

# KD180GH-2PU

High efficiency multicrystal photovoltaic module



## CUTTING-EDGE TECHNOLOGY

Exhaustive research work and continuous further development of production processes enable the integrated Kyocera high-performance solar cells with a standard size of 156 mm x 156 mm to achieve over 16 % efficiency, guaranteeing an extremely high annual yield of energy from the photovoltaic system.

To protect against the harshest weather conditions, the cells are embedded between a reinforced glass covering and EVA foil, and are sealed with a PET foil backing. The laminate is set in a sturdy aluminium frame which is easy to assemble. Our warranty covers a surface load of 2,400 N/m<sup>2</sup>, but (in addition to that), the module even passed TÜV certification test IEC 61215 ed. 2 with the test condition of 5,400N/m<sup>2</sup>.

The junction box on the module backside is equipped with bypass diodes that eliminate the risk of the individual solar cells overheating (hot spot effect). Many series-connected photovoltaic modules can be easily wired using pre-assembled solar cables and multi-contact plugs.

Kyocera manufactures all the components at its own production sites – without buying in semi-finished products – to ensure consistently high product quality.

## EXAMPLES OF APPLICATION

- Grid-connected systems, for e.g.
  - Residential solar power systems
  - Public and industrial solar power systems
- Solar power stations

*Apartment house, Germany*



TUVdotCOM Service: Internet platform  
for tested quality and service  
TUVdotCom-ID: 0000023299  
IEC 61215 ed. 2, IEC 61730 and  
Safety Class II  
Kyocera is ISO 9001 and ISO 14001  
certified and registered.

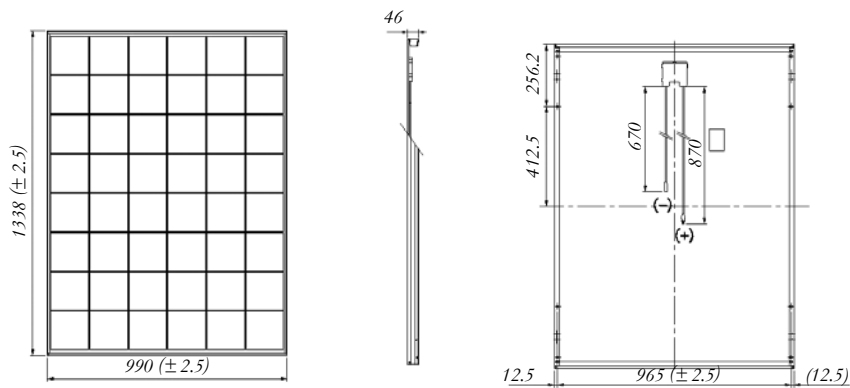


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SOLAR**

**We care!**

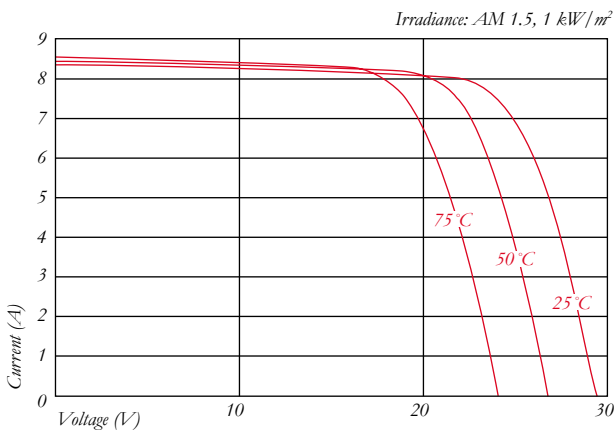
## SPECIFICATIONS

in mm

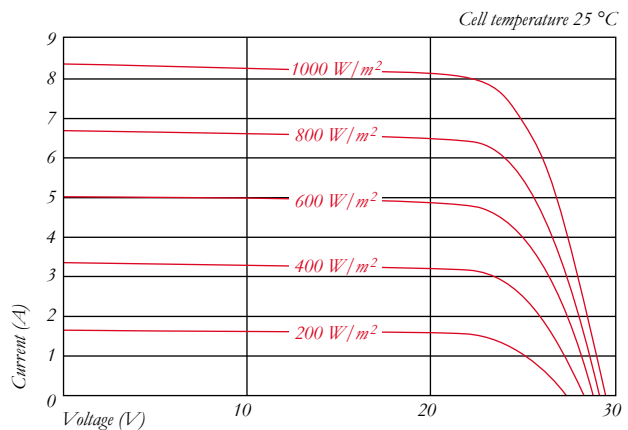


## ELECTRICAL CHARACTERISTICS

Current-Voltage characteristics at various cell temperatures



Current-Voltage characteristics at various irradiance levels



## ELECTRICAL PERFORMANCE

|   |             |                        |
|---|-------------|------------------------|
| PV Module Type  | KD180GH-2PU |                        |
| <b>At 1000 W/m<sup>2</sup> (STC)*</b>   |             |                        |
| Maximum Power   | [W]         | 180                    |
| Maximum System Voltage  | [V]         | 1000                   |
| Maximum Power Voltage   | [V]         | 23.6                   |
| Maximum Power Current   | [A]         | 7.63                   |
| Open Circuit Voltage (V <sub>OC</sub> )                                       | [V]         | 29.5                   |
| Short Circuit Current (I <sub>SC</sub> )                                      | [A]         | 8.35                   |
| <b>At 800 W/m<sup>2</sup> (NOCT)**</b>  |             |                        |
| Maximum Power   | [W]         | 127                    |
| Maximum Power Voltage   | [V]         | 20.8                   |
| Maximum Power Current   | [A]         | 6.1                    |
| Open Circuit Voltage (V <sub>OC</sub> )                                       | [V]         | 26.5                   |
| Short Circuit Current (I <sub>SC</sub> )                                      | [A]         | 6.8                    |
| NOCT  | [°C]        | 49                     |
| Power Tolerance   | [%]         | +5 / -5                |
| Maximum Reverse Current I <sub>R</sub>  | [A]         | 15                     |
| Series Fuse Rating  | [A]         | 15                     |
| Temperature Coefficient of V <sub>OC</sub>                                    | [V/°C]      | -1.06x10 <sup>-1</sup> |
| Temperature Coefficient of I <sub>SC</sub>                                    | [A/°C]      | 5.01x10 <sup>-3</sup>  |
| Temperature Coefficient of Max. Power   | [W/°C]      | -8.24x10 <sup>-1</sup> |
| Reduction of Efficiency (from 1000 W/m <sup>2</sup> to 200 W/m <sup>2</sup> ) | [%]         | 5,8                    |

## DIMENSIONS

|                            |                         |                 |
|----------------------------|-------------------------|-----------------|
| Length                     | [mm]                    | 1338 (±2.5)     |
| Width                      | [mm]                    | 990 (±2.5)      |
| Depth / incl. Junction Box | [mm]                    | 46              |
| Weight                     | [kg]                    | 16              |
| Cable                      | [mm]                    | (+)870 / (-)670 |
| Connection Type            | MC PV-KBT3 / MC PV-KST3 |                 |
| Junction Box               | [mm]                    | 100x108x15      |
| IP Code                    | IP65                    |                 |

## GENERAL INFORMATION

|                       |                      |
|-----------------------|----------------------|
| Performance Guarantee | 10*** / 20 years**** |
| Warranty              | 2 years              |

## CELLS

|                     |                 |
|---------------------|-----------------|
| Number per Module   | 48              |
| Cell Technology     | polycrystalline |
| Cell Shape (square) | [mm] 156x156    |
| Cell Bonding        | 3 busbar        |

\* Electrical values under standard test conditions (STC): irradiation of 1000 W/m<sup>2</sup>, airmass AM 1.5 and cell temperature of 25 °C.

\*\* Electrical values under normal operating cell temperature (NOCT): irradiation of 800 W/m<sup>2</sup>, airmass AM 1.5, wind speed of 1 m/s and ambient temperature of 20 °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).

Your local Kyocera dealer:

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