

We care! Since 1975.

# Y-series

KD140GH-2YU · KD190GH-2YU · KD220GH-4YU  
 KD240GH-4YB · KD245GH-4YB · KD320GH-4YB



Apartment house, Germany

## CUTTING-EDGE TECHNOLOGY

### Cell:

- 156 mm × 156 mm
- Polycrystalline, 3-busbar
- >16% efficiency
- Embedded in EVA film
- Silicon nitride texturing: little light reflection, homogenous coloration

### Frame:

- Aluminium, black anodised and coated
- Screwed and also adhered
- Load capacity: 5,400 N/m<sup>2</sup>
- Interior drainage openings to protect against frost damage
- Flexible assembly (horizontal and upright)
- 36-/ 48-/ 54-cell modules: approved for module inlay systems
- 60-/ 80-cell modules: reinforced on rear side with 2 support bars

### Junction box:

- Incl. bypass diodes
- Encapsulated
- Highest fireproof class 5VA in accordance with UL94

- 36-/ 48-cell modules: pre-configured with connection wires and original multi-contact plug connectors
- 54-/ 60-/ 80-cell modules: pre-configured with connection wires and SMK plug connectors (MC4 compatible)

### Pairing:

- Sorting procedure: Nominal output is achieved by two paired modules (e.g. ≥490 Wp for 2 × KD245GH-4YB)

### Production:

- Fully automated and integrated production processes in our own production plants
- Vertical integration = 100% control

### Service:

- Professional Europe-wide customer service in Esslingen/Germany
- Individual maintenance service increases life expectancy of the photovoltaic system

## COMPANY

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.

## Kyocera photovoltaic modules meet the highest standards



- Periodic inspection
- Qualified, IEC 61215
- Safety tested, IEC 61730
- Long-term sequential testing



IEC 61701  
 Salt Mist Corrosion Test



Kyocera is ISO 9001, ISO 14001 and OHSAS 18001 certified and registered.

**ELECTRICAL PERFORMANCE Y-SERIES**

PV Module Type	KD140GH-2YU	KD190GH-2YU	KD220GH-4YU	KD240GH-4YB	KD245GH-4YB	KD320GH-4YB
<b>At 1000 W/m<sup>2</sup> (STC)<sup>(1)</sup></b>						
Maximum Power [W]	140	190	220	240	245	320
Maximum System Voltage [V]	1000	1000	1000	1000	1000	1000
Maximum Power Voltage [V]	17.7	23.6	26.6	29.8	29.8	40.1
Maximum Power Current [A]	7.91	8.06	8.28	8.06	8.23	7.99
Open Circuit Voltage (V <sub>oc</sub> ) [V]	22.1	29.5	33.2	36.9	36.9	49.5
Short Circuit Current (I <sub>sc</sub> ) [A]	8.68	8.82	8.98	8.59	8.91	8.60
Efficiency [%]	13.9	14.3	14.8	14.5	14.8	14.5
<b>At 800 W/m<sup>2</sup> (NOCT)<sup>(2)</sup></b>						
Maximum Power [W]	101	137	158	172	176	230
Maximum Power Voltage [V]	16.0	21.3	24.0	26.7	26.8	36.1
Maximum Power Current [A]	6.33	6.45	6.63	6.45	6.58	6.40
Open Circuit Voltage (V <sub>oc</sub> ) [V]	20.2	27.0	30.4	33.7	33.7	45.3
Short Circuit Current (I <sub>sc</sub> ) [A]	7.03	7.14	7.27	6.95	7.21	6.96
NOCT [°C]	45	45	45	45	45	45
Power Tolerance [%]	+5 / -5	+5 / -5	+5 / -3	+5 / -3	+5 / -3	+5 / -3
Maximum Reverse Current I <sub>r</sub> [A]	15	15	15	15	15	15
Series Fuse Rating [A]	15	15	15	15	15	15
Temperature Coefficient of V <sub>oc</sub> [%/K]	-0.36	-0.36	-0.36	-0.36	-0.36	-0.36
Temperature Coefficient of I <sub>sc</sub> [%/K]	0.06	0.06	0.06	0.06	0.06	0.06
Temperature Coefficient of Max. Power [%/K]	-0.46	-0.46	-0.46	-0.46	-0.46	-0.46
Reduction of Efficiency (from 1000 W/m <sup>2</sup> to 200 W/m <sup>2</sup> ) [%]	5.3	5.3	6.0	7.3	6.6	7.1
<b>DIMENSIONS</b>						
Length [mm]	1500 (±2.5)	1338 (±2.5)	1500 (±2.5)	1662 (±2.5)	1662 (±2.5)	1662 (±2.5)
Width [mm]	668 (±2.5)	990 (±2.5)	990 (±2.5)	990 (±2.5)	990 (±2.5)	1320 (±2.5)
Depth / incl. Junction Box [mm]	46	46	46	46	46	46
Weight [kg]	12.5	16	18	21	21	27.5
Cable [mm]	(+)1010 / (-)840	(+)1030 / (-)840	(+)1100 / (-)900	(+)1190 / (-)960	(+)1190 / (-)960	(+)1290 / (-)1040
Connection Type	MC PV-KBT3 / MC PV-KST3	MC PV-KBT3 / MC PV-KST3	PV-03 (SMK)	PV-03 (SMK)	PV-03 (SMK)	PV-03 (SMK)
Junction Box [mm]	113 × 82 × 15	113 × 82 × 15	123 × 91.6 × 16	123 × 91.6 × 16	123 × 91.6 × 16	133 × 136 × 16.5
Number of bypass diodes	2	3	3	3	3	4
IP Code	IP65	IP65	IP65 / IP67	IP65 / IP67	IP65 / IP67	IP65 / IP67
<b>CELLS</b>						
Number per Module	36	48	54	60	60	80
Cell Technology	polycrystalline	polycrystalline	polycrystalline	polycrystalline	polycrystalline	polycrystalline
Cell Shape (square) [mm]	156 × 156	156 × 156	156 × 156	156 × 156	156 × 156	156 × 156
Cell Bonding	3 busbar	3 busbar	3 busbar	3 busbar	3 busbar	3 busbar
<b>GENERAL INFORMATION</b>						
Performance Guarantee	10 <sup>(3)</sup> / 20 years <sup>(4)</sup>	10 <sup>(3)</sup> / 20 years <sup>(4)</sup>	10 <sup>(3)</sup> / 20 years <sup>(4)</sup>	10 <sup>(3)</sup> / 20 years <sup>(4)</sup>	10 <sup>(3)</sup> / 20 years <sup>(4)</sup>	10 <sup>(3)</sup> / 20 years <sup>(4)</sup>
Warranty	10 years <sup>(5)</sup>	10 years <sup>(5)</sup>	10 years <sup>(5)</sup>	10 years <sup>(5)</sup>	10 years <sup>(5)</sup>	10 years <sup>(5)</sup>

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

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

(3) 10 years on 90% of the minimally specified power P under standard test conditions (STC)

(4) 20 years on 80% of the minimally specified power P under standard test conditions (STC)

(5) In the case of Europe

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