

Features and Benefits

Macsun Solar[™] CPV technology combines GaAS multi-junction solar cells into a high concentration flat Fresnel lens design. At over 1000 suns, the module achieves greater than 27% conversion efficiency using a 50cm depth, establishing a new IEC benchmark for CPV systems.

More Power

- Enabled by advanced triple junction cells self-manufactured
- Less than half the degradation in power output due to temperature of silicon panels
- Employs refractive, non-imaging optical lens and multilevel concentrator parts which avoids chromatic aberration

Reliable & Robust Design

- Proven materials, partially tempered front glass and a sturdy anodized frame allowed module to operate reliably in multi-array mounting configurations
- Enclosed modular assembly –no exposed cables and circuits avoids fire hazards
- No moving parts inside –avoids mechanical failure and keeps Transportation Security
- Glass-based concentrator immune to UV degradation

Low Cost

- More power per module means fewer modules per installment
- Macsun Solar's CPV systems are designed to be used in conjunction with Macsun Solar's high precision dual axis trackers in order to optimize system performance.

Macsun Solar Energy Technology Co.,Limited Tel: 0086 755 8981 6120 / 8981 8305 Email: sales@macsunsolar.com Website: www.macsunsolar.com

Macsun Solar[™] -CPV-MS-CM3D High Efficiency Concentrator PV Module



A concentrator cell assembly consists of one triple junction solar cell and a bypass diode attached to a DBC substrate. This assembly provides a robust package for easy integration into a solar concentration system.



The module incorporates 12 individual modular receivers and achieves an acceptance angle of ± 0.86 degree which is the widest among CPV design, lowering tracker and balance of systems costs. Reliability is achieved with fully-enclosed design.





In this concentrator design pattern, incident solar radiation is concentrated using three optical element. Primary and secondary glasses are arranged in a frame structure that directs sunlight to the cell via a tertiary, non-imaging optical glass. This design offers a wide insolation acceptance angle(\pm 0.86 °) and this concentrating profile improving power, efficiency and cost.

Macsun Solar Energy Technology Co., Limited +86 755

+86 755 8981 8160

sales@macsunsolar.com

www.macsunsolar.com



Macsun Solar Energy Technology Co.,Limited Tel: 0086 755 8981 6120 / 8981 8305 Email: sales@macsunsolar.com Website: www.macsunsolar.com



Performance Characteristics at 1000W/m ² DNI	
Power(Pmax)*	350W±5%
Max Power Voltage(V _{mp})	32.75 V
Max Power Current(Imp)	10.69 A
Open Circuit Voltage(Voc)	36.05 V
Short Circuit Current(Isc)	11.93 A
Module Efficiency	27.3%
Acceptance Angle	±0.86°
Optimized Work Temperature	-40 to 50 °C
Temperature Coefficient	
Power	-0.2%
Voltage	-65 mV/℃
Current	1.35 mA/ ັc
Mechanical Specification	
Dimension(L×W×D)	1.38 m×1.05 m×0.58 m
Weight	42 kg
Connector Termination	4 mm ² Plug & Play Connector
Material	Al
Fresnel Lens	Silicone on Glass(SOG)
Standard	
Qualification	IEC 62108
Safety	IEC 62688
Electrical	IEC 62670



Wide acceptance angle results from multi-level optics design

Design and Specification included in this datasheet are subject to change without notice.

©Macsun Solar.2012 All rights are reserved. www.macsunsolar.com