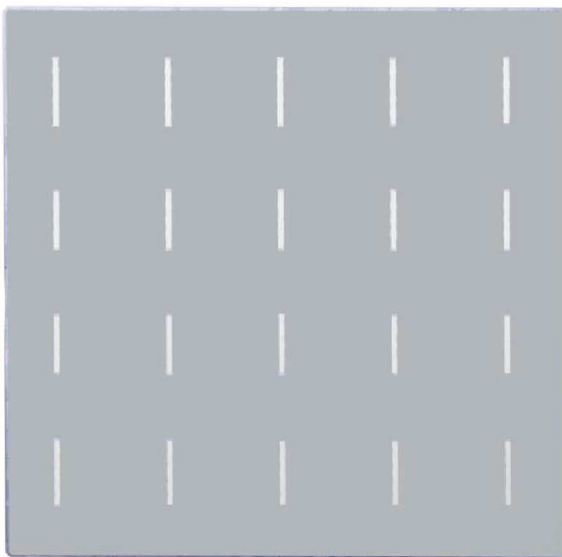
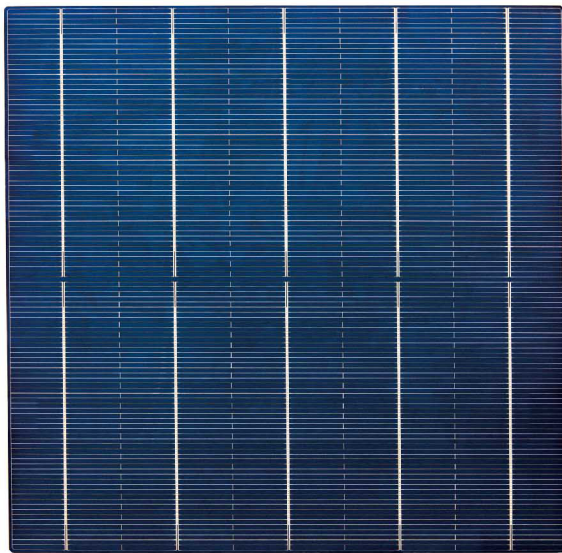


Black Silicon Cell (5BB)

Fullstar uses high-efficiency black silicon cells, it has become easier than ever to manufacture modules with more than 285Wp (6*10) and 335Wp (6*12) power output. Meanwhile the anti-PID cell technology reduces the module attenuation caused by induced electric potential, as well as system power attenuation caused by the high temperature, humidity and salty atmosphere.



The module adopts the non-anti-PID EVA, 85%℃, 96H, -1000V, and leads the Attenuation

$\leq 2\%$

Advantage

- ◆ The advanced flocking additives cleaning technology for silicon system makes the surface of silicon uniformly, also reflection is reduced.
- ◆ The unique expansion technology ensure the uniformity.
- ◆ The advanced PECVD technology makes the dark blue silicon nitride antireflection film uniform and beautiful color.
- ◆ High quality metal paste for back field and electrode, ensuring excellent electrical conductivity, reliable adhesion and wonderful weldability.
- ◆ Low breakage ratio, high excellent quality ratio.
- ◆ Rigorous standards for classification and bus bar design, decreasing the possibility of power dissipation during assembling process.

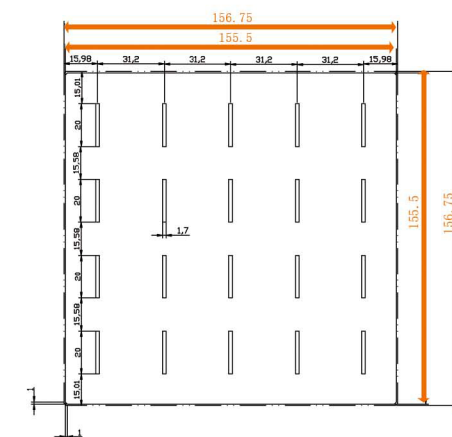
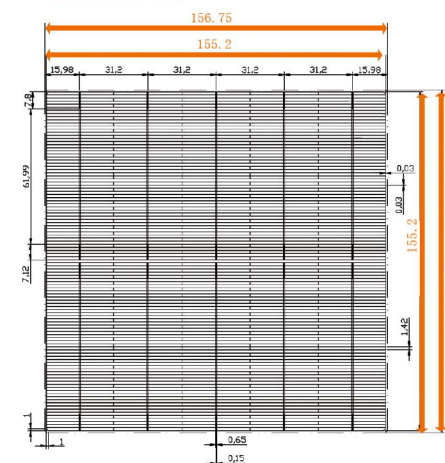
Mechanical Data And Design

| | |
|-----------|--|
| Format | 156.75mm*156.75mm±0.25mm |
| Thickness | 200±20 μm |
| Front (-) | 0.7mm±0.1mm bus bars(silver).blue anti-reflecting coating(silicon nitride) |
| Back (+) | 1.7±0.1mm wide soldering pads(silver) back surface field (aluminum) |

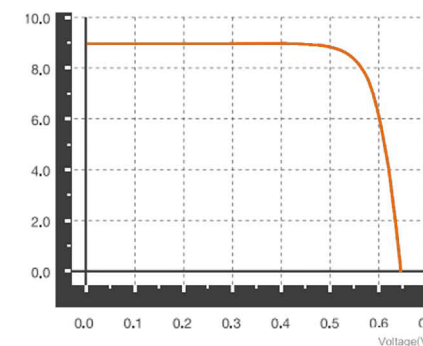
Temperature Coefficients

| | |
|------------|-----------|
| Tk voltage | -0.36%/ k |
| Tk current | +0.06%/ k |
| Tk power | -0.36%/ k |

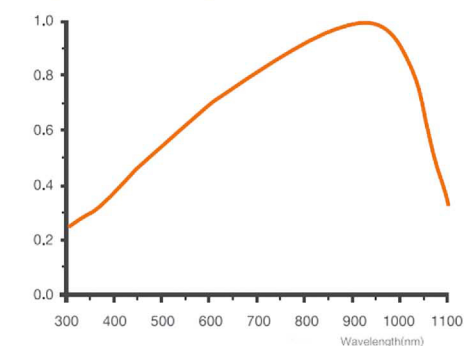
Size



IV Curve



Spectral Response



Characteristics

| No. | Efficiency (%) | Pmpp(W) | Umpp(V) | Impp(A) | Uoc(V) | Isc(A) |
|-----|----------------|---------|---------|---------|--------|--------|
| 01 | 19.60 | 4.816 | 0.562 | 8.687 | 0.663 | 9.208 |
| 02 | 19.50 | 4.791 | 0.561 | 8.665 | 0.662 | 9.185 |
| 03 | 19.40 | 4.767 | 0.552 | 8.636 | 0.651 | 9.154 |
| 04 | 19.30 | 4.742 | 0.550 | 8.622 | 0.649 | 9.139 |
| 05 | 19.20 | 4.718 | 0.548 | 8.609 | 0.647 | 9.126 |
| 06 | 19.10 | 4.693 | 0.547 | 8.580 | 0.645 | 9.094 |
| 07 | 19.00 | 4.668 | 0.545 | 8.565 | 0.643 | 9.079 |

Intensity Dependence

| Intensity[w/m2] | Isc | Voc | Pmpp |
|-----------------|------|------|------|
| 1000 | 1.00 | 1.00 | 1.00 |
| 900 | 0.90 | 0.99 | 0.90 |
| 800 | 0.80 | 0.99 | 0.79 |
| 500 | 0.50 | 0.97 | 0.49 |
| 300 | 0.30 | 0.94 | 0.29 |
| 200 | 0.20 | 0.91 | 0.19 |

The short circuit current, open circuit voltage and power at different irradiance intensity.