

USL



Solar

Photovoltaic

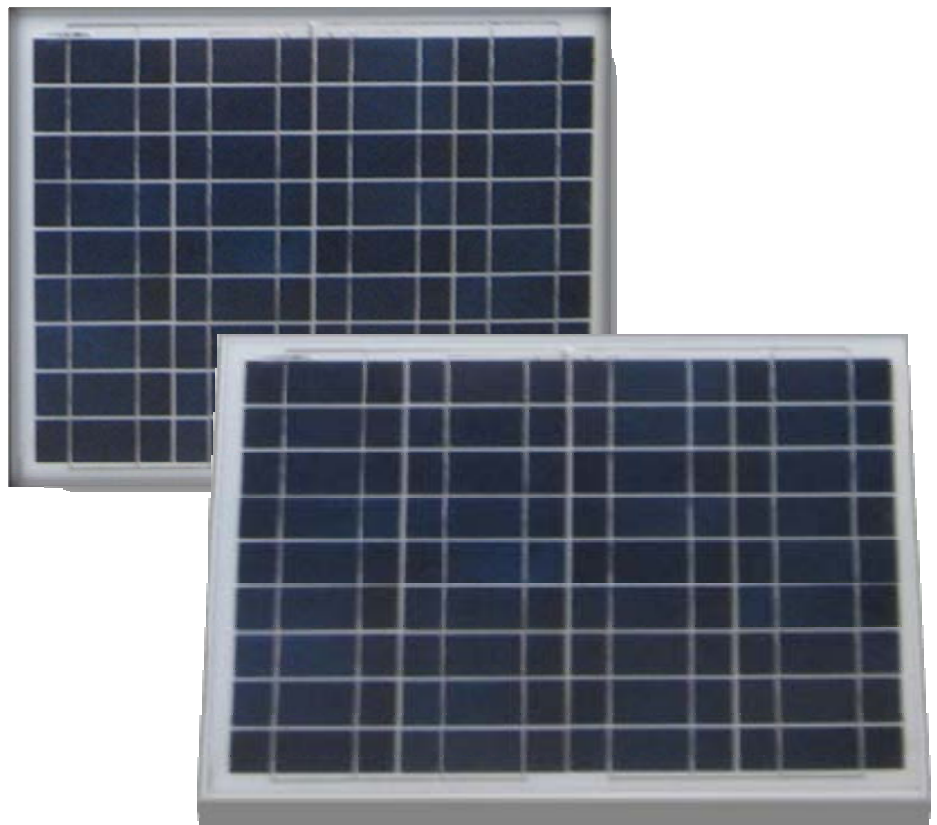
Modules

USP20 / USP25 / USP30

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 20W, 25W & 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.

M5

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*M5 Series:
Monocrystalline modules*

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.

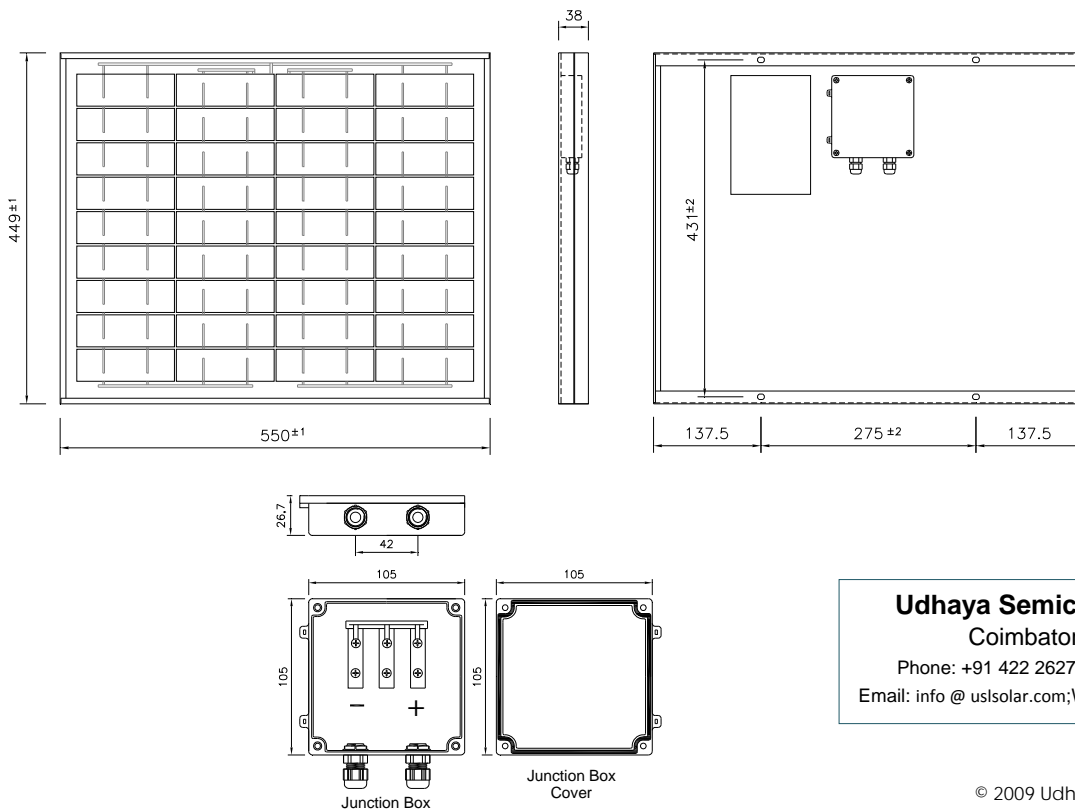
- Optimized lamination process parameters ensure a stable laminate. Junction Box with PG Cable glands are standard in all modules.

- Each module is flash tested in a Sun simulator to ensure conformity to specification.

Electrical and Mechanical Data

Model	USP20	USP25	USP30
Maximum power (Pmax)	20 Wp	25 Wp	30 Wp
Open Circuit Voltage (Voc)	21.0 V	21.5 V	21.8 V
Maximum power point voltage (Vmpp)	17.0 V	17.1 V	17.3 V
Short circuit current (Isc)	1.32 A	1.63 A	1.93 A
Maximum power point current (Impp)	1.18 A	1.46 A	1.73 A
Tolerance	±10%	±10%	±10%
Cell Size (mm)	41.66 X 125	41.66 X 125	41.66 X 125
No. of cells	36	36	36
Dimensions (mm) ± 1	550 x 449 x 38	550 x 449 x 38	550 x 449 x 38
Maximum system voltage	600	600	600
Temperature co-efficient	NOCT (°C)45	NOCT (°C)45	NOCT (°C)45
$\frac{\Delta Voc}{\Delta T}$ (mV/°C)	- 105	- 105	- 105
$\frac{\Delta Isc}{\Delta T}$ (mA/°C)	- 0.32	- 0.32	- 0.32
$\frac{\Delta Pmax}{\Delta T}$ (%/°C)	- 0.45	- 0.45	- 0.45
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)



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