We care! Since 1975.

KD50SE-1P
High efficiency multicrystal photovoltaic module

As a pioneer in the photovoltaic sector, Kyocera Solar can look back on over 35 years of experience. We are also involved in numerous future-oriented solutions across the world. Our focus is on innovation and quality.

Our vision: To make solar energy accessible to everybody and to ensure a comprehensive sustained energy supply.

**CUTTING-EDGE TECHNOLOGY**

- **Cell:**
  - 52 mm × 156 mm
  - Polycrystalline, 3-busbar
  - >16% efficiency
  - Embedded in EVA film
  - Patented RIE process: very little light reflection, homogenous dark coloration

- **Frame:**
  - Aluminium, anodised and coated
  - Screwed and also adhered
  - Strength: 2,400 N/m²
  - Drainage openings to protect against frost damage
  - Flexible assembly (horizontal and upright)

- **Junction box:**
  - Incl. bypass diodes
  - Over-voltage proof Si-p/n bypass diodes
  - Accessible junction box for flexible installation

- **Pairing:**
  - Sorting procedure: Nominal output is achieved by two paired modules (≥100 Wp for 2 × KD50SE-1P)

- **Production:**
  - Fully automated and integrated production processes in our own production plants
  - No intermediate products are purchased
  - 100% final inspection

- **Service:**
  - Professional Europe-wide customer service in Esslingen/Germany

**COMPANY**

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TÜVdotCOM Service: Internet platform for tested quality and service
TÜVdotCOM-ID: 0000023574
IEC 61215 ed. 2, IEC 61730 and Safety Class II
Kyocera is ISO 9001, ISO 14001 and OHSAS18001 certified and registered.
SPECIFICATIONS

in mm

19.5
705
19.5

706 (± 2.5)
19.5
705
19.5

36

Electrical Characteristics

Current-Voltage characteristics at various cell temperatures

Irradiance: AM 1.5, 1 kW/m²

Cell temperature 25 °C

Current-Voltage characteristics at various irradiance levels

Cell temperature 25 °C

Electrical Performance

PV Module Type

KD50SE-1P

At 1000 W/m² (STC)*

Maximum Power [W] 50
Maximum System Voltage [V] 750
Maximum Power Voltage [V] 17.9
Maximum Power Current [A] 2.8
Open Circuit Voltage (V_OC) [V] 22.1
Short Circuit Current (I_SC) [A] 3.07
Efficiency [%] 9.5

At 800 W/m² (NOCT)**

Maximum Power [W] 35
Maximum Power Voltage [V] 15.8
Maximum Power Current [A] 2.24
Open Circuit Voltage (V_OC) [V] 19.9
Short Circuit Current (I_SC) [A] 2.50
NOCT [°C] 49

Power Tolerance [%] +10 / – 5
Maximum Reverse Current I_R [A] 6
Series Fuse Rating [A] 6
Temperature Coefficient of V_OC [%/K] –0.36
Temperature Coefficient of I_SC [%/K] 0.06
Temperature Coefficient of Max. Power [%/K] –0.46
Reduction of Efficiency (from 1000 W/m² to 200 W/m²) [%] 2.3

Dimensions

Length [mm] 706 (± 2.5)
Width [mm] 744 (± 2.5)
Depth / incl. Junction Box [mm] 36 / 45
Weight [kg] 6.5
Connection Type Screw Terminals
Junction Box [mm] 140 × 150 × 37.2
Number of bypass diodes 2
IP Code IP65

Cells

Number per Module 36
Cell Technology polycrystalline
Cell Shape (square) [mm] 52 × 156
Cell Bonding 3-busbar

General Information

Performance Guarantee 10*** / 20 years ****
Warranty 5 years *****

* Electrical values under standard test conditions (STC): irradiation of 1000 W/m²,
airmass AM 1.5 and cell temperature of 25 °C
** Electrical values under normal operating cell temperature (NOCT): irradiation of 800 W/m²,
airmass AM 1.5, wind speed of 3 m/s and ambient temperature of 25 °C
*** 10 years on 90% of the minimally specified power P under standard test conditions (STC)
**** 20 years on 80% of the minimally specified power P under standard test conditions (STC)
***** In the case of Europe