

### USP100 / USP110 / USP120

*UPL provides cost-effective photovoltaic power for general use, operating DC directly or, in an inverter-equipped system, AC loads. The 72 cells in series provides 100W, 110W & 120 watts 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*

## Electrical and Mechanical Data

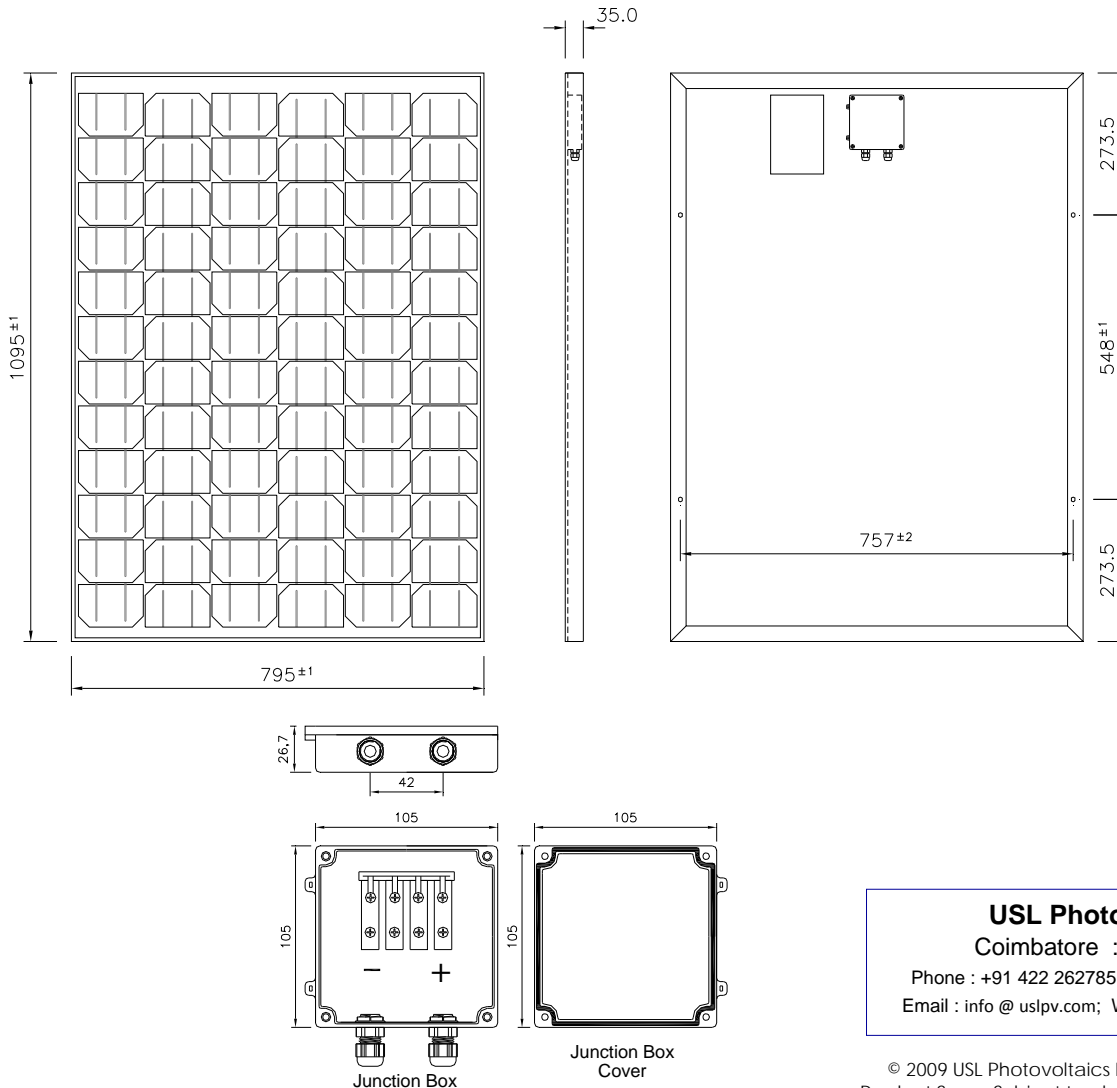
Model	USP100	USP110	USP120
Maximum power (Pmax)	100 Wp	110 Wp	120 Wp
Open Circuit Voltage (Voc)	43.0 V	43.6 V	43.6 V
Maximum power point voltage (Vmpp)	34.2 V	34.6 V	34.6 V
Short circuit current (Isc)	3.28 A	3.56 A	3.88 A
Maximum power point current (Impp)	2.93 A	3.18 A	3.47 A
Tolerance	±7.5%	±7.5%	±7.5%
Cell Size (mm)	83.5 x 125	83.5 x 125	83.5 x 125
No. of cells	72	72	72
Dimensions (mm) ± 1	1095 x 795 x 35	1095 x 795 x 35	1095 x 795 x 35
Maximum system voltage	1000	1000	1000
Temperature co-efficient	NOCT (°C)45	NOCT (°C)45	NOCT (°C)45
$\frac{\partial V_{oc}}{\partial T}$ (mV/°C)	- 105	- 105	- 105
$\frac{\partial I_{sc}}{\partial T}$ (mA/°C)	- 0.32	- 0.32	- 0.32
$\frac{\partial P_{max}}{\partial T}$ (%/°C)	- 0.45	- 0.45	- 0.45
Weight (kgs)	10.0	10.0	10.0

### Proven Materials and Construction

UPL 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.
- 72 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 and bypass diodes are standard in all modules.
- Each module is flash tested in a Sun simulator to ensure conformity to specification.

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



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