



明徽能源

MONO PERC SE CELL G1 5BB

MING HWEI ENERGY

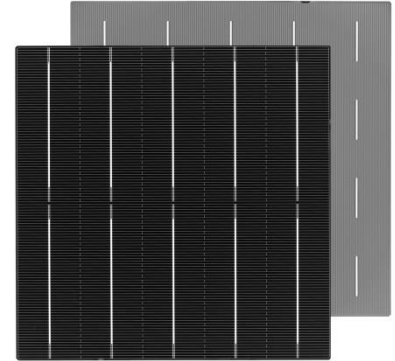
Creating date: 2019/11/12

Revision status: Ver.01

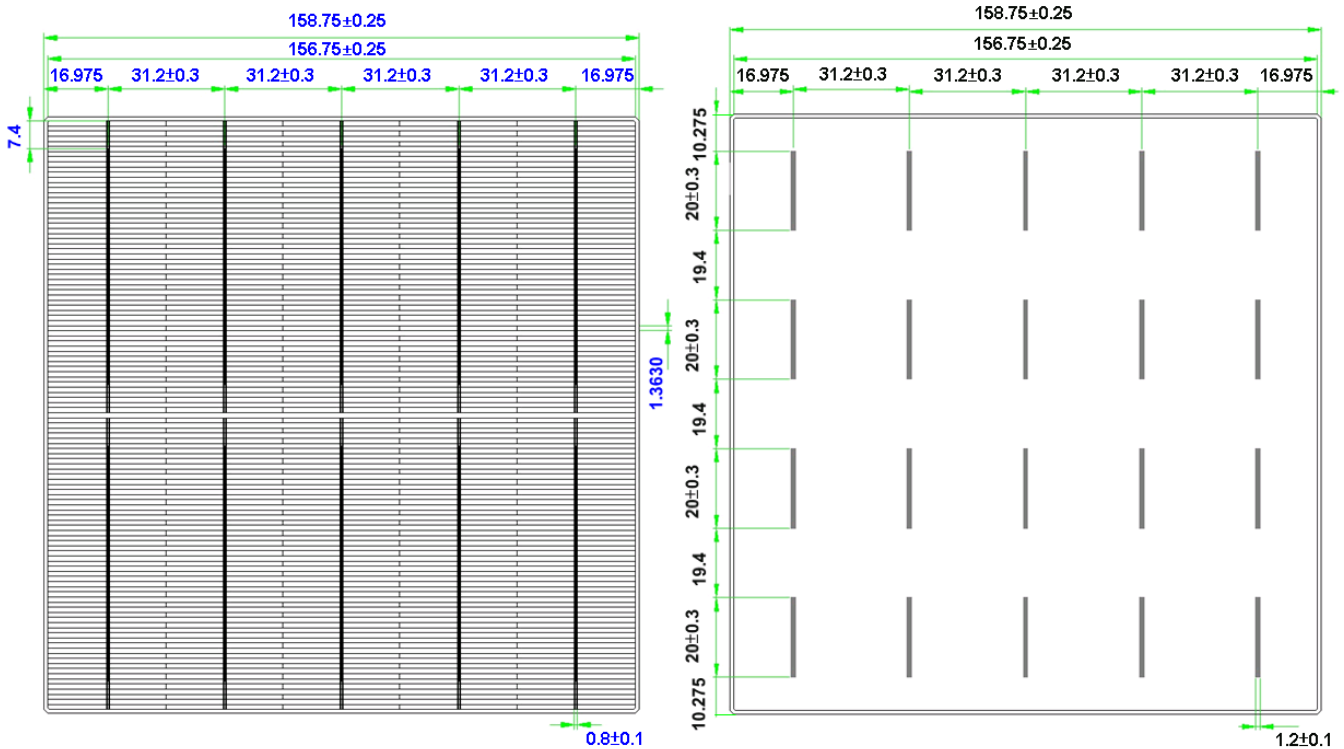
Model name: MHE35

☀ Physical Characteristics

Dimension	158.75 mm x 158.75 mm ± 0.25 mm
Diagonal	223 mm ± 1.0 mm
Thickness(Si)	180 μm ± 20 μm, 170 μm +20/-10 μm
Front side(-)	Blue silicon nitride anti-reflection coating 5 silver bus-bars (0.8 ± 0.1 mm), 116 fingers
Back side(+)	Full-Surface aluminum BSF, 5 x 4 soldering pads 1.2mm ± 0.1mm wide Silver / Aluminum bus-bar



☀ Cell Layout



☀ Production and Quality Control

- ❖ 100% PID Resistance.
- ❖ Precision cell efficiency sorting procedures.
- ❖ Reverse current and shunt resistance screening.
- ❖ Stringent criteria for color uniformity and appearance.
- ❖ 100% in-line inspection for optical.



☀ Features

- ❖ Uniform Color and low breakage rate.
- ❖ Laser doping selective emitter.
- ❖ High conversion efficiencies resulting.
- ❖ Superior output power in any condition.
- ❖ 100% inspected performance of products.
- ❖ All products conform to the regulation of RoHS.
- ❖ Excellent mechanical performance proven by all customers.
- ❖ Regularly monitor product performance and soldering properties.
- ❖ Less power deviation of modules ensured by precise matching of cells, sorted 100% in narrow current classes at constant test voltage.

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☀ Electrical Performance

Efficiency Code		223	222	221	220	219	218
Efficiency	Eff(%)	22.30	22.20	22.10	22.00	21.90	21.80
Rated Power	Pmpp(W)	5.619	5.594	5.569	5.544	5.519	5.493
Max Power Voltage	Vmp(V)	0.581	0.579	0.577	0.575	0.574	0.572
Max Power Current	Imp(A)	9.671	9.662	9.652	9.641	9.615	9.602
Open Circuit Voltage	Voc(V)	0.675	0.673	0.671	0.670	0.668	0.666
Short Circuit Current	Isc(A)	10.197	10.182	10.172	10.159	10.146	10.132
Efficiency Code		217	216	215	214		
Efficiency	Eff(%)	21.70	21.60	21.50	21.40		
Rated Power	Pmpp(W)	5.468	5.443	5.418	5.393		
Max Power Voltage	Vmp(V)	0.570	0.568	0.567	0.566		
Max Power Current	Imp(A)	9.593	9.582	9.556	9.529		
Open Circuit Voltage	Voc(V)	0.664	0.663	0.662	0.660		
Short Circuit Current	Isc(A)	10.114	10.100	10.071	10.053		

*Standard testing conditions(STC): 1000 W/m², AM 1.5, 25 °C. Measuring tolerance: Pmpp(W) ± 1.5% rel.

The measurement of cell is calibrated by Fraunhofer ISE. Product part number = **HFA88**



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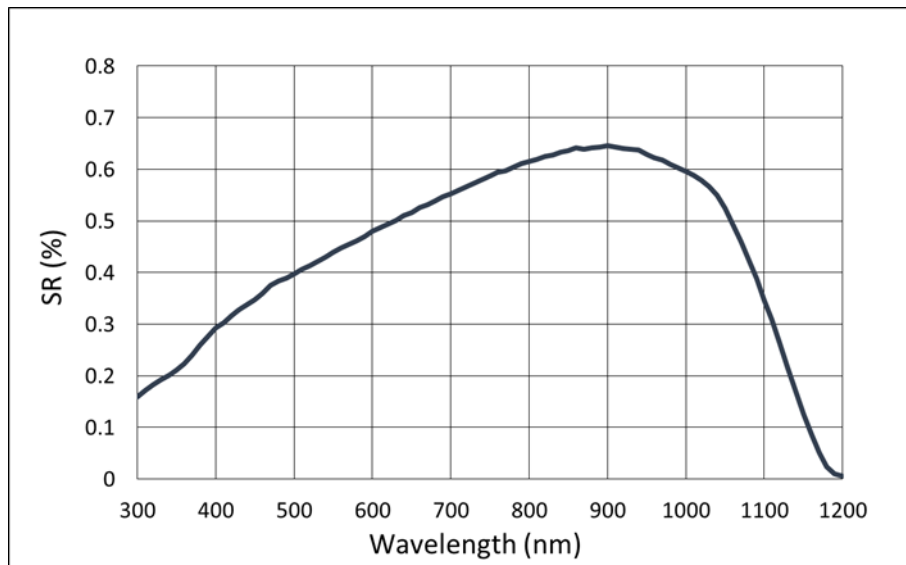
☀ Temperature Coefficients

❖ $V_{oc}(\alpha)$: -0.32 % / °C

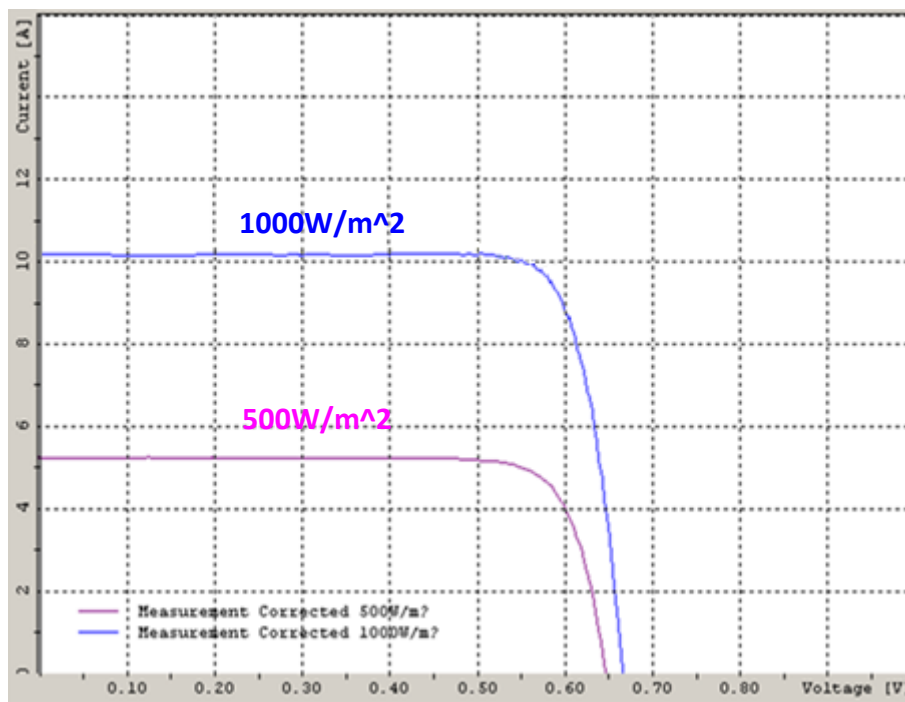
❖ $I_{sc}(\beta)$: 0.05 % / °C

❖ $P_{mp}(\gamma)$: -0.37 % / °C

☀ Spectral Response (SR)



☀ IV- Curve





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