

ENERGY SOLAR

High-Efficiency Solar Cells for Space Applications

Explore our High-Efficiency Solar Cells designed for satellite, space station, and deep space applications. These cells feature high radiation resistance, thin profiles, and offer outstanding efficiency for demanding aerospace environments.

High-Efficiency Solar Cells

Explore our High-Efficiency Solar Cells designed for satellite, space station, and deep space applications. These cells feature high radiation resistance, thin profiles, and offer outstanding efficiency for demanding aerospace environments.

Product Features

High-efficiency Solar Cells have excellent radiation resistance characteristics. The average conversion efficiency exceeds **30%** under AM0 test conditions. Thin High-efficiency Solar Cells can reduce the cell thickness to **30μm**, and compared with similar products, the specific power of our production is increased by more than twice.

Applications

- Application scenarios: satellites, space stations, deep space exploration, etc.
- Provide customizable high-efficiency, high-energy-density aerospace products.

Parameters

High-Efficiency Solar Cell Models

Product Model	TJ30	Thin Type TJ30C	Large Size TJ30
Working Environment			
Application Orbit	LEO, GEO, IGSO, Deep space exploration	LEO, GEO, IGSO, Deep space exploration	LEO, GEO, IGSO, Deep space exploration
Working Temperature	-175°C to 110°C	-175°C to 110°C	-175°C to 110°C
Information			
Size	Area: 40mm×80mm, 30.6mm×40.3mm, 39.8mm×60.4mm; Thickness: 85±20μm, 150±20μm, 180±20μm, customizable	Area: 40mm×80mm, 30.6mm×40.3mm, 39.8mm×60.4mm; Thickness: 30-80μm, customizable	Area: 60mm×120mm, 67×138mm; Thickness: 180±20μm, customizable
Weight	Mass per unit area: 47 mg/cm² ~ 95 mg/cm²	Mass per unit area: 33 mg/cm² ~ 47 mg/cm²	Mass per unit area: ≤ 110 mg/cm²

Typical Performance Data

Fluence (e/cm²)	BOL	1E14	5E14	1E15
Efficiency η [%]	30	28.8	27	25.8
Short Circuit Jsc [mA/cm²]	17.5	17.4	16.8	16.3
Open Circuit Voc [V]	2.75	2.643	2.577	2.533
Current @ Max. Power Jm [mA/cm²]	16.6	16.4	16	15.5

Fluence (e/cm ²)	BOL	1E14	5E14	1E15
Voltage @ Max. Power Vm [V]	2.45	2.376	2.283	2.248
AM0 (1353W/m ² ,T=25°C) @fluence 1MeV				

Temperature Gradients

Fluence (e/cm ²)	BOL	1E14	5E14	1E15
Short Circuit Jsc [μ A/cm ² /°C]	12	11	12	13
Open Circuit Voc [mV/°C]	-5.6	-6.0	-6.2	-6.3
Current @ Max. Power Jm [μ A/cm ² /°C]	9.0	9.5	10.0	10.0
Voltage @ Max. Power Vm [mV/°C]	-5.8	-6.1	-6.5	-6.6
Temperature Coefficient (20°C~80°C)@fluence 1MeV				

For more details or to inquire about how these high-efficiency solar cells can meet your specific requirements, feel free to [contact us](#).