

Encapsulated high efficiency multi - junction CPV Solar cell optimized for 300 suns

ELC 38 - 300

Description

ELC 38 - 300 is multi - junction solar cell of third generation with 38 % efficiency ready to immediate use in CPV solar panel. Due to encapsulation and innovative ceramic construction both bypass diode and solar die are protected against moisture and sun hot spot. The flat cover ceramic tile is suitable for the mounting of secondary optics, if required.

Application

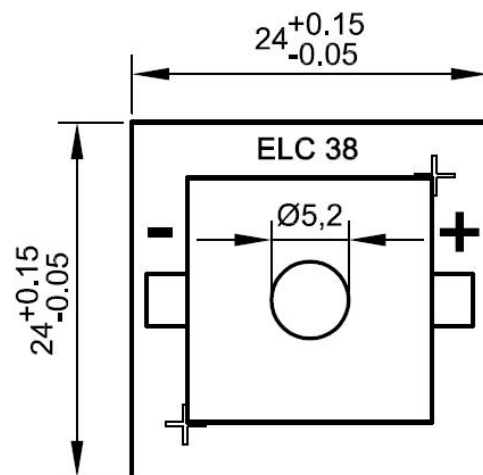
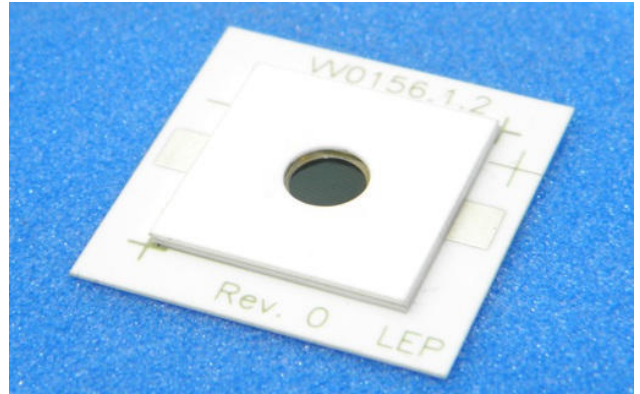
Solar cell is ready to use for terrestrial concentrated photovoltaic (CPV) with concentrating ratio of 300 suns. Primary optics like a lens or a mirror is possible. Due to its ceramic construction it is eliminated the destruction of solar cell and bypass diode if sun tracker fails. Solar cells can be connected by standard flat ribbon wire.

Related products:

ELC 38 - 500 - Solar cells optimized for 500 suns

Qualification tests

IEC 62108:2007 – Powered Thermal Cycling – Sections 10.6



Specifications of solar die	
Solar die	Multi - junction GaInP / GaAs / Ge, substrate Ge
Active area	Circle - 18,09 mm ²
Efficiency of solar die	38 % @ 300 suns, E = 1000 W / m ² , 25 °C, AM1.5d
Maximal power	2,1 W @ 300 suns, E = 1000 W / m ² , 25 °C, AM1.5d
U _{oc} ; I _{sc}	3,116 V ; 0,78 A
Temperature coefficient of efficiency	- 0,106 % / K
Specifications of solar cells	
Base material	Al ₂ O ₃ - 96 %
Dimensions	24 x 24 x 1,35 mm
Contact	Solderable Ag, dimension 3,5 x 3,5 mm
Mount side	Al ₂ O ₃ / (Ag, Ag / Pd) is possible
Encapsulation	Polymer

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