

## 高效多晶電池

## 概述

在采用公司自主研发的设备建成的生产线上，使用公司自己生产的高效多晶硅片制成的高效多晶电池，平均效率比普通多晶电池高0.2%-0.4%，整线良品率提升，创造了更高的效益。

使用PECVD生长的氮化硅减反射膜



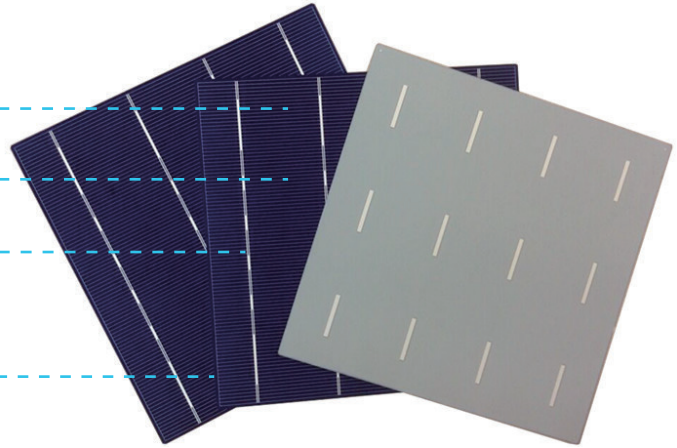
片内与片间的颜色保持一致



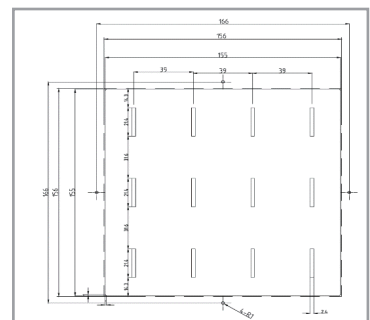
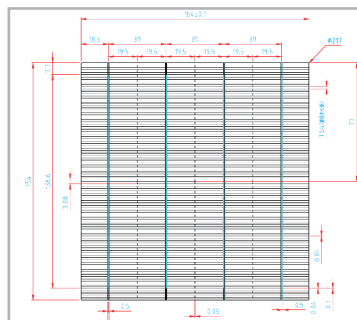
## 高质量印刷浆料确保可焊性和张力



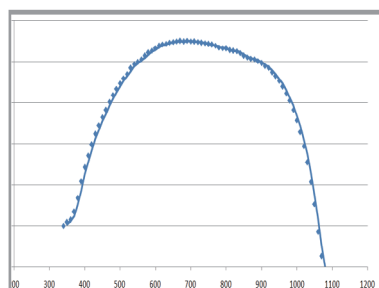
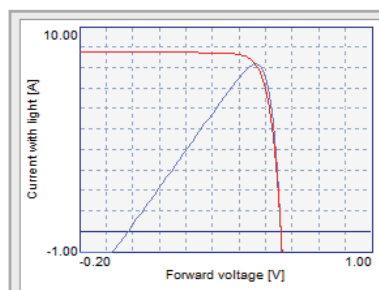
### 低光致衰减



## 基本尺寸



## I-V 特性



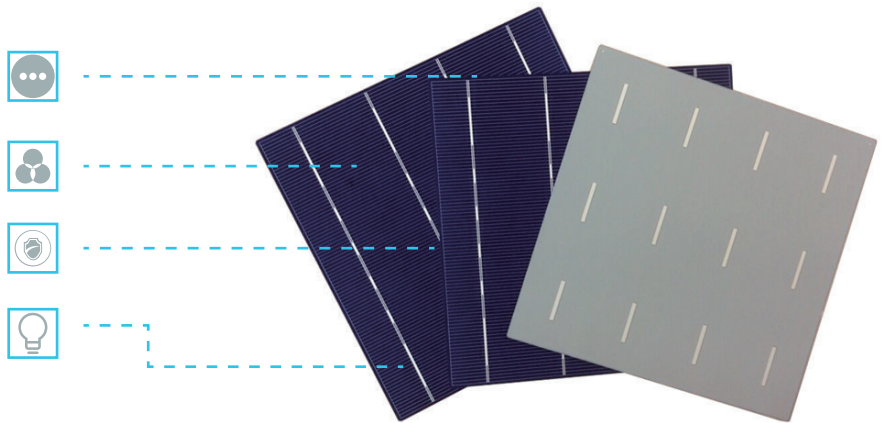
## 响应光谱

# Polycrystalline Solar Cell

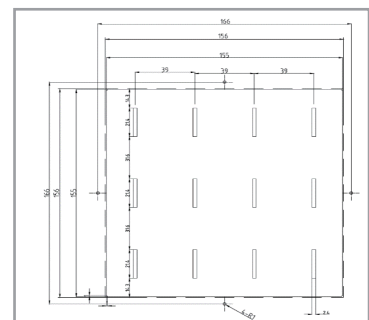
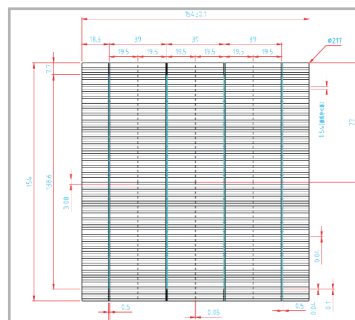
# Overview

With self-developed manufacturing equipment and self-made high efficiency solar wafer, the polycrystalline solar cell can achieve a higher efficiency of 0.2% – 0.4% than that of regular solar cell, thus ensuring high yield and profit.

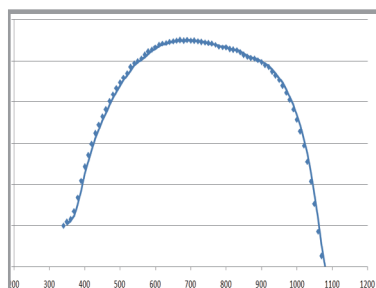
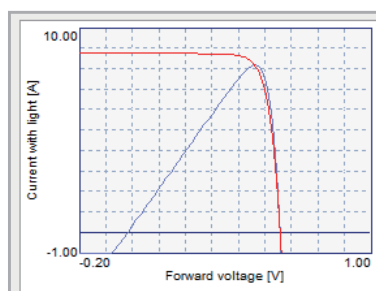
- Silicon nitride antireflection coating deposited with PECVD
- Color uniformity among cells and within cell
- Solderability and tension ensured by quality printing paste
- Low light-induced degradation



## Dimension



## I-V Curve



## Response Spectrum

## Specification

|            |                                                            |
|------------|------------------------------------------------------------|
| Cell type  | Polycrystalline solar cell                                 |
| Size       | 156 × 156 ± 0.5 mm                                         |
| Diagonal   | 219 ± 0.5 mm                                               |
| Thickness  | 200 ± 20 μm                                                |
| Front side | 1.1 mm busbar, blue silicon nitride antireflection coating |
| Back side  | 2.4 mm back electrode, aluminum back surface field         |

## Temperature Coefficient

|                       |          |
|-----------------------|----------|
| Open-circuit voltage  | -0.36%/k |
| Short-circuit current | 0.07%/k  |
| Max power             | -0.38%/k |

## Electric Performance

(Test condition: AM 1.5, 1000 ± 50 W/m<sup>2</sup>, 25 ± 2 °C)

| Efficiency | Range           | P <sub>mpp</sub> (W) | I <sub>mpp</sub> (A) | U <sub>mpp</sub> (V) | I <sub>sc</sub> (A) | U <sub>oc</sub> (V) | FF (%) |
|------------|-----------------|----------------------|----------------------|----------------------|---------------------|---------------------|--------|
| 18.60%     | 18.60% – 18.80% | 4.53                 | 8.276                | 0.547                | 8.788               | 0.638               | 80.80  |
| 18.40%     | 18.40% – 18.60% | 4.48                 | 8.214                | 0.545                | 8.729               | 0.638               | 80.44  |
| 18.20%     | 18.20% – 18.40% | 4.43                 | 8.153                | 0.543                | 8.667               | 0.637               | 80.24  |
| 18.00%     | 18.00% – 18.20% | 4.38                 | 8.091                | 0.541                | 8.606               | 0.637               | 79.90  |
| 17.80%     | 17.80% – 18.00% | 4.33                 | 8.043                | 0.538                | 8.567               | 0.635               | 79.59  |
| 17.60%     | 17.60% – 17.80% | 4.28                 | 7.995                | 0.535                | 8.536               | 0.633               | 79.21  |

## Low Light Performance

| Illumination intensity [W/m <sup>2</sup> ] | V <sub>pm</sub> | I <sub>pm</sub> |
|--------------------------------------------|-----------------|-----------------|
| 1000                                       | 1.000           | 1.000           |
| 800                                        | 0.990           | 0.800           |
| 600                                        | 0.978           | 0.600           |
| 200                                        | 0.930           | 0.200           |
| 100                                        | 0.900           | 0.100           |
| 60                                         | 0.878           | 0.060           |
| 30                                         | 0.848           | 0.030           |
| 15                                         | 0.818           | 0.015           |