

## M10LN-ST-16BB -160200

### High Efficiency N-type Monocrystalline Silicon Bifacial TOPCon Solar Cell

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Higher Conversion Efficiency, Average Efficiency of Mass Production > 26.4%, Theoretical Efficiency > 27%



Lower Temperature Coefficient, Lowest to  $-0.30\%/^{\circ}\text{C}$



Bifaciality Over 85%



Better Weak Light Generation, Extending The Module Working Time In The Morning And Evening Over 1 Hour



Better Reliability And Lower Degradation



## Frontside Electrical Performance Distribution

| Cell model            | Unit | 25.00  | 24.90  | 24.80  | 24.70  | 24.60  | 24.50  | 24.40  | 24.30  | 24.20  | 24.10  | 24.00  |
|-----------------------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Open Circuit Voltage  | V    | 0.718  | 0.717  | 0.717  | 0.717  | 0.716  | 0.715  | 0.714  | 0.713  | 0.712  | 0.711  | 0.71   |
| Short-circuit Current | A    | 14.045 | 14.037 | 14.010 | 13.982 | 13.974 | 13.965 | 13.957 | 13.948 | 13.939 | 13.930 | 13.921 |
| Operation Voltage     | V    | 0.615  | 0.614  | 0.612  | 0.611  | 0.609  | 0.608  | 0.607  | 0.607  | 0.605  | 0.603  | 0.601  |
| Operation Current     | A    | 13.552 | 13.520 | 13.510 | 13.477 | 13.467 | 13.434 | 13.401 | 13.346 | 13.335 | 13.324 | 13.313 |
| Maximum Output        | W    | 8.33   | 8.30   | 8.27   | 8.23   | 8.20   | 8.17   | 8.13   | 8.10   | 8.07   | 8.03   | 8.00   |
| Efficiency            | %    | 25     | 24.9   | 24.8   | 24.7   | 24.6   | 24.5   | 24.4   | 24.3   | 24.2   | 24.1   | 24.0   |

Standard Test Conditions: 1000W/m<sup>2</sup>, AM1.5, 25°C

## Backside Electrical Performance Distribution

| Cell model            | Unit | >20.50 | 20.25-20.50 | 20-20.25 | <20.00 |
|-----------------------|------|--------|-------------|----------|--------|
| Open Circuit Voltage  | V    | 0.692  | 0.691       | 0.69     | 0.689  |
| Short-circuit Current | A    | 12.858 | 12.814      | 12.769   | 12.748 |
| Operation Voltage     | V    | 0.586  | 0.585       | 0.584    | 0.582  |
| Operation Current     | A    | 11.542 | 11.521      | 11.481   | 11.451 |
| Maximum Output        | W    | 6.76   | 6.74        | 6.70     | 6.66   |
| Efficiency            | %    | >20.5  | 20.25-20.5  | 20-20.25 | <20.00 |

Standard Test Conditions: 1000W/m<sup>2</sup>, AM1.5, 25°C

## Design And Dimensional Parameters

|                    |   |
|--------------------|---|
| Substrate Material | N-type monocrystalline silicon wafer  |
| Thickness          | 130μm±10μm  |
| Edge Length        | 182.2mm*183.75mm±0.5mm  |
| Diagonal Length    | Φ247mm±0.5mm  |
| Frontside(-)       | 16*0.030±0.015mm Busbar (Silver), 160 Fingers,<br>Blue (Dark Blue) Color Anti-Reflective Film (Silicon Nitride) |
| Backside(+)        | 16*0.030±0.015mm Busbar (Silver), 200 Fingers,<br>Blue (Dark Blue) Color Anti-Reflective Film (Silicon Nitride) |

## Degradation & CTM

Irradiance: 1000W/m<sup>2</sup>, Standard solar spectrum(AM 1.5), total irradiation: 5 kwh/m<sup>2</sup>,  
Degradation of cell efficiency by≤2%

Cell to module loss<3%

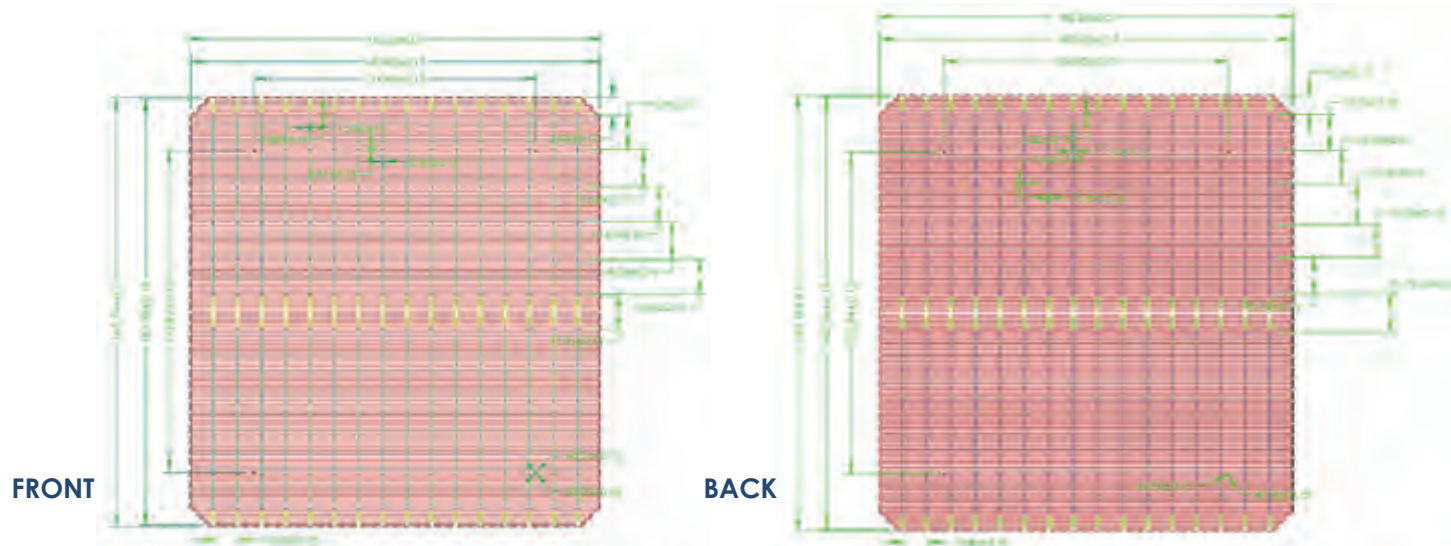
-1500 volts, 192 hours, power degradation<5%

## Packaging and storage

The packaging box is heat shrinkable and surrounded by foam air cushions for shock absorption and cushioning, reducing the impact of long-distance transportation on the product. The packaged batteries are stored indoors in a well ventilated and dry environment, with humidity controlled below 60%.

\* Design technical data changes and specific instructions for testing conditions. The right to final interpretation reserved.

## Appearance

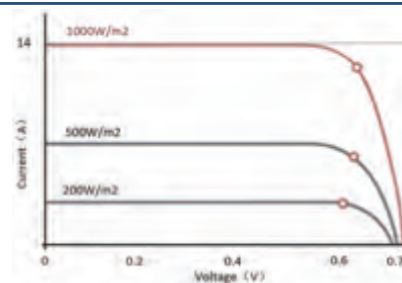


## Light Intensity Reliability

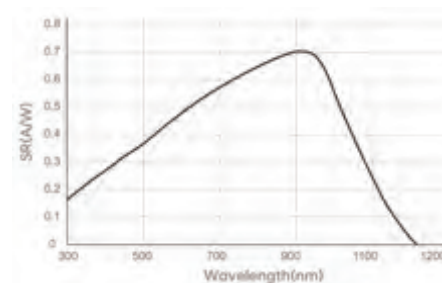
| Light intensity(W/m <sup>2</sup> ) | 1000 | 900   | 800   | 600   | 400   |
|------------------------------------|------|-------|-------|-------|-------|
| Open circuit voltage               | 1.0  | 0.998 | 0.992 | 0.988 | 0.964 |
| short-circuit current              | 1.0  | 0.904 | 0.803 | 0.602 | 0.403 |

Using Uoc (Isc) tested at (1000W/m<sup>2</sup>, AM1.5, 25 °C) as the standard, measure the magnitude of Uoc (Isc) decrease with light intensity

## I-V Curve



## Spectral Response Curve



## Temperature Coefficient

|                                       |                  |
|---------------------------------------|------------------|
| Maximum power temperature coefficient | -(0.32±0.02)%/k  |
| Maximum Voc                           | -(0.28±0.03)%/k  |
| Maximum Isc                           | +(0.06±0.015)%/k |