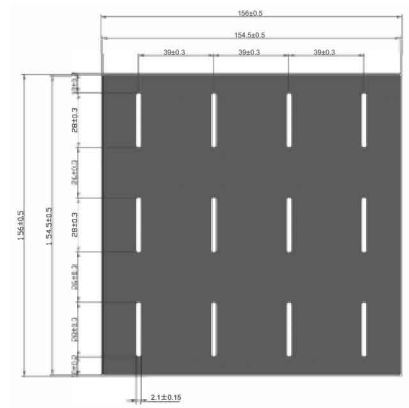
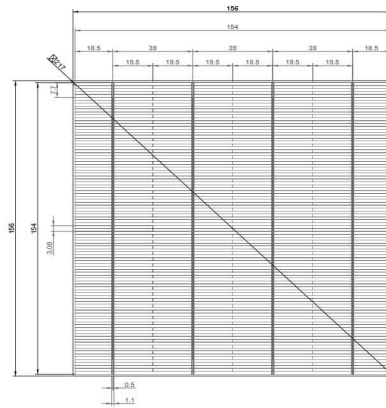


Multicrystalline Solar Cells

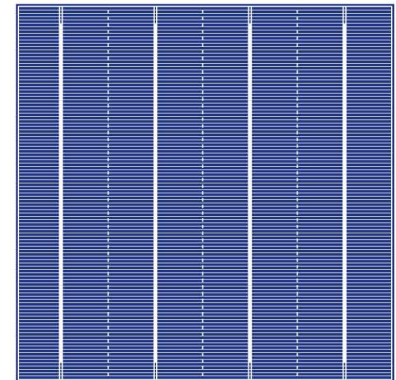
Features

- Color Uniformity, Low Breakage rate
- 100% in-line optical and electrical inspection
- Long-term stability, reliability and performance
- Outstanding power output even in low light or high
- Optimized design for ease of soldering and lamination
- High conversion efficiencies resulting in superior power
- Compatible with present module manufacturing process
- 100% inspected for shunt resistance and reverse current
- regularly monitor product performance and soldering properties
- PID resistant confirmed by all major customers and testing labs



Physical Characteristics

Dimension	156mm X 156mm ± 0.5mm
Thickness	180 μm ± 30 μm, 200 μm ± 30 μm
Front (-)	Acid texturized surface with Silicon nitride anti-reflecting coating Color: Dark Blue, Blue, Sky Blue & Light Blue 4 X 1.1 mm ± 0.1 mm wide bus bars, Distance between bus bars : 39 mm
Back (+)	aluminum back surface field 4 X 3 soldering pads, 2.1 mm ± 0.15 mm wide bus bars Distance between bus bars : 39 mm



Electrical Characteristics

Efficiency Code		196	194	192	190	188	186	184	182	180	178
Efficiency	Eff(%)	19.60	19.40	19.20	19.00	18.80	18.60	18.40	18.20	18.00	17.80
Power	Pmpp(W)	4.77	4.72	4.67	4.62	4.58	4.53	4.48	4.43	4.38	4.33
Max Power Current	I _{mp} (A)	8.628	8.585	8.535	8.508	8.474	8.437	8.407	8.373	8.320	8.246
Short Circuit Current	I _{sc} (A)	9.109	9.069	9.014	8.990	8.954	8.914	8.883	8.847	8.786	8.710
Max Power Voltage	V _{mp} (V)	0.553	0.550	0.547	0.543	0.540	0.536	0.533	0.529	0.526	0.525
Open Circuit Voltage	V _{oc} (V)	0.659	0.656	0.650	0.646	0.642	0.638	0.634	0.630	0.628	0.626

Standard test condition: AM1.5, 1000W/m², 25°C

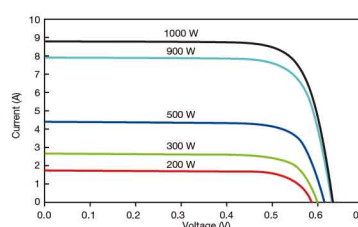
Average accuracy of all tests is +/-1.5% rel.

Temperature Coefficients

Current Temperature Coefficient	α (ISC)	0.05%/K
Voltage Temperature Coefficient	β (VOC)	-0.30%/K
Power Temperature Coefficient	γ (Pmax)	-0.37%/K

Standard test condition: AM1.5, 1000W/m², 25°C

Typical Current-Voltage Curve



Typical Spectral Response

