

Sharp Silicon Coverglass-Interconnected Cell (CIC) Space Solar Cells

Space Qualified

Datasheet



Features

Silicon design – p-type PERC cells with 17.4% beginning of life (BOL) efficiency

Space Qualified – Radiation resistant substrate with printed electrodes exhibiting thermal cycle resistance

Affordability – Cost savings realized compared to dual- and triple junction cells

Customizable – Cell size and CIC thickness can be changed to match mission needs

Product Information

Product Name Sharp Silicon Space Solar Cells

Product Group Space Qualified Solar

Product Description

Cell Dimensions Customizable sizes available

Cover Glass Thickness 0.1 mm, 0.21 mm and 0.3mm (to match mission requirements)

BOL Efficiency 17.4% (under AM0:136.7mW/cm², 25°C)

EOL Efficiency 10.8% (under AM0:136.7mW/cm², 25°C, after 1MeV electron irradiation 1x10¹⁵e/cm²)

13.1% (under AM0:136.7mW/cm², 25°C, after 1MeV electron irradiation 1x10¹⁴e/cm²)

Electrical Data

Voc (V) 0.665

Jsc (mA/cm²) 46.8

Vmp (V) 0.543

Jmp (mA/cm ²)	43.8						
FF	0.763						
Pmax (mW/cm ²)	23.8						
(under AM0:136.7mW/cm ² , 25°C)							
Remaining Factors	Voc	Jsc	Vmp	Jmp	FF	Pmax	Eff
1x10 ¹⁴	0.87	0.85	0.87	0.86	1.00	0.75	0.75
1x10 ¹⁵	0.82	.074	0.82	0.75	1.00	0.62	0.62
(following 1MeV electron irradiation at rate 1x10 ¹² e/cm ² /sec)							

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