



## PRIMA Shingled Cell Rigid Solar Module

| Model                           | PSM50(S) | PSM70(S) | PSM100(S) | PSM110(S) | PSM120(S) | PSM130(S)       | PSM170(S) | PSM180(S) | PSM200(S) |
|---------------------------------|----------|----------|-----------|-----------|-----------|-----------------|-----------|-----------|-----------|
| Electrical Characteristics      |          |          |           |           |           |                 |           |           |           |
| Rated Power                     | 50W      | 70W      | 100W      | 110W      | 120W      | 130W            | 170W      | 180W      | 200W      |
| Rated Voltage (Umpp)            | 22.8V    | 21.2V    | 22.8V     | 22.5V     | 24.7V     | 26.0V           | 30.3V     | 27.4V     | 26.9V     |
| Open-Circuit voltage (Uoc)      | 26.9V    | 18.0V    | 26.9V     | 19.1V     | 20.9V     | 22.0V           | 25.7V     | 23.2V     | 22.8V     |
| Short-circuit current(Isc)      | 2.32A    | 4.12A    | 4.65A     | 6.10A     | 6.09A     | 6.26A           | 7.01A     | 8.22A     | 9.30A     |
| Rated current (Impp)            | 2.20A    | 3.89A    | 4.39A     | 5.76A     | 5.75A     | 5.91A           | 6.15A     | 7.76A     | 8.78A     |
| Efficiency                      | 22.00%   | 22.70%   | 22.00%    | 22.70%    | 22.70%    | 22.70%          | 22.00%    | 22.70%    | 22.00%    |
| Max. system Voltage             | 600V     |          | 1000V     |           |           |                 |           |           |           |
| Power temperature coefficient   |          |          |           |           |           | - 0.38%/°C      |           |           |           |
| Voltage temperature coefficient |          |          |           |           |           | - 0.36%/°C      |           |           |           |
| Current temperature coefficient |          |          |           |           |           | 0.07%/°C        |           |           |           |
| Output power tolerance          |          |          |           |           |           | ±3%             |           |           |           |
| Temperature range               |          |          |           |           |           | -40°C bis +85°C |           |           |           |

| Technical Specifications |                     |               |               |               |               |               |               |               |               |
|--------------------------|---------------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| Solar cell size          | 210mm               | 166mm         | 210mm         | 166mm         | 166mm         | 166mm         | 210mm         | 166mm         | 210mm         |
| No.of Cells              | 40 (2x20)           | 62 (2x31)     | 80 (2x40)     | 99 (3x33)     | 108 (3x36)    | 114 (3x38)    | 135(3x45)     | 160 (4x40)    | 160 (4x40)    |
| Dimensions               | 625x460x30mm        | 1050x370x30mm | 1210x460x30mm | 1110x540x30mm | 1210x540x30mm | 1270x540x30mm | 1350x670x30mm | 1335x705x30mm | 1210x890x30mm |
| Junction box             | IP65                | IP67          | IP65          | IP67          | IP67          | IP67          | IP65          | IP67          | IP65          |
| Weight                   | 3.13 kg             | 3.53 kg       | 5.06 kg       | 5.44 kg       | 5.94 kg       | 6.23 kg       | 8.22 kg       | 8.55 kg       | 9.79 kg       |
| No. of Diodes            | 1                   |               | 2             |               |               |               |               |               |               |
| Cable Cross-section      | 2.5mm²              |               | 4mm²          |               |               |               |               |               |               |
| Cable Length             | 900mm²              |               |               |               |               |               |               |               |               |
| Connectors               | MC4 Compatible      |               |               |               |               |               |               |               |               |
| Solar cells              | Monocrystalline     |               |               |               |               |               |               |               |               |
| Cell Connection          | Shingled Technology |               |               |               |               |               |               |               |               |
| Certifications           | CE, ROHS            |               |               |               |               |               |               |               |               |

### Shingle-Technologie

In advanced solar modules with shingle technology, the individual solar cells are arranged in a way so that they overlapped slightly - similar to the shingles on a roof. This structure and a special, highly conductive adhesive mean that the conspicuous copper connectors and main conductor tracks of conventional panels are no longer necessary. This results in various advantages:

- approx. 10 % higher area efficiency compared with conventional monocrystalline cells
- increased efficiency in (partial) shade
- lower resistance and higher performance on a smaller area
- no occurrence of hotspots
- Integrated bypass diodes