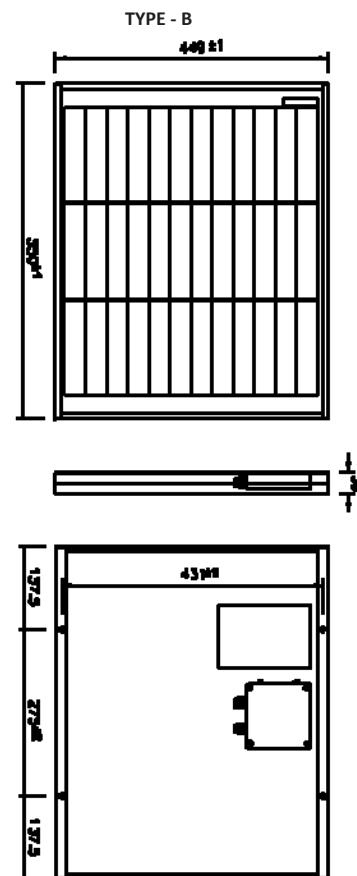
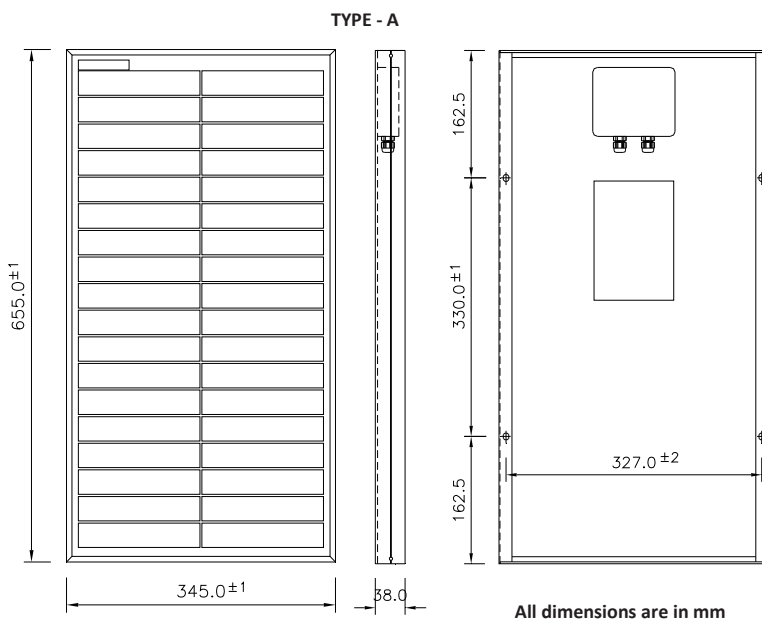
### Electrical and Mechanical Data

Model	KL024	KL025	KL030
Maximum power (Pmax)	24 Wp	25 Wp	30 Wp
Open Circuit Voltage (Voc)	21.5 V	21.5 V	21.5 V
Maximum power point voltage (Vmpp)	17.1 V	17.1 V	18.0 V
Short circuit current (Isc)	1.57 A	1.64 A	1.82 A
Maximum power point current (Impp)	1.41 A	1.47 A	1.67 A
Tolerance of Pmax	±10%	±10%	±10%
Cell Size (mm)	31.2x156	31.2x156	31.2x156
No. of cells	36	36	36
Dimensions (mm) ± 1 – TYPE-A	665 x 345 x 38	665 x 345 x 38	665 x 345 x 38
Dimensions (mm) ± 1 – TYPE-B	550 x 449 x 38	550 x 449 x 38	550 x 449 x 38
Maximum system voltage	1000	1000	1000
Module Efficiency – TYPE A	10.46%	11.06%	13.07%
Weight (kgs)	2.9	2.9	2.9

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 (°C)45
Power [Pmax]	-0.43 %/K
Open-circuit voltage [ Voc ]	-0.36 %/K
Short circuit current (Isc)	+0.06 %/K



### Qualification and certificates

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

