



Advantage

Basic idea of CPV is saving cost by focusing sunlight onto high efficiency solar cells through optical devices that are less costly than the solar cells.

Based on the novel optics design (glass reflector & wave-guide secondary optics), Macsun Solar Energy Technology Co., Limited provides CPV modules with 1000 times sunlight concentration and 28% power efficiency. Low thermal resistance solar cell package solution (ceramic substrate and void-free solar cell soldering) ensures the CPV module thermal performance and long-term stability. Our CPV module is environmental friendly, 99% of the module material are glass and aluminum.

Characteristics

- High Concentration (1000X)
- Novel optics design
- All glass design (green & stable)
- Slim form factor (Half of Fresnel lens design)
- High tolerance(+/-1.2degree)
- Solar cell package (ceramic substrate and void-free soldering)

Parameters	UL-SUB-8703(3) Testing Condition	Standard Testing Condition
DNI (W/m ²)	900	1000
Air Mass	AM1.5D	AM1.5D
Solar Cell T (degree C)	-	25
Air T (degree C)	20	-
Wind Speed (m/s)	4	-
Power Output (Wdc)	178	205



Module Performance	
Module Efficiency	~28% power efficiency
Weight (kg)/Module	25
Module Dimension (m)	1.48 × 0.61 × 0.25
Solar Cell Dimension (mm2)	10 × 10
Concentration Ratio	1000 times
Angle Tolerance (degree)	+/- 1.2
Open-circuit Voltage (V)	24
Short-circuit Current (A)	9.47
Solar Cell Efficiency	~40% @ 1000 W/m ²

Module Thermal Performance	
T Coefficient (Voltage)	0.21 V/°C
T Coefficient (Current)	0.00037 A/°C
T Coefficient (Power)	-0.165% /°C

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