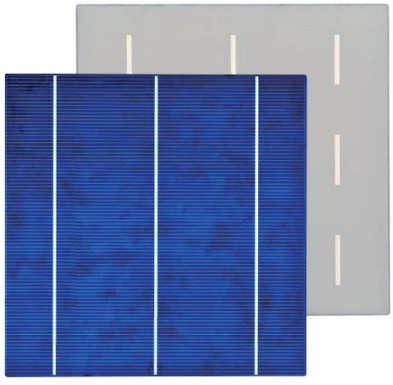
TNP3-156

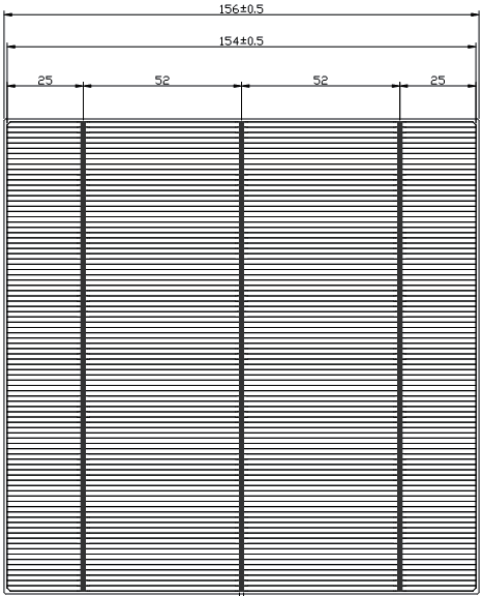
Multicrystalline Solar Cell

TOPSKY ENERGY®



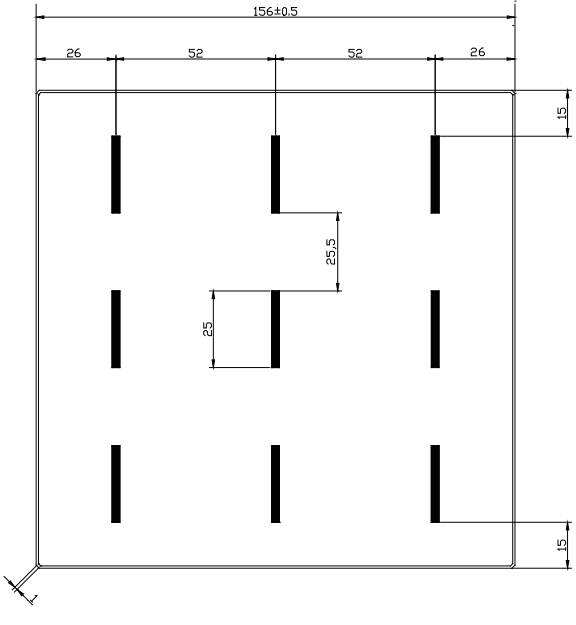
Dimension	156mm x 156mm ± 0.5mm
Thickness(Si)	180μm ± 20μm, 200μm ± 20μm
Front	Blue silicon nitride anti-reflection coatings
	1.4mm silver busbars
Back	Full-surface aluminum back-surface field
	2.5mm (silver / aluminum) discontinuous soldering pads

Features



- High conversion efficiencies resulting in superior power output performance
- Outstanding power output even in low light or high temperature conditions
- Optimized design for ease of soldering and lamination
- Long-term stability, reliability and performance
- Low breakage rate
- Color uniformity

Production and Quality Control



- Precision cell efficiency sorting procedures
- Stringent criteria for color uniformity and appearance
- Reverse current and shunt resistance screening
- REACH-SVHC test passed, ISO9001, ISO14001 and OHSAS 18001 certificated
- Calibrated against Fraunhofer ISE

* See the reverse side for more detail

Electrical Performance

		182	181	180	179	178	177	176	175	174
Efficiency	Eff(%)	18.20	18.10	18.00	17.90	17.80	17.70	17.60	17.50	17.40
Power	Ppm(W)	4.43	4.40	4.38	4.36	4.33	4.31	4.28	4.26	4.23
Max. Power Current	Ipm(A)	8.35	8.32	8.30	8.28	8.25	8.24	8.23	8.21	8.19
Short Circuit Current	Isc(A)	8.82	8.81	8.78	8.76	8.74	8.73	8.72	8.70	8.68
Max. Power Voltage	Vpm(V)	0.530	0.529	0.528	0.527	0.525	0.523	0.520	0.519	0.517
Open Circuit Voltage	Voc(V)	0.633	0.632	0.631	0.630	0.628	0.627	0.625	0.624	0.622
Efficiency Code		**173**	**172**	**171**	**170**	**169**	**168**	**166**	**164**	**162**
Efficiency	Eff(%)	17.30	17.20	17.10	17.00	16.90	16.80	16.60	16.40	16.20
Power	Ppm(W)	4.21	4.19	4.16	4.14	4.11	4.09	4.04	3.99	3.94
Max. Power Current	Ipm(A)	8.17	8.15	8.12	8.10	8.07	8.05	8.00	7.97	7.93
Short Circuit Current	Isc(A)	8.66	8.64	8.62	8.61	8.58	8.56	8.52	8.49	8.45
Max. Power Voltage	Vpm(V)	0.515	0.514	0.512	0.511	0.509	0.508	0.505	0.501	0.497
Open Circuit Voltage	Voc(V)	0.621	0.620	0.619	0.618	0.617	0.615	0.613	0.610	0.608

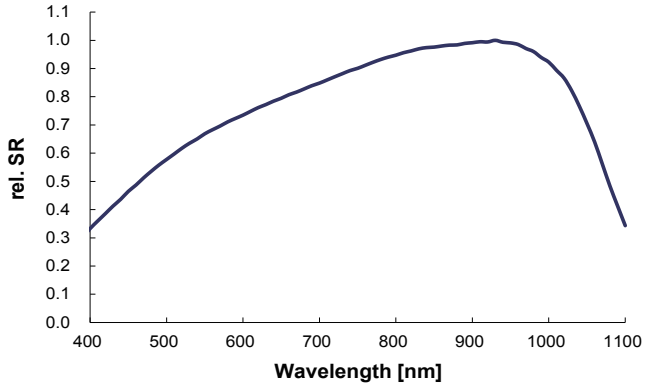
Standard test conditions: AM1.5, 1000W/m², 25°C. | Average accuracy of all tested figures is ±1.5% rel.

Temperature Coefficients

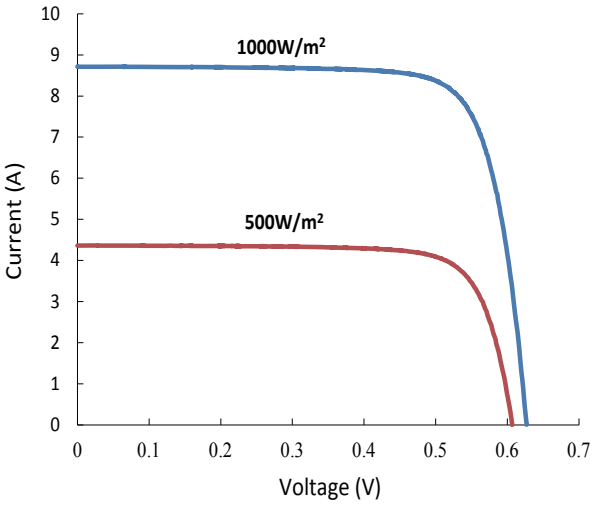
Current Temperature Coefficient	α(Isc)	0.05%/°C
Voltage Temperature Coefficient	β(Voc)	-0.33%/°C
Power Temperature Coefficient	τ (Pmax)	-0.42%/°C

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

Spectral Response(SR)



IV Curve



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