

M-156-3D | 6" Multicrystalline Solar Cell

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

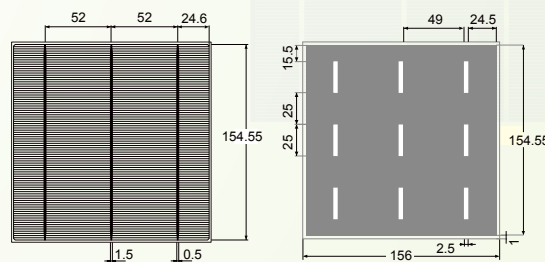
Performance and Quality

- 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

Packaging

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

Cell Layout



Physical Characteristics

Dimension	156 mm x 156 mm ± 0.5 mm
Thickness (si)	180 μm - 20 / + 30 μm 200 μm ± 30 μm
Front Side (-)	Silicon nitride anti-reflection coating 1.5 mm silver busbar
Back Side (+)	Full surface aluminum back surface field 2.5 mm (silver) soldering pads

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Electrical Characteristics

Class	Efficiency	Rated Power	*Maximum Power	*Short Circuit	*Maximum Power	*Open Circuit
	Range (%)	(Wp)	Current (A)	Current (A)	Voltage (V)	Voltage (V)
160	16.0~16.1	3.894	7.625	8.131	0.512	0.612
161	16.1~16.2	3.918	7.665	8.169	0.513	0.613
162	16.2~16.3	3.942	7.701	8.201	0.513	0.614
163	16.3~16.4	3.967	7.736	8.234	0.515	0.616
164	16.4~16.5	3.991	7.764	8.256	0.516	0.618
165	16.5~16.6	4.015	7.789	8.282	0.517	0.619
166	16.6~16.7	4.040	7.821	8.313	0.518	0.620
167	16.7~16.8	4.064	7.853	8.340	0.519	0.621
168	16.8~16.9	4.088	7.885	8.369	0.520	0.622
169	16.9~17.0	4.113	7.916	8.397	0.521	0.623
170	17.0~17.1	4.137	7.936	8.418	0.523	0.624
171	17.1~17.2	4.161	7.957	8.440	0.524	0.625
172	17.2~17.3	4.186	7.976	8.457	0.526	0.627
173	17.3~17.4	4.210	7.999	8.481	0.527	0.628
174	17.4~17.5	4.234	8.035	8.501	0.528	0.629
175	17.5~17.6	4.259	8.065	8.518	0.529	0.630
176	17.6~17.7	4.283	8.096	8.542	0.530	0.630
177	17.7~17.8	4.307	8.141	8.578	0.530	0.630
178	17.8~17.9	4.332	8.185	8.611	0.530	0.630
179	17.9~18.0	4.356	8.234	8.645	0.530	0.630

Test condition: 1000 W / m², AM 1.5, 25 °C

Power measuring tolerance: ± 1.5 % rel.

*Data & drawing for reference only.

Temperature coefficients

Current (mA/K)	4.36
Voltage (mV/K)	-2.06
Power (%/K)	-0.408

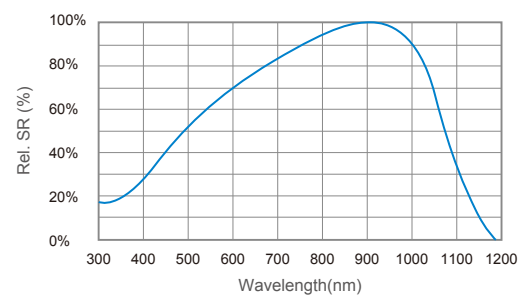
Solderability

Ribbon	Sn - Pb - Ag	62 % - 36 % - 2 %
Flux	Kester	955
Soldering Temp.	Preheating Temp.	180 ~ 230°C
	Heating Temp.	180 ~ 230°C
Condition	Heating duration	3 Sec
	Applied pressure	170 ~ 200 g

Light Intensity Dependence

Intensity [W/m ²]	V _{mpp}	I _{mpp}
1000	1.000	1.000
800	0.998	0.799
600	0.991	0.599
400	0.981	0.397
200	0.952	0.196

Spectral Response



IV-Curve

