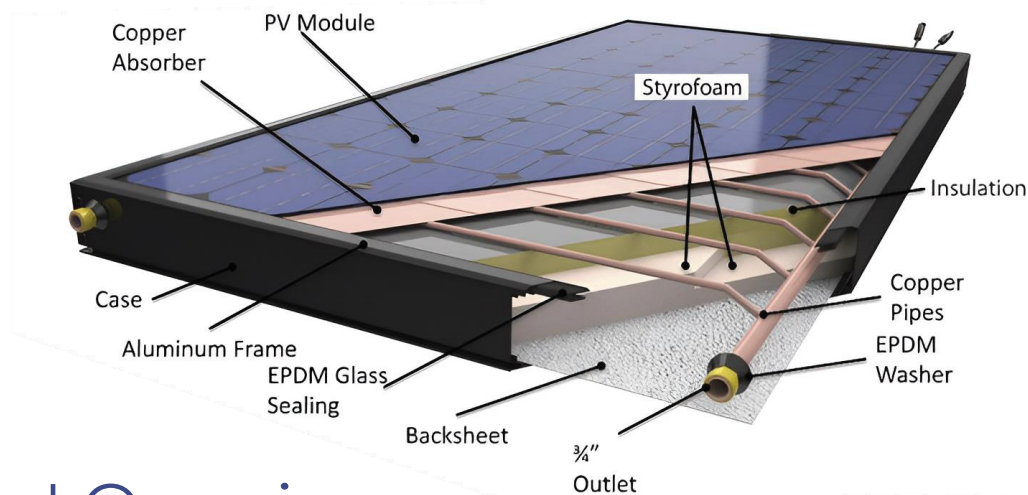


# PVT Hybrid Solar Panel

2 in 1: Generate electricity and hot water from a single panel.

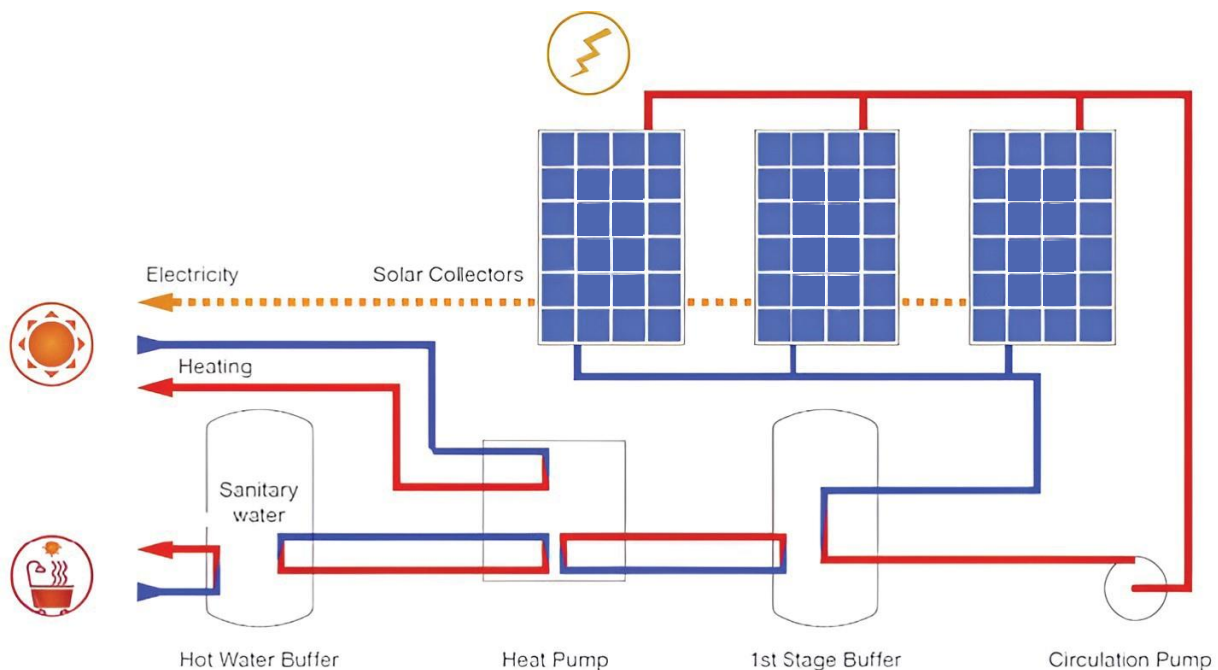


## Product Overview

The CALPRO PVT Hybrid Solar Panel is an advanced 2-in-1 solar solution that combines photovoltaic (PV) and thermal (T) technologies in a single unit. This unique integration allows you to generate electricity and produce hot water simultaneously, making it the most efficient use of your solar investment and roof space. Traditional PV panels lose significant efficiency in hot climates due to heat buildup, which reduces electrical output and stresses the system over time. CALPRO solves this challenge through active liquid cooling, lowering panel temperature by up to 25°C. This cooling effect can boost PV efficiency by up to 25%, while delivering a continuous supply of thermal energy for residential, commercial and industrial applications. The result is higher energy yield, extended panel lifespan, and maximum return on investment.

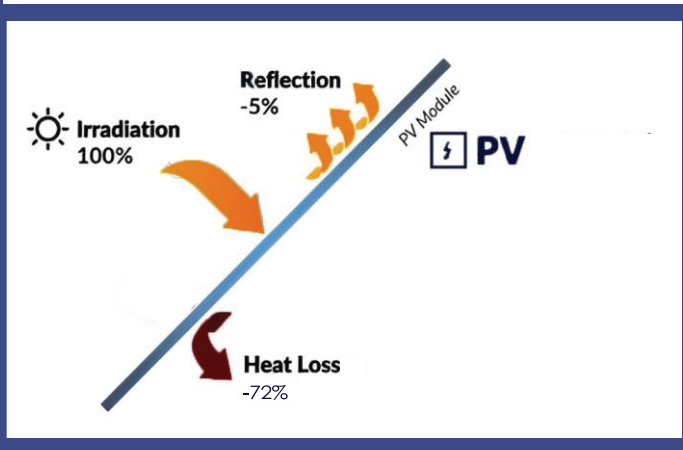
### Why choose CALPRO PVT ?

- Dual Energy Output – Electricity + thermal energy in one system
- Higher PV Efficiency – Active cooling boosts output by up to 25%
- Extended Lifespan – Reduced thermal stress improves durability
- Space-Saving Design – Ideal for rooftops with limited installation area
- Complete Energy Solution – Perfect for buildings requiring both power and hot water



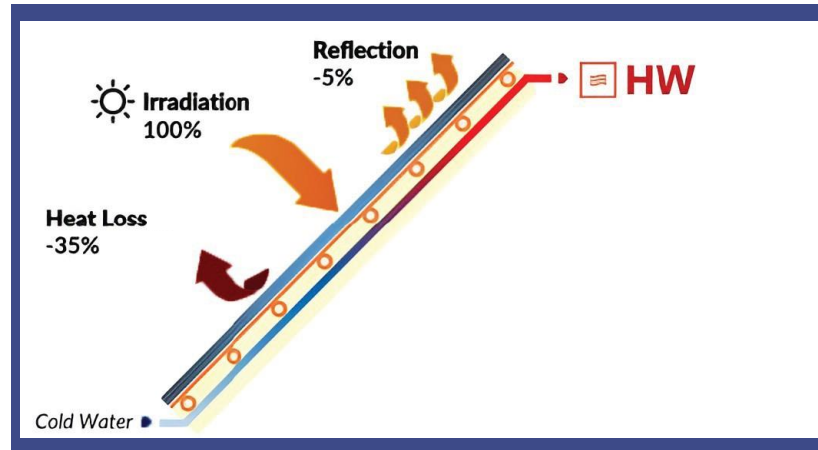
## Photovoltaic Panel (PV)

PV panels typically convert up to 23%(peak) solar energy into electricity.

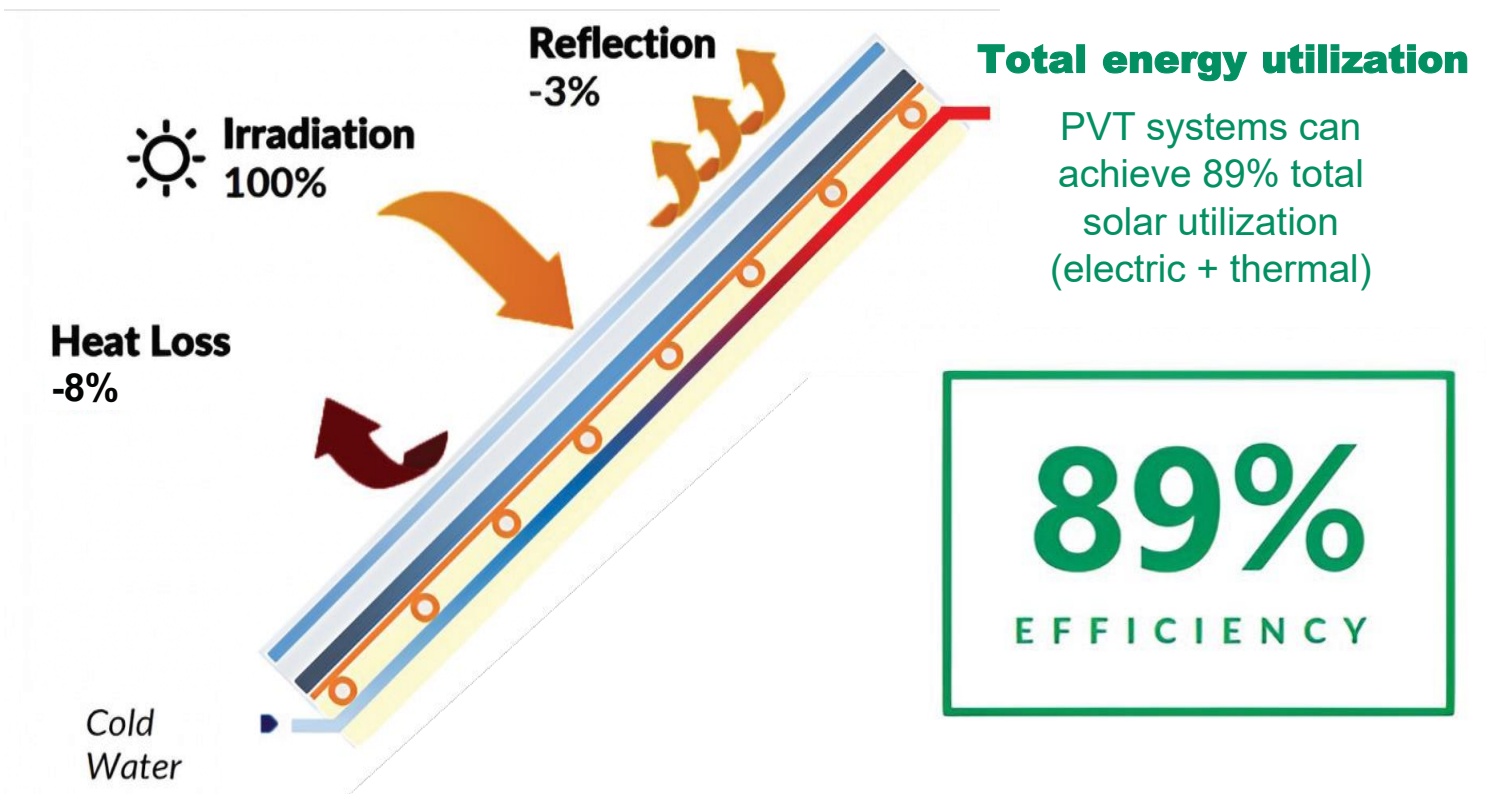


## Thermal Panel (Hot Water)

Traditional solar thermal systems typically achieve 50-70% efficiency.



## Our PV Hybrid Panel



## Key Benefits:

- Dual energy output Electricity + hot water
- Up to 89% total solar energy utilization Boosts efficiency by up to 25% from active cooling
- Ideal for rooftops with limited space and/or need of hot water
- European design and quality standards
- Lower installation costs
- Supports sustainability goal and energy saving
- Extended panel lifespan by lowering operating temperatures, reducing thermal stress and material degradation

## Product Description

Model	PVT -340P	PVT -380M	PVT -450M	PVT -580M
Length	195.6 cm	195.6 cm	209.4 cm	227.9 cm
Width	99.2 cm	99.2 cm	103.8 cm	113.4 cm
Thickness	44 mm	44 mm	44 mm	44 mm
PV Peak Output	340 W	380 W	450 W	580 W
Solar Thermal Peak Output	910 W	1002 W	1187 W	1736 W
Gross Area	1.95 m <sup>2</sup>	1.95 m <sup>2</sup>	2.22 m <sup>2</sup>	2.56 m <sup>2</sup>
Number of Cells	72 Poly Cells	72 Mono Cells	144 Mono Cells	144 Mono Cells
Weight	26 Kg	28 Kg	32 Kg	37 Kg
Dimension of Cell	156×156 mm or 166×83 mm for 450 W / 182×91 mm for 580 W			
Front Glass	3.2 mm Tempered			
Framework	6005 - T5 Aluminum Alloy			

### Thermal Specifications

Thermal Efficiency	70 %
Coefficient of Thermal Losses, a1	3.2 W/ m <sup>2</sup> .k
Coefficient of Thermal Losses, a2	0.003 W/(m×k) <sup>2</sup>
Internal Liquid Capacitance	1.8L - 2.3L
Stagnation Temperature	90 °C
Measure Hydraulic Connection	Quick Connect
Maximum Permissible Pressure	10 bars
Solar Thermal Peak Output	910 W – 1736 W

## Specifications

Model	PVT -340P	PVT -380M	PVT -450M	PVT -580M
Power Range	340 W	380 W	450 W	580 W
Optimum Operating Voltage (Vmp)	38.2 V	39.02 V	41.5 V	41.95 V
Optimum Operating Current (Imp)	8.9 A	9.74 A	10.86 A	13.12 A
Open Circuit Voltage (Voc)	47.5 V	47.9 V	49.3 V	49.8 V
Short Circuit Current (Isc)	9.22 A	10.67 A	11.6 A	13.98 A
Model Efficiency(%)	17.8 %	19.5 %	20.7 %	21.3%
Power Tolerance (W)	0 / +3 %			
Maximum System Voltage	1000 V DC (IEC)			
Temperature Coefficient of Pmpp	-0.39 % / OC			
Temperature Coefficient of Voc	-0.29 % / OC			
Temperature Coefficient of Isc	0.05 % / OC			
Maximum Reverse Current	20 A			
NOCT Temperature	45+ / -2 OC			



Thermal energy output  
50-70%



PV electrical output  
19-23%



Enhanced pv output  
(active cooling)  
25%



Residential



Hotel



Building



School



Pool



Hospital



# Projects

