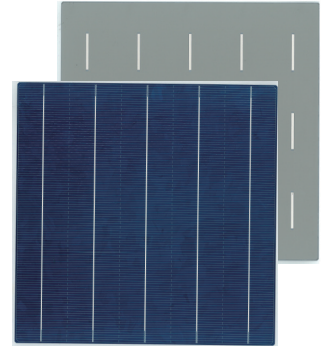


TNP5-156

Multicrystalline Solar Cell

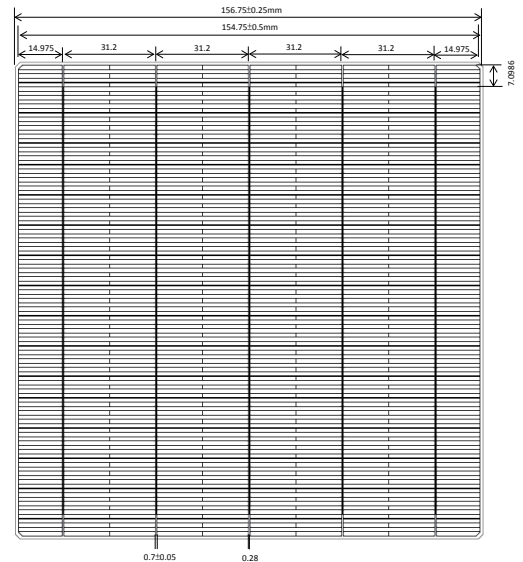


Dimension	156.75mm x 156.75mm ± 0.25mm
Thickness(Si)	180μm ± 20μm, 200μm ± 20μm
Front	Blue silicon nitride anti-reflection coatings 0.7±0.05 mm silver busbars
Back	Full-surface aluminum back-surface field 1.7mm (silver / aluminum) discontinuous soldering pads



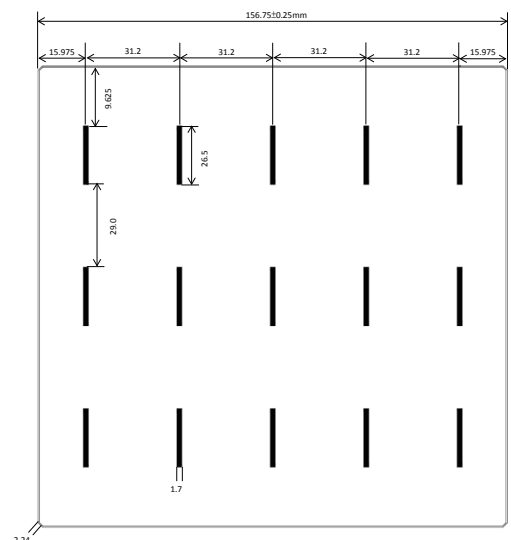
► Features

- > 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
- > Uniform Color



► Production and Quality Control

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



* See the reverse side for more detail

Electrical Performance

Efficiency Code		190	188	186	185	184
Efficiency	Eff(%)	19.00	18.80	18.60	18.50	18.40
Power	Ppm(W)	4.67	4.62	4.57	4.55	4.52
Max. Power Current	Ipm(A)	8.54	8.49	8.42	8.40	8.38
Short Circuit Current	Isc(A)	9.02	8.97	8.91	8.89	8.86
Max. Power Voltage	Vpm(V)	0.547	0.544	0.543	0.542	0.540
Open Circuit Voltage	Voc(V)	0.641	0.638	0.636	0.635	0.634

Efficiency Code		183	182	180	178
Efficiency	Eff(%)	18.30	18.20	18.00	17.80
Power	Ppm(W)	4.50	4.47	4.42	4.37
Max. Power Current	Ipm(A)	8.36	8.33	8.27	8.22
Short Circuit Current	Isc(A)	8.84	8.81	8.76	8.71
Max. Power Voltage	Vpm(V)	0.538	0.537	0.535	0.532
Open Circuit Voltage	Voc(V)	0.633	0.631	0.629	0.626

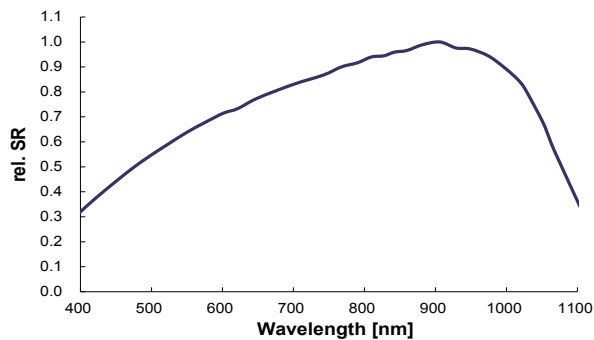
Standard test conditions: AM1.5, 1000W/m², 25°C. Average accuracy of all tested figures is ±1.5% rel.

Temperature Coefficients

Current Temperature Coefficient	$\alpha(I_{sc})$	0.04%/°C
Voltage Temperature Coefficient	$\beta(V_{oc})$	-0.31%/°C
Power Temperature Coefficient	$\gamma(P_{max})$	-0.39%/°C

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

Spectral Response(SR)



IV Curve

