

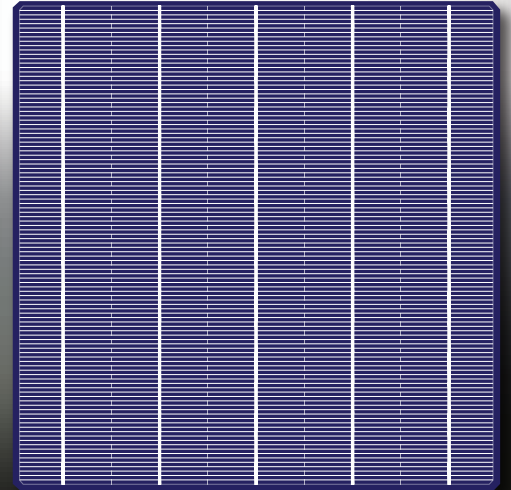
URE

United Renewable Energy Co., Ltd.

Super19 Series

NP6W

Multicrystalline Solar Cell by Black Silicon



Features

- High efficiency solar cells with an isotropically etched surface
- Silicon nitride anti-reflection coating
- Silver front contact bars and full surface aluminum back contact field

Performance and Quality

- Proper handling from incoming inspection through production, outgoing inspection and packaging
- 100% checked for reverse current and visual appearance
- Calibrated against Fraunhofer ISE
- RoHS compliance
- **100% PID Resistance**

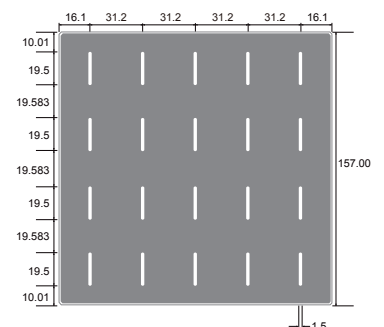
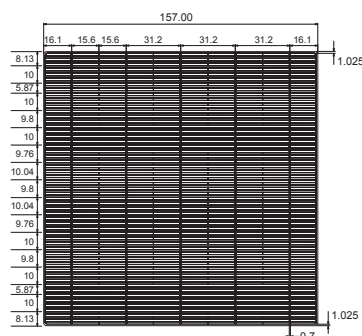
Packaging

- Minimize the risk of broken cells with special design
- Label with product information

Physical Characteristics

Dimension	157 mm x 157 mm ± 0.25 mm
Cell's Thickness (si)	190 μm ± 30 μm
Front Side (-)	Silicon nitride anti-reflection coating 0.7 mm silver busbar
Back Side (+)	Back surface field and full surface aluminum 1.5 mm (silver) discontinuous soldering pads

Cell Layout



Electrical Characteristics

Class	Efficiency Range (%)	Rated Power (Wp)	*Maximum Power Current (A)	*Short Circuit Current (A)	*Maximum Power Voltage (V)	*Open Circuit Voltage (V)
182	18.2-18.3	4.486	8.405	8.882	0.538	0.633
184	18.4-18.5	4.535	8.442	8.926	0.541	0.636
186	18.6-18.7	4.584	8.473	8.961	0.543	0.638
187	18.7-18.8	4.609	8.495	8.986	0.544	0.640
188	18.8-18.9	4.634	8.516	9.007	0.546	0.641
189	18.9-19.0	4.658	8.534	9.027	0.547	0.642
190	19.0-19.1	4.683	8.556	9.048	0.548	0.643
191	19.1-19.2	4.708	8.573	9.068	0.549	0.644
192	19.9-19.3	4.732	8.596	9.089	0.550	0.646

Test condition : 1000 W / m², AM 1.5, 25°C Power measuring tolerance: ±1.5% rel.

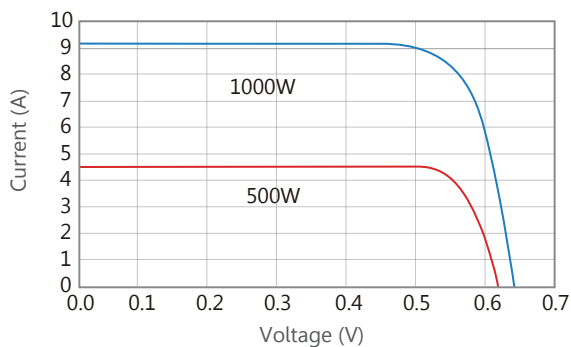
Temperature coefficients

Current (%/K)	0.0451
Voltage (%/K)	-0.3045
Power (%/K)	-0.3614

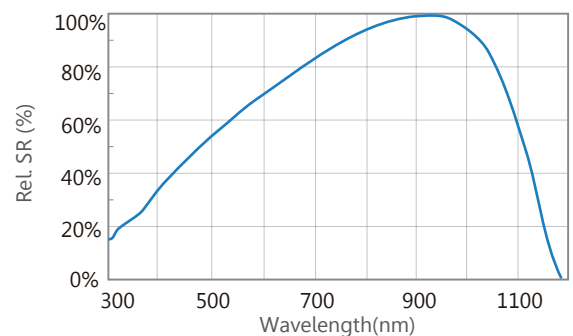
Light Intensity Dependence

Intensity [W/m ²]	Vmpp	I _{mp}
1000	1.000	1.000
900	0.996	0.903
500	0.972	0.499
300	0.948	0.298
200	0.928	0.198

IV-Curve



Spectral Response



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