High Quality PVT Modules Series

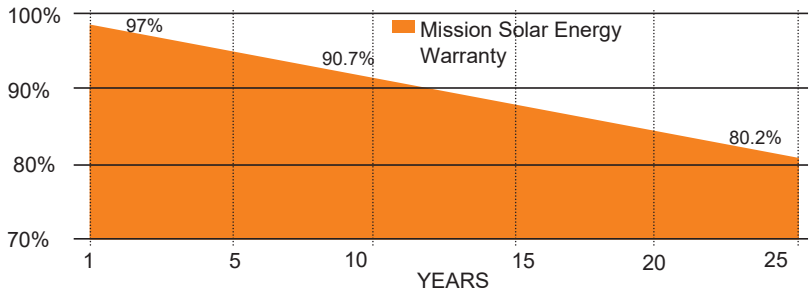
Photovoltaic Thermal Modules - PVT 280W(60)PVT

Producer: Plasma DOO; PV modules: PiKCELL Group; Solar thermal absorber: Camel Solar DOO

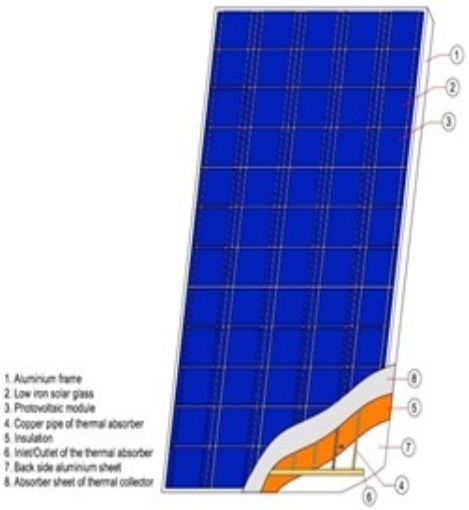
PVT collectors provide both electrical and thermal energy.
Electrical power is around 20% more than standard PV panel during summer period plus 3 to 4 times more thermal power compare with electrical power from PV standard module.
Introduction with PVT: The greater part of the absorbed solar radiation by photovoltaic is converted into heat (at about 70% - 80%), small part reflected and the rest into electricity. As result of that cell temperature of PV is increasing. This effect reduces PV electrical efficiency.
In façade or inclined roof installation on buildings the thermal losses are reduced due to the thermal protection of PV rear surface and PV modules operate at higher temperatures.
This undesirable effect can be partially avoided by PVT hybrid collector (pictures b and c) applying a suitable heat extraction with a fluid circulation, keeping the electrical efficiency at a satisfactory level.
PVT collector divided in two groups:
a) Glazed: PV panel with additional glass above PV panel which produce more thermal power and
b) Unglazed: PV panel without additional glass, which produces more electrical power.

- Made in Macedonia
- PID free
- Module efficeiency up to 18.6% and up to 19.4%
- ~3% Output power tolerances
- 25 yr Supremly low degradation
- Excellent low light performance

25-YEAR LINEAR WARRANTY



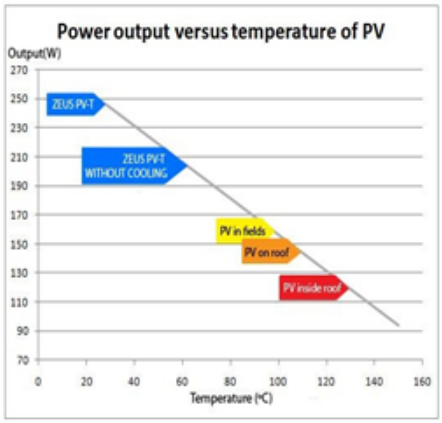
Electrical Specifications @ STC (AM, 5, 1,000W/m2, 25^{0}C):



Module Type		PiK280P(60)
Nominal Power	Pmpp(W)	280
Short Circuit Current	Isc (A)	9.45
Open Circuit Voltage	Voc (V)	38.40
MPP Current	Impp(A)	8.85
MPP Voltage	Vmpp(V)	31.61
Solar Cell Efficien	ηc (%)	19.1
Module Efficien	ηm% (%)	18.66
Power Output Tolerance		~3%
Maximum Reverse Current		18A
Maximum System Voltage		1,000 V (Application Class A)

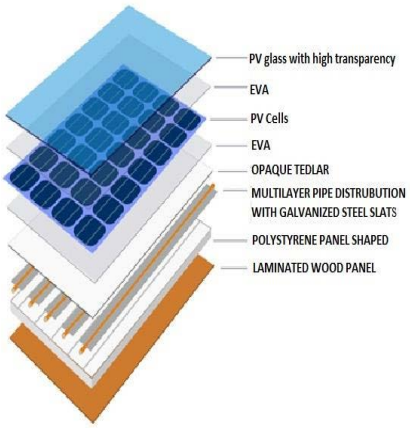
Additional power classes aavallible upon request. | Power measurment tolerance: ~3%.

Thermal Specifications



Nominal operating temperature of cell	44,4±2°C
Voltage Temperature Coefficient	- 0.34 %/°C
Power Temperature Coefficient	-0.44 %/°C
Current temperature Coefficient	+0.1%/°C
NOCT	44 °C
Temperature Range	-40 °C to + 85 °C
Highest thermal power	910W
Average thermal energy produced (kWh / m2 / year)	633 (kWh/m2/year)
Input and output of thermal part	Copper pipes F18 mm
Type of fluid	Propylene glycol
Quantity of fluid	1.5 l
Absorbent sheet metal	Aluminium
Registry	Copper pipes F8 mm
Isolation	Knauf stone wool 25 mm

Mechanical Specifications



Length x Width x Thickness	1640 mm x 992 mm x 45 mm
Weight	33 kg
Total area	1.62m2
Solar Cells	60 poly c-Si in series / 156 mm x 156 mm (6+")
Junction Box / Connectors	Five bypass diodes / MC4 compatible / IP 67
Frame	Anodized AL with drainage holes / rigid anchored corners
Glass	3.2 mm glass with anti-reflective coating / tempered / high –transparency / low-iron content
Packaging	26 modules per pallet / stackable 2 pallets high
Certified Nominal Load (snow/wind	5,400 Pa / 2,400 Pa
Impact resistance	Hailstone / ϕ 25 mm / 83 km/h (51 mph)

All unspecified tolerances are ~3%. Unspecified product properties remain under full discretion of PiKCell Group.