



**Article number:** 231 614  
**Description:** NDQ2E3E/ND162E1

#### Module

Module type: Standard module  
Frame: Aluminium anodised silver (similar to RAL 7035, light grey)  
Size (W x H): 1318 x 994 mm  
Frame height: 46 mm  
Height of connecting box: 14 mm  
Weight: 16 kg  
Configuration: 48 cells (8 x 6)  
Cell connection arrangement: In series

#### Cell

Cell type: Polycrystalline  
Colour: Light blue  
Size: 155.5 x 155.5 mm  
Horizontal gap between cells: 2.0 mm  
Vertical gap between cells: 2.0 mm  
Distance from edge horizontally: 29.5 mm  
Distance from edge vertically: 13.0 mm  
Strip conductors: Vertical

#### Input and output values (STC: 1000 W/m<sup>2</sup>; 25°C; AM 1.5)

Nominal output:  $P_{MPP}$  162 Wp  
Output tolerance: +/- 5 %  
Nominal voltage:  $U_{MPP}$  22.8 V  
Nominal current:  $I_{MPP}$  7.11 A  
Open-circuit voltage:  $U_{oc}$  28.4 V  
Short-circuit current:  $I_{sc}$  7.92 A  
Max. system voltage (SKL II):  $U_{sys}$  1000 V

#### Module design

Front glass: 3.2 mm opal glass  
Space between cells: EVA with solar cells  
Reverse side: PVF-PET-PVF foil

#### Connection

Connecting box with bypass diodes.  
Fitted connecting cable 0.9 m with MC-T3 plug system.

**Packing unit** 2

#### PV module: NDQ2E3E/ND162E1

The Sharp **NDQ2E3E/ND162E1** PV module builds on 40 years of technical development and has excellent durability even in adverse environmental conditions.

The use of a bypass diode minimises the fall in output in the event of shade.

The high performance module with a cell efficiency of 13.8% achieves a module efficiency of 12.2%.

To protect them against the harshest of climatic conditions, the cells are embedded between a toughened glass covering and cast EVA, and are sealed on the reverse with PVF-PET-PVT foil. The laminate is held in a robust, easy to assemble aluminium frame.

#### Features

- Performance guarantee: 20 years: 80% of  $P_{Min}$   
10 years: 90% of  $P_{Min}$
- 2-year product guarantee for end customers
- Each module is subjected to a 100% final inspection, with individual detection of the electrical values.
- Sharp solar modules exceed the internationally defined target values and meet the following requirements:
- JIS (Japanese Industrial Standard)
- IEC 61215, International Electrotechnical Commission, Worldwide Standard (TÜV / Rhineland)
- DIN VDE protection class II (TÜV / Rhineland)
- Connecting box with bypass diodes
- Fitted connecting cables with MC-T3 connectors