Photoelectric™

An ISO 9001: 2008 Certified Company

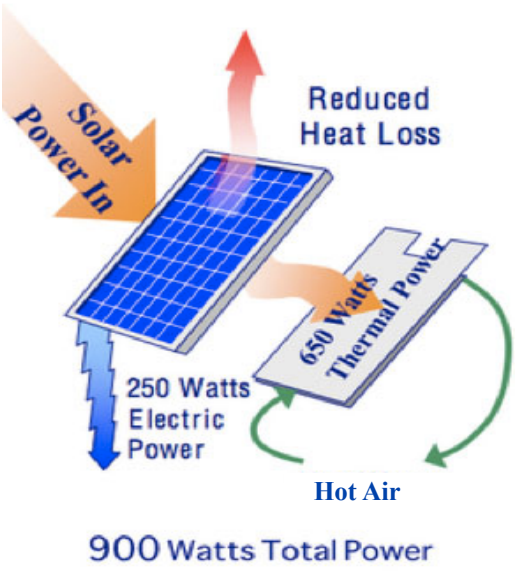
Solar PVT Panel

Solar Panel	300 Watts
Energy Usage (fan)	Watts 30
Heat Energy Output	Watts 1200
Panel Weight	40 kg
Dimensions	1.0 m W x 2m L x 50mm H
Temperature Gain DegC	10 C to 28 C degrees above ambient
Modularly Expandable	Yes - working in parallel
Power Supply	Options 115v AC wall outlet / 12v DC / 220v-50
BTU's p/hour	Up to 10,000

Additional Information:

- Puts out more heat per square foot than any other type of panel at any given irradiance level, angle of incidence or flow rate.
- Hermetically sealed, allowing recirculation of filtered household air. This also means that we are not pulling household air over paint.
- No fogged lenses or mold; as household moisture laden air is prevented from getting between the lens and the core.
- Starts sooner, and runs longer with lowest angle of incidence modifier in the industry.
- No tracking device necessary.
- Used for space heating, crop/process drying, and preheating of ventilation air.
- External Frame made of Extruded Aluminum.
- Internal Core is made of Aluminum Fins.
- Most cost effective heating system in the world market to date.
- PV Panel of 300 W can be used to supply power for Blower Fan and other household appliances with or without inverter optional.
- Application: Cold remote areas where grid is not available.

Solar PVT Panel



11-A, Dina Bldg, 2nd Floor, Shrikant Palekar Marg, Chira Bazaar, Mumbai- 400002.
Maid Id: vphotoelectric@gmail.com, Website: www.photoelectric-solar.in, Mobile: 09867305800

Photoelectric™

An ISO 9001: 2008 Certified Company

Hybrid photo-thermal collector

The hybrid solar panel is a combination of a photovoltaic module and a solar thermal collector. This compact appliance performs two functions simultaneously, and spares mounting space.

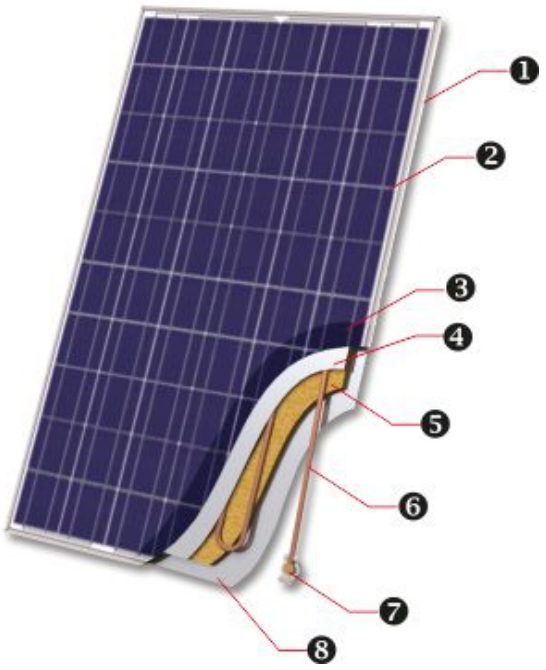
A well known property of all crystalline PV cells is that they lose efficiency as their temperature rises with a rate of 0.5%/°C. Since they need solar energy to generate electricity at their highest capacity, however, they demand abundant solar radiation. As there are seldom such conditions in nature, regular PV modules can hardly be found to operate at their maximum efficiency: High solar activity is normally available in the warm seasons, and the surface of the regular PV modules heats up in result of being exposed to direct sunlight, thus losing efficiency. The Photoelectric PVT works around this issue as its cells are permanently cooled down by the thermal absorber passing behind the cell layer. The absorbed heat from the PV is utilized for heating Space.

Main advantages:

- Compact design
- Higher electricity yield as compared to regular PV modules
- Powers a hot Space heating system

PVT Elements

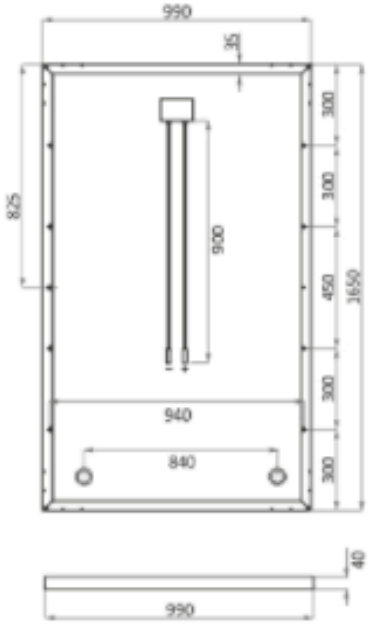
1. Aluminum case
2. Protective glass pane
3. Cell layer
4. Separator
5. Rockwool insulation
6. Thermal absorber
7. Thermal Inlet/Outlet
8. Back panel

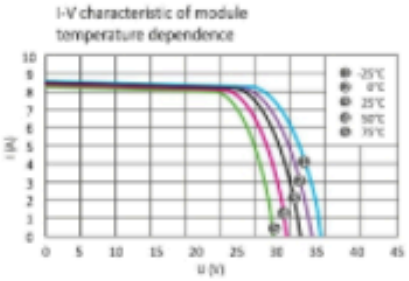


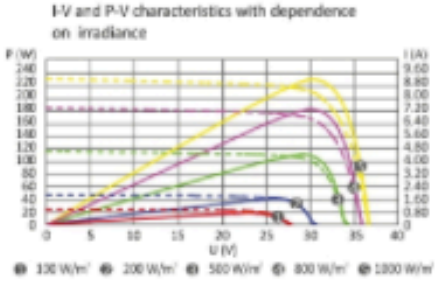
Photoelectric™

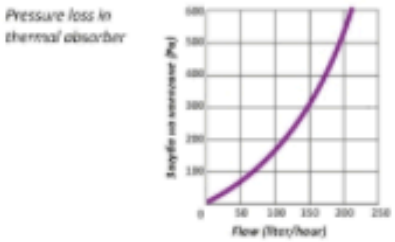
An ISO 9001: 2008 Certified Company

	Model	PVT 240
	Overall dimensions	1650 x 990 x 40 mm
	Weight	28 kg
	Case	Aluminum
Photovoltaic module	Front side	Tempered solar glass 3,2 mm
	Back side	Aluminum panel
	Cell type	Polycrystalline
	Number of cells/ cell dimension	60(6x10) /156x156mm
	Maximum power Pmax	240 Wp
	Cable lenght	900 mm
	Connector type	MC 4
	Electricity yield tolerance	+ 3% - 0%
	Voltage at max power Vmp	30,6 V
	Current at max power Imp	7,84 A
	Open circuit voltage Voc	37,2 V
	Short circuit current Isc	8,52 A
	Cell/Module efficiency	16,4 % /14,7 %
	NOCT	48˚C ± 2˚C
	Temperature coefficient of Pmax	- 0,45 % / ˚C
	Temperature coefficient of Vmp	- 0,35 % / ˚C
	Temperature coefficient of Imp	+ 0,05 % / ˚C
	Temperature coefficient of Voc	- (0,3 ± 0,05) % / ˚C
	Temperature coefficient of Isc	+ 0,065 % / ˚C
	Max. system voltage	1000 V DC
	Temperature range	-40˚C - +85˚C
	Max. physical load	2400 Pa
	Overall surface	1,62 m²
	Nominal thermal capacity	900 W
Thermal absorber	Thermal inlet/outlet	G ½"
	Distance between thermal inlet and outlet	840 mm
	Heat carrier	Propylene Glycol
	Volume of heat carrier	1,17 l
	Flow rate of heat carrier	1,5 ÷ 2,5 l/min
	Thermal loss coefficient K_1	9,12
	Thermal loss coefficient K_2	0,00
	Separator	AL Aluminum
	Absorber	Cu Copper
	Insulation	Rigid PU - 20 mm









* STC (Standard test conditions) : Irradiation 1000 W/m2,
ambient temperature 25˚C, Spectre AM 1.5