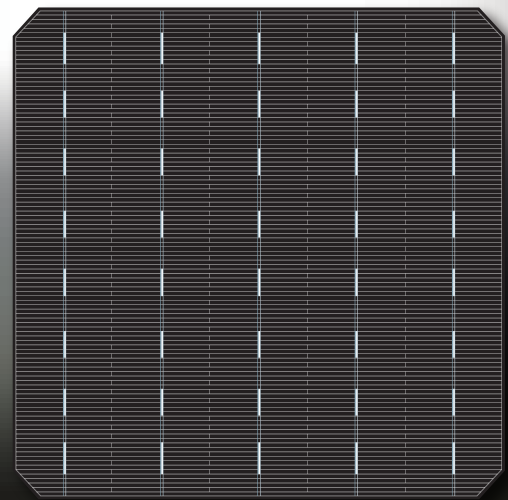


Black21 Series Ultra-Efficient

NS6WL

Mono-Crystalline Solar Cell



Features

- Ultra-Efficient solar cells with an anisotropically etched surface
- Silicon nitride anti-reflection coating
- Silver front contact bars and aluminum local back surface 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**

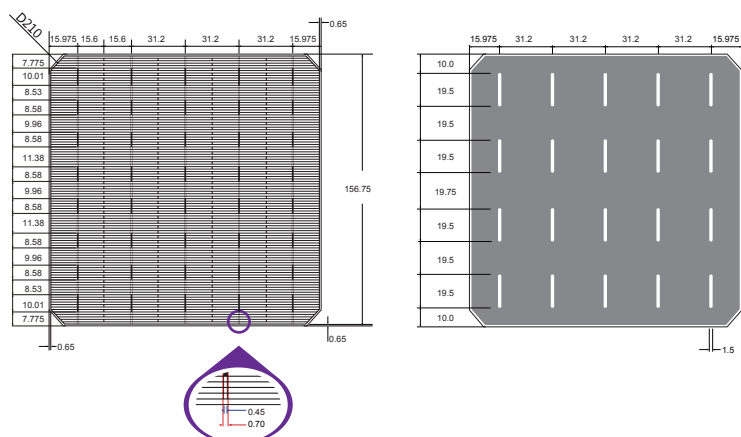
Packaging

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

Physical Characteristics

Dimension	156.75 mm x 156.75 mm $\pm$ 0.25 mm
Cell's Thickness (si)	180 μ m $\pm$ 30 μ m
Front Side (-)	Silicon nitride anti-reflection coating 0.7 mm silver busbar
Back Side (+)	Aluminum local back surface field 1.5 mm (silver) discontinuous soldering pads

Cell Layout



Mono-Crystalline Solar Cell

NS6WL Ultra-Efficient



Electrical Characteristics

Class	Efficiency Range (%)	Rated Power (Wp)	*Maximum Power Current (A)	*Short Circuit Current (A)	*Maximum Power Voltage (V)	*Open Circuit Voltage (V)
211	21.1-21.2	5.155	9.247	9.754	0.563	0.668
212	21.2-21.3	5.180	9.262	9.765	0.564	0.670
213	21.3-21.4	5.204	9.284	9.791	0.565	0.672
214	21.4-21.5	5.228	9.300	9.804	0.566	0.673
215	21.5-21.6	5.253	9.314	9.809	0.568	0.675
216	21.6-21.7	5.277	9.330	9.820	0.570	0.676
217	21.7-21.8	5.302	9.345	9.829	0.571	0.677
218	21.8-21.9	5.326	9.359	9.838	0.573	0.677
219	21.9-22.0	5.351	9.377	9.850	0.574	0.678
220	22.0-22.1	5.375	9.395	9.861	0.576	0.679

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

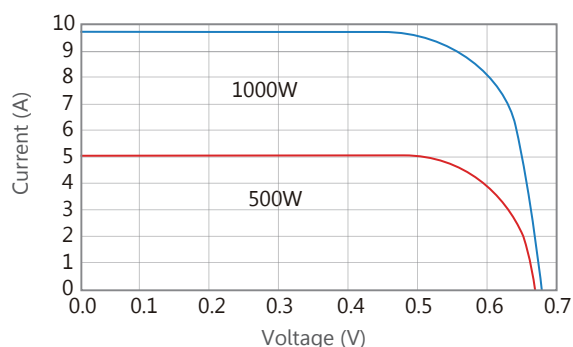
Temperature coefficients

Current (%/K)	0.0400
Voltage (%/K)	-0.2889
Power (%/K)	-0.3632

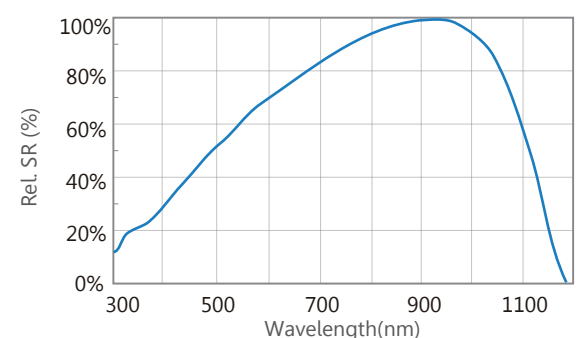
Light Intensity Dependence

Intensity [W/m ²]	V _{mpp}	I _{mpp}
1000	1.000	1.000
900	0.998	0.899
500	0.977	0.497
300	0.955	0.297
200	0.936	0.197

IV-Curve



Spectral Response



United Renewable Energy Co., Ltd.



Hsinchu HQ

No.7, Li-Hsin 3rd Rd., Hsinchu Science Park, Hsinchu,
30078, Taiwan
Tel: +886-3-5780011 Fax: +886-3-5781255

Taipei Office

9F., No. 295, Tiding Blvd. Sec. 2, Taipei,
11493, Taiwan
Tel: +886-2-26562000 Fax: +886-2-26560593