

# Technical Description



## Photovoltaic Module NG 24 TP1 SAW



### 36 polycrystalline Si solar cells

Main application: small off-grid PV systems

### Module Electrical Performance under Standard Test Conditions

Refers to standard test conditions of  $1000 \text{ Wm}^{-2}$  solar irradiance,  $25^\circ\text{C}$  cell temperature, Air Mass 1.5.

Note: Maximum power point is subject to +10%/-5% variation. All other values are typical and for guidance only.

Maximum Power Point: 24 Watts, 1.32 Amps at 18.1 Volts.

Short Circuit: 1.41 Amps. Open circuit: 22.3 Volts.

### Dimensions and Weight

all dimensions +/- 2mm, weight approximately +/-0.3kg

Length: 540mm. Width: 340mm. Thickness at edge: 34mm. Weight: 2.4kg

### Construction

Top cover material: low iron tempered M glass 3mm

Rear cover material: Tedlar-Polyester-Tedlar white

Encapsulant (lamination material): EVA

Frame: anodised aluminium

2 factory-fitted bypass diodes

1 junction box type small

2 x 4mm earthing holes in frame

### Integral mounting holes

Along length: 270mm centre to centre, 135mm centre to module edge.

4 holes, size 7mm.

Across width: 318mm centre to centre, 21mm centre to module edge.

### Cell circuit

Cut from full size cells into 1/6 of a cell

Cell dimensions: Length (tab direction) 52mm. Width: 78mm.

Electrical circuit: 36 cells in series

Cell layout: 4 rows, each row is 9 cells long.

### Normal Operating Cell Temperature (NOCT)

$47^\circ\text{C}$

error in measurement around +/-  $2^\circ\text{C}$

Cell temperature at  $800 \text{ Wm}^{-2}$  solar irradiance,  $20^\circ\text{C}$  ambient temperature, wind speed  $\leq 1 \text{ ms}^{-1}$ , free air access to rear.

### Efficiencies based on Standard Test Conditions Rating

Module: 13.1%

Laminated area: 13.4%

Cells alone: 16.4%

Note: Standard Test Conditions efficiency figures should only be used to compare one module with another. These efficiency figures do not apply to actual field performance, for which a careful analysis of operating conditions is necessary to determine the effects of module temperature and other factors.

Specifications may change due to Naps policy of continuous product improvement.

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Please check current specification before purchasing.

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