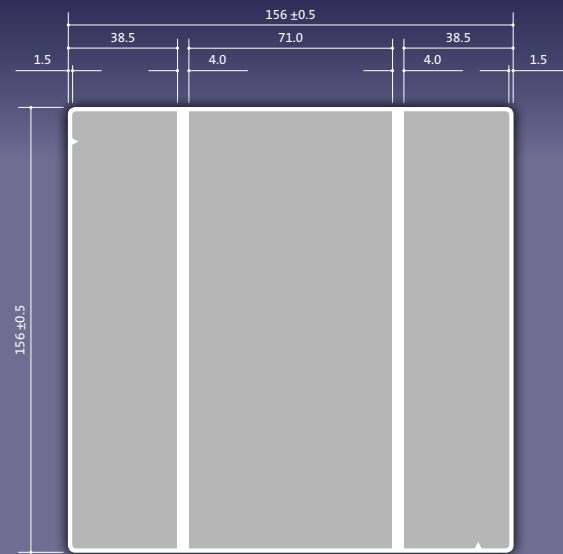


FRONT VIEW



BACK VIEW

HIGH PERFORMANCE SOLAR CELL

Our highly automated manufacturing plant is designed for 6" cell size. In-line production processes optimize the material flow and minimize wafer handling, thereby enhancing the mechanical stability of our products. State-of-the-art manufacturing and handling systems are used. The latest technology features are incorporated in our production process to guarantee high cell efficiencies. This includes surface texturisation that provides a dark homogeneous appearance to our cells.

MEASUREMENTS AND CALIBRATION

The electrical performance of every manufactured solar cell is individually tested and sorted according to very narrow power classes. This means that you get a high performance solar cell with precisely defined characteristics. Our testing equipment is calibrated on a regular basis to comply with IEC 60904-9 standards.

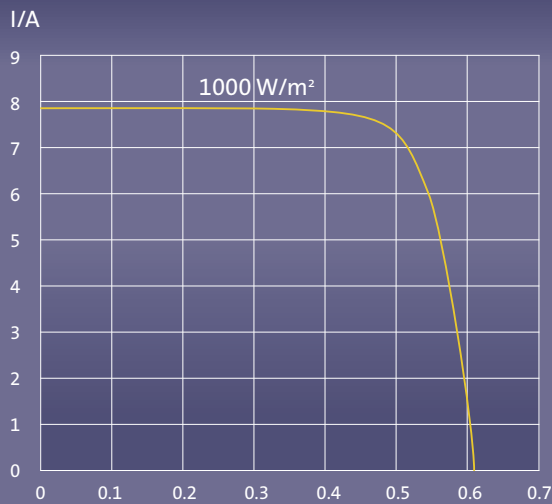
PRODUCTION AND QUALITY CONTROL

- Visual inspection on every single cell for mechanical and aesthetic faults.
- Hot spot resistance ($I_{rev} < 3A @ -10V$) and parallel resistance testing, resulting in an excellent low light behaviour.
- Our production equipment is optimised for soft-handling to avoid micro cracks and reduce breakage rates during in-line processing.

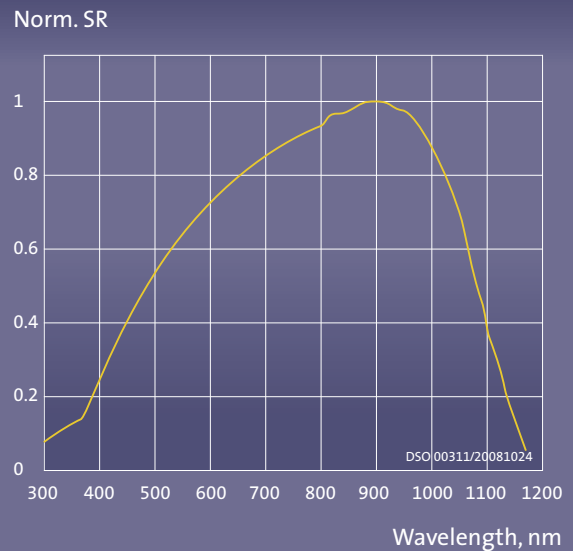
MECHANICAL DATA AND DESIGN

- Multicrystalline silicon material
- Dimensions 156 mm x 156 mm (± 0.5 mm)
- Thickness 220 μ m ($\pm 40\mu$ m)
200 μ m ($\pm 40\mu$ m)
180 μ m ($\pm 30\mu$ m)
- Contacts Front: 2 mm busbars (Ag)
Back: 4 mm busbars (Ag)
- Blue anti-reflection coating
- Fine line screen printed metallization

IV CURVE



SPECTRAL RESPONSE



ELECTRICAL CHARACTERISTICS

Typical data at STC (non encapsulated cells)*

Cell class	Pmpp (W)	Efficiency (%)	Voc (mV)	Isc (A)
S156PS355	3.55	14.60	604	7.69
S156PS360	3.60	14.80	606	7.74
S156PS365	3.65	15.00	607	7.80
S156PS370	3.70	15.20	610	7.86
S156PS375	3.75	15.40	613	7.92
S156PS380	3.80	15.60	615	7.98
S156PS385	3.85	15.80	618	8.04
S156PS390	3.90	16.00	619	8.14
S156PS395	3.95	16.20	620	8.22
S156PS400	4.00	16.40	622	8.28
S156PS405	4.05	16.60	625	8.35

Standard Test Conditions (STC): 1000 W/m², AM 1.5, 25°C; tolerance P: ± 1,5% rel.**
The temperature coefficients of the open circuit voltage and the peak power are -2.15 mV/K and -17 mW/K respectively.

* This table shows typical values based on historical production data. This implies no warranty that future production data will comply with these typical values.

** The tolerance value refers to a reference cell calibrated at Fraunhofer ISE in Freiburg.