# P-Type PERC
# STD-PM1010

The results may be influenced by electrode, welding method and conditions

**Size：** 182mm*182mm±0.5mm **Thickness：** 175±17.5μm **Solderability：** ⩾1.4N/mm

## Technical Data And Design

**Power：** -0.38%/K **Voltage：** -0.36 %/K **Current：** +0.07%/K

**Front (-)：** 10 * 0.06 ± 0.03mm main gate line (silver), 150 ± 15 secondary gate lines blue (dark blue), anti-reflective film (silicon nitride)

**Back (+)：** Back electrode width (silver) 1.2 ± 0.3mm, 170 ± 17 sub-grid lines Rsh⩾50Ω, Irev2⩽1.0A

## Front Electrical Performance Parameters

| | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| ProductivenessEff(%) | 23.2 | 23.1 | 23.0 | 22.9 | 22.8 | 22.7 | 22.6 | 22.5 | 22.4 | 22.3 | 22.2 |
| Maximum output powerPmpp(W) | 7.66 | 7.63 | 7.59 | 7.56 | 7.53 | 7.49 | 7.46 | 7.43 | 7.40 | 7.36 | 7.33 |
| Maximum output voltage Umpp(V) | 0.591 | 0.590 | 0.589 | 0.588 | 0.587 | 0.586 | 0.585 | 0.584 | 0.582 | 0.580 | 0.579 |
| Maximum output currentImpp(A) | 12.965 | 12.924 | 12.888 | 12.850 | 12,819 | 12.785 | 12.755 | 12.729 | 12.709 | 12.685 | 12.652 |
| Open-circuit voltageUoc(V) | 0.692 | 0.691 | 0.690 | 0.689 | 0.688 | 0.687 | 0.686 | 0.684 | 0.683 | 0.681 | 0.681 |
| Short-circuit current Isc(A) | 13.593 | 13.584 | 13.577 | 13.568 | 13.560 | 13.554 | 13.548 | 13.541 | 13.534 | 13.528 | 12.501 |
| Fill factor FF(%) | 81.49 | 81.26 | 81.05 | 80.85 | 80.64 | 80.45 | 80.26 | 80.16 | 80.03 | 79.90 | 79.78 |

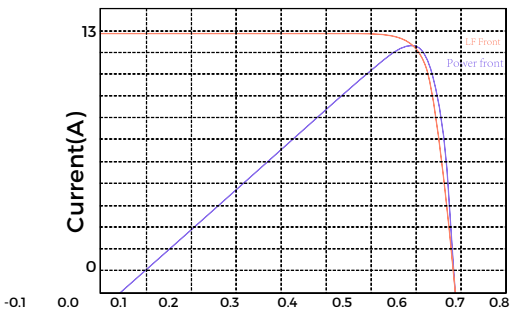
## Back Electrical Performance Parameters

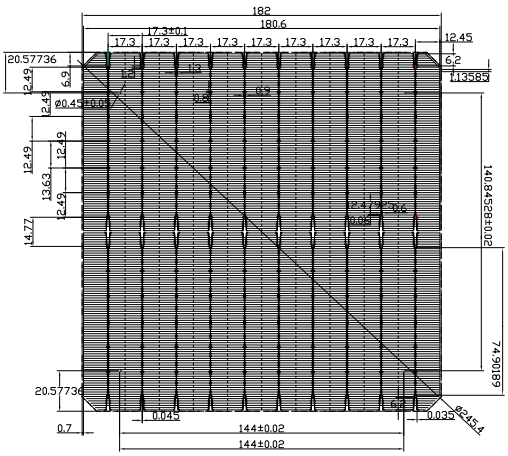
| ProductivenessEff(%) | >16 | 15.5-16 | >15-15.5 | <15 |
|---|---|---|---|---|
| Maximum output powerPmpp(W) | 5.28 | 5.18 | 5.02 | 4.89 |
| Maximum output voltage Umpp(V) | 0.578 | 0.572 | 0.565 | 0.559 |
| Maximum output currentImpp(A) | 9.136 | 9.068 | 8.877 | 8.743 |
| Open-circuit voltageUoc(V) | 0.676 | 0.675 | 0.673 | 0.671 |
| Short-circuit current Isc(A) | 10.119 | 10.056 | 9.989 | 9.903 |

## Light Intensity Reliability

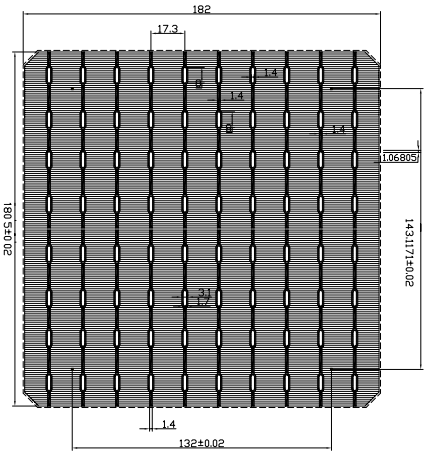
| Intensity(W/m2) | Voc | Isc |
|---|---|---|
| 1000 | 1.000 | 1.000 |
| 900 | 0.996 | 0.903 |
| 800 | 0.991 | 0.803 |
| 600 | 0.988 | 0.602 |
| 400 | 0.962 | 0.403 |

## Iv Curve



FRONT



BACK

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