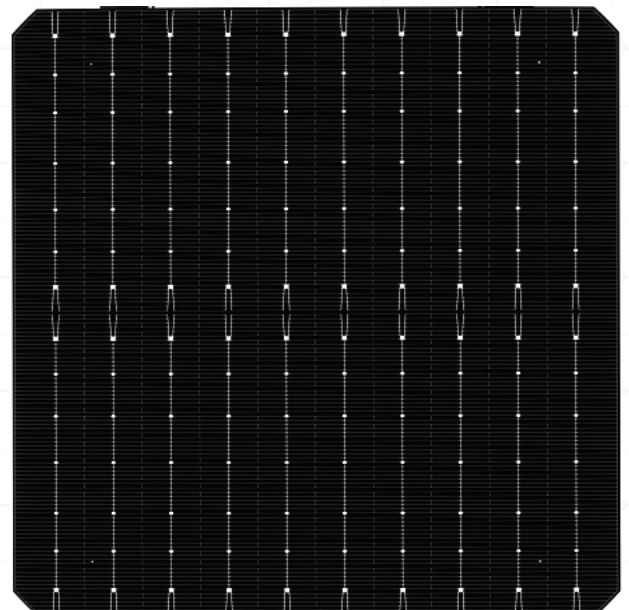
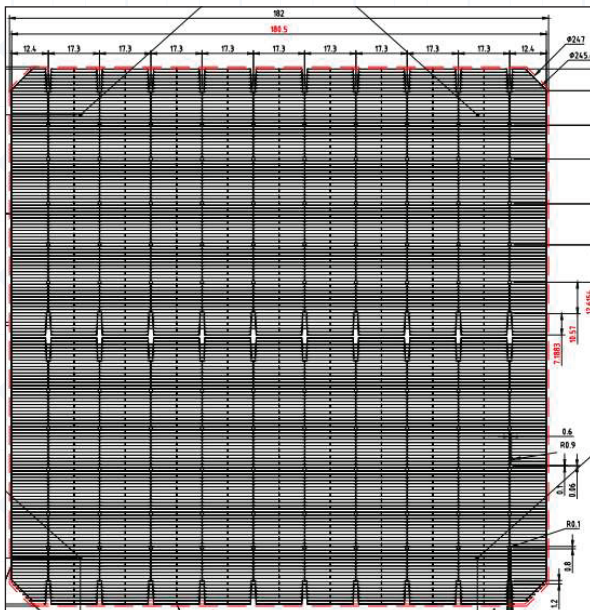


+ Mechanical Data

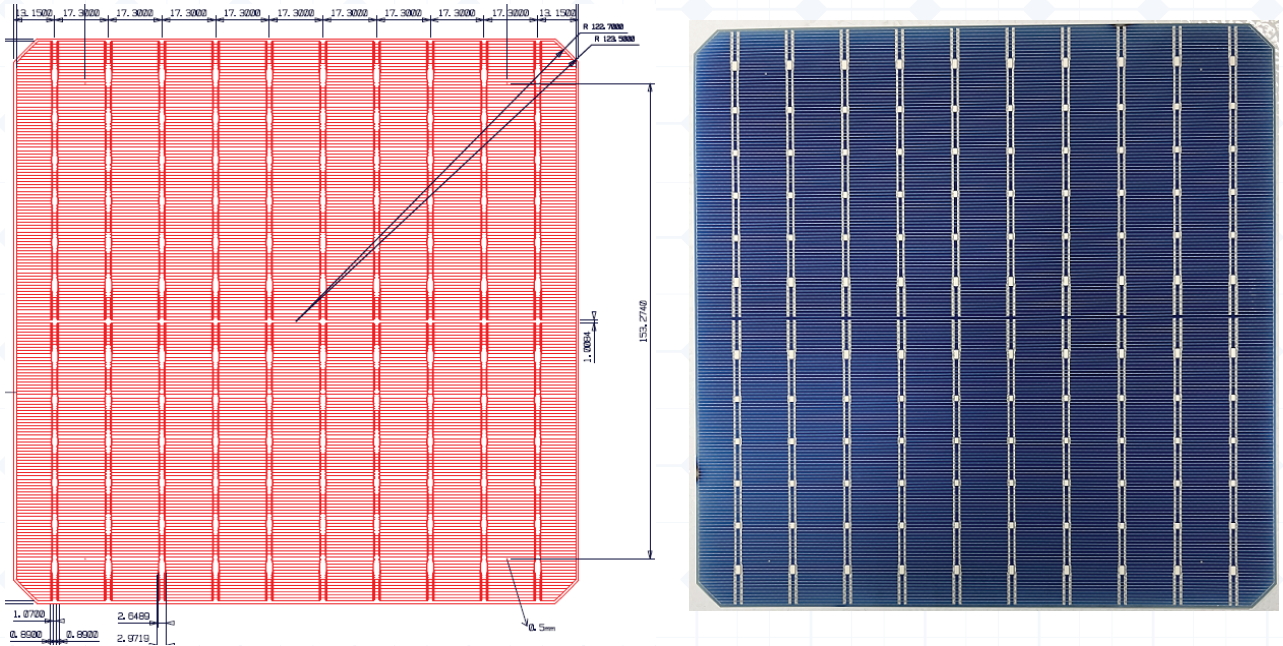
| | |
|-------------------------------------|--|
| Model | 182 |
| Cell Type | Mono PERC Bifacial Solar Cell |
| Cell Format | 182 x 182 ± 0.25 mm |
| Cell Thickness (with Metallization) | 166 ± 16 µm |
| Cell Diagonal | 247 ± 0.25 mm |
| Front side (-) | 10 x 0.10 ± 0.05 mm Bus Bar (Silver), Blue (Dark Blue) antireflection layer (SiONx), front side 180.5 ± 0.20 mm length, 170 Silver Fingers, Half cut design, 14 no. soldering pads/Bus Bar (04 no. head pad of 1.4 x 1.2 mm ± 0.10 mm and 10 no. middle pad of 1.0 x 0.8 mm ± 0.10 mm) |
| Back side (+) | 12 no. soldering pads/Bus Bar (04 no. head pad of 2.81 x 1.58 mm ± 0.10 mm and 08 no. middle pad of 1.81 x 1.47 mm ± 0.10 mm). Rear electrode (Silver) covered with Aluminum fingers, Half cut design |
| Center to center Bus Bar distance | 17.3 ± 0.15 mm |

+ Cell Appearance - Front Side





Cell Appearance - Rear Side



Electrical Performance

- Shunt resistance: Greater than 60Ω with 98% population greater than 100Ω
- Leakage current @ -12V: Maximum Irev 0.8A with 98% population having Irev less than 0.50A
- 100% PID Resistive, Compliance as per IEC 62804, MNRE
- 100% Inline EL Testing
- Fill Factor > 80.5%
- Optimum RI
- Uniform Color Quality
- Compliance as per RoHS Directive (EU) 2015/863
- Outstanding Power output even in low light or high temperature condition
- Optimum Cell Layout



Mono Perc Bifacial Solar Cell Data Sheet



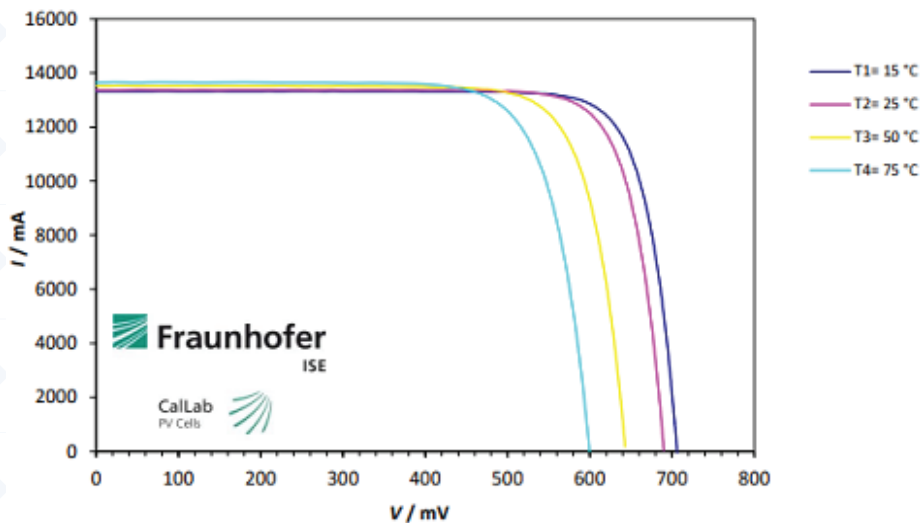
Electrical Data

| Efficiency Range | Product Code | Pmax | Voc | Isc | FF | Umpp | Impp |
|------------------|----------------|------|-------|--------|-------|-------|--------|
| >23.50 | 23.50L7.76W II | 7.76 | 0.689 | 13.604 | 82.79 | 0.597 | 12.998 |
| 23.4-23.50 | 23.40L7.72W II | 7.72 | 0.688 | 13.602 | 82.49 | 0.596 | 12.953 |
| 23.30-23.40 | 23.30L7.69W II | 7.69 | 0.687 | 13.600 | 82.31 | 0.595 | 12.933 |
| 23.20-23.30 | 23.20L7.66W II | 7.66 | 0.686 | 13.596 | 82.13 | 0.594 | 12.896 |
| 23.10-23.20 | 23.10L7.63W II | 7.63 | 0.685 | 13.590 | 81.94 | 0.592 | 12.889 |
| 23.00-23.10 | 23.00L7.59W II | 7.59 | 0.684 | 13.581 | 81.71 | 0.591 | 12.849 |
| 22.90-23.00 | 22.90L7.56W II | 7.56 | 0.683 | 13.574 | 81.54 | 0.589 | 12.837 |
| 22.80-22.90 | 22.80L7.53W II | 7.53 | 0.682 | 13.565 | 81.45 | 0.587 | 12.828 |
| 22.70-22.80 | 22.70L7.49W II | 7.49 | 0.680 | 13.552 | 81.29 | 0.585 | 12.803 |
| 22.60-22.70 | 22.60L7.46W II | 7.46 | 0.678 | 13.536 | 81.26 | 0.583 | 12.789 |
| 22.50-22.60 | 22.50L7.43W II | 7.43 | 0.677 | 13.520 | 81.19 | 0.581 | 12.779 |
| 22.40-22.50 | 22.40L7.39W II | 7.39 | 0.676 | 13.504 | 80.98 | 0.580 | 12.748 |
| 22.30-22.40 | 22.30L7.36W II | 7.36 | 0.675 | 13.492 | 80.84 | 0.578 | 12.738 |
| 22.20-22.30 | 22.20L7.33W II | 7.33 | 0.674 | 13.478 | 80.75 | 0.576 | 12.728 |
| 22.10-22.20 | 22.10L7.30W II | 7.30 | 0.672 | 13.459 | 80.69 | 0.574 | 12.718 |
| 22.00-22.10 | 22.00L7.26W II | 7.26 | 0.670 | 13.453 | 80.51 | 0.572 | 12.701 |

All data measured at standard testing conditions: 1000W/m², 25°C, AM1.5G IEC60904-3 (2020) and Reference cell calibrated by the Fraunhofer ISE in Freiburg.



Temperature Coefficient



Tk Voltage : -0.259%/K

Tk Current : +0.041%/K

Tk Power : -0.320%/K

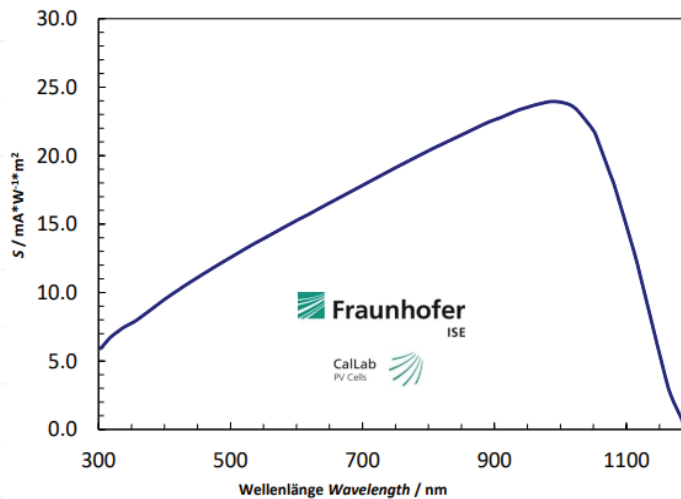


Mono Perc Bifacial Solar Cell Data Sheet

Intensity Dependence

| Intensity W/m ² | VOC | ISC |
|----------------------------|-------|-------|
| 1000 | 1.000 | 1.000 |
| 800 | 0.991 | 0.801 |
| 400 | 0.962 | 0.402 |
| 200 | 0.922 | 0.199 |

Spectral Response



The amplitude of Voc/Isc decreasing with irradiation intensity based on STC (1000w/m²)

Reliability

Peak force on soldering pad $\geq 1.0\text{N}$ (Both FBB & RBB).

Processing Recommendations

Solder Joint: 0.33 mm (round) including Sn60Pb40 coating thickness 15 to 20 μm on both sides.

Storage Recommendations

Solar cells are fragile and sensitive to storage conditions. So, cells should be stored indoor in the condition of good ventilation, dry, relative humidity below 60% and temperature below 40°C. Solar cells are extremely susceptible to humidity. It is recommended to make panels using the cells within Six months of the storage period for paramount performance. Once cells are opened from its original primary packing then cells should be used within 4 hrs.