

The Delta SM series solar modules are manufactured from high efficiency solar cells of Grade A quality class, which guarantees high performance, durability and reliability. The strength of the modules is provided by the use of a tempered glass and an anodized aluminum profile frame (with drainage holes). Exclusive module's frame prevents its deformation under extreme weather conditions.

**SM 200-24 P**



#### Cells

|                      |                 |
|----------------------|-----------------|
| Technology.....      | Polycrystalline |
| Cell thickness ..... | 180 µm          |
| Number of cells..... | 72 (6x12)       |
| Quality class .....  | Grade A         |

#### Electrical parameters (STC)\*

|  |         |
|--|---------|
| Peak electrical power ( $P_{max}$ ).....         | 200 W   |
| Tolerance.....                                   | +3 %    |
| Nominal voltage ( $U_{nom}$ ).....               | 24 V    |
| Voltage at maximum power point ( $U_{mp}$ )..... | 36,54 V |
| Current at maximum power point ( $I_{mp}$ )..... | 5,48 A  |
| Short-circuit current ( $I_{sc}$ ).....          | 5,81 A  |
| Open-circuit voltage ( $U_{oc}$ ).....           | 43,85 V |
| Maximum series fuse rating.....                  | 15 A    |
| Cell efficiency .....                            | 16,69 % |
| Module efficiency .....                          | 15,16 % |

\*Standard measurement conditions (STC): light density 1000 W/m<sup>2</sup>, air mass AM = 1,5, nominal temperature 25°C

#### Temperature coefficients

|   |            |
|---|------------|
| NOCT* ( $\pm 2^{\circ}\text{C}$ ).....  | 45±2°C     |
| Of power ( $P_{max}$ ).....             | -0,5 %/°C  |
| Of voltage ( $U_{oc}$ ).....            | -0,35 %/°C |
| Of current ( $I_{sc}$ ).....            | 0,06 %/°C  |
| Operating and storage temperature ..... | -40 ÷ 85°C |

\*NOCT - normal operating temperature of solar module

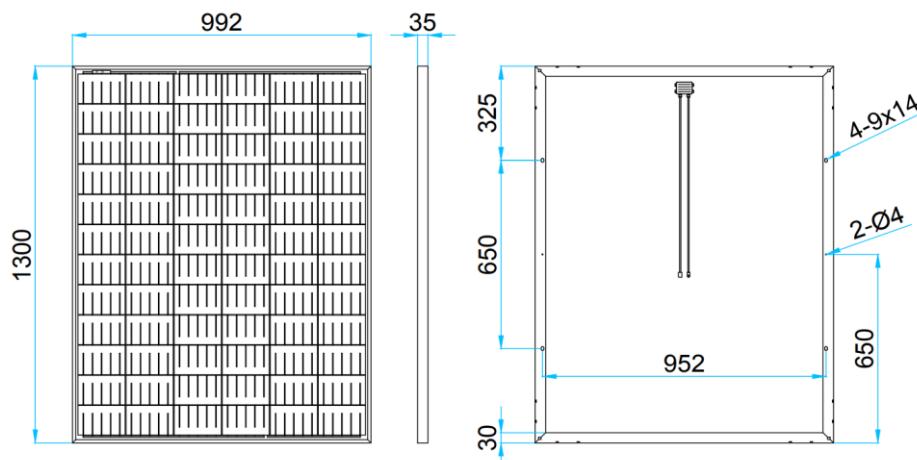
#### Mechanical characteristics

|                        |                                      |
|------------------------|--------------------------------------|
| Module dimensions..... | 1300 x 992 x 35 mm                   |
| Weight.....            | 16,4 kg                              |
| Front glass.....       | Tempered non-reflecting glass 3,2 mm |
| Frame.....             | Anodized aluminum                    |
| Terminal box .....     | IP 65                                |
| Connectors.....        | MC4                                  |
| Cable length .....     | 900 mm                               |
| Output cable .....     | 4 mm <sup>2</sup>                    |
| Number of diodes.....  | 2                                    |
| Wind load.....         | 5400 Pa                              |

Our products are constantly being improved, so we reserve the right to make changes without prior notice.

#### Quality and warranty

- The quality control complies with IEC61215 and IEC61730 standards.
- The warranty for solar module is 10 years and does not cover any damages caused by mechanical, thermal or other external actions.
- The manufacturer guarantees that more than 90% of the declared nominal power will be retained for 10 years. 80% of the declared minimum nominal power will be retained for 25 years.



**ATTENTION!** The solar module should be installed and connected by a qualified technician with the corresponding access level. While connecting the solar module, strictly observe the connection polarity. Be sure to use a solar charge controller to charge the battery and power the load. Before using the module, read the manual carefully.