

# Technical Description



## Photovoltaic Module KC85T-1

Product Code: 12121



**36 polycrystalline Si solar cells**

**Main application: general purpose PV use**

### Module Electrical Performance under Standard Test Conditions

*Refers to standard test conditions of 1000 Wm<sup>-2</sup> solar irradiance, 25°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: 87 Watts, 5.02 Amps at 17.3 Volts.

Short Circuit: 5.34 Amps. Open circuit: 21.7 Volts.

### Dimensions and Weight

*all dimensions +/- 2mm, weight approximately +/-0.1kg*

Length: 1007mm. Width: 652mm. Thickness at edge: 36mm. Weight: 8.3kg

### Construction

Top cover material: low iron tempered glass 3.2mm

Rear cover material: PVF/PET

Encapsulant (lamination material): EVA

Frame: anodised aluminium

3 factory-fitted bypass diodes

1 junction box type K1

thickness with junction box 58mm

### Integral mounting holes

Along length: 949mm centre to centre, 29mm centre to module edge.

8 holes, size 7mm.

Across width: 613mm centre to centre, 19.5mm centre to module edge.

### Cell circuit

Cut from full size cells into 2/3 of a cell

Cell dimensions: Length (tab direction) 100mm. Width: 155mm.

Electrical circuit: 36 cells in series

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

### Normal Operating Cell Temperature (NOCT)

47°C *error in measurement around +/- 2°C*

*Cell temperature at 800Wm<sup>-2</sup> solar irradiance, 20°C ambient temperature, wind speed <=1ms<sup>-1</sup>, free air access to rear.*

### Efficiencies based on Standard Test Conditions Rating

Module: 13.3%

Laminated area: 13.4%

Cells alone: 15.6%

*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.*

*Please check current specification before purchasing.*

*Information last updated: 12-Jan-06*

**Naps Systems Oy, Pakkalankuja 7A, FIN-01510 Vantaa, Finland**

**Tel +358 20 7545 666, Fax +358 20 7545 660, [www.napssystem.com](http://www.napssystem.com)**