KYOCERA

KD135SX-1PU

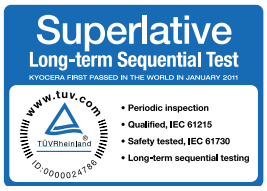
CUTTING EDGE TECHNOLOGY

As a pioneer with over 36 years in the solar energy industry, Kyocera demonstrates leadership in the development of solar energy products. Kyocera's *Kaizen* Philosophy, commitment to continuous improvement, is shown by repeated achievement of world record cell efficiencies, supported by proven field performance.

QUALITY & SAFETY BUILT IN

- Manufactured in our own production plants using a fully automated and integrated production process
- UV stabilized, aesthetically pleasing black anodized frame
- Easily accessible grounding points on all four corners for fast installation
- Accessible junction box for flexible installation
- Supported by major mounting structure manufacturers
- Pass TUV surface load testing to 5400N/m^2

PROVEN RELIABILITY



- First and only module manufacturer to date to pass rigorous Long-Term Sequential Test performed by TÜV Rheinland
- Proven superior field performance with more than 25 years of field data
- Tight power tolerance
- Performance leader at a number of real world system installations, confirmed with actual yield data.

WARRANTY

- Kyocera standard 20 year power output warranty
- 5 year workmanship warranty

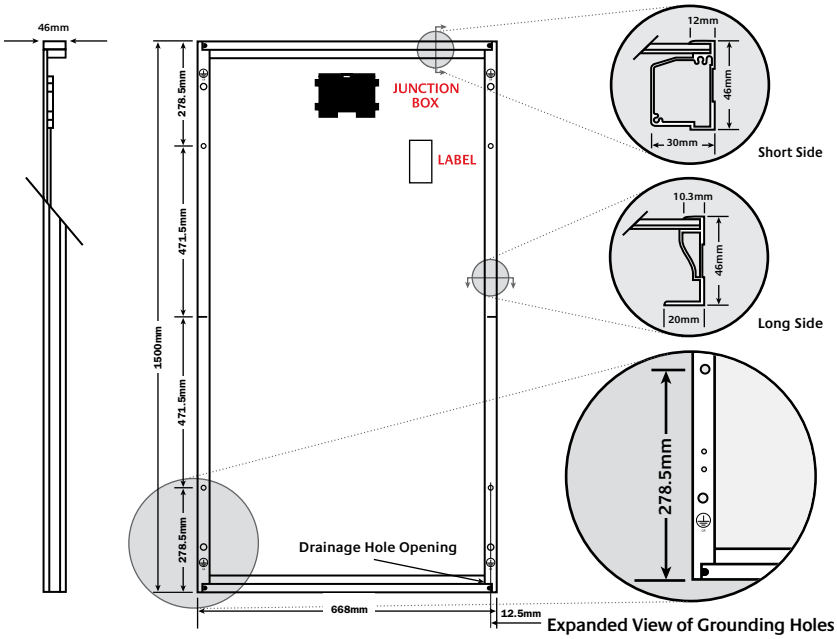
QUALIFICATIONS AND CERTIFICATIONS

IEC 61215 ed.2 IEC 61730 and Application Class A
TUVdoCom-ID: 0000023299

Kyocera is ISO 9001 and ISO 14001 certified and registered

SPECIFICATIONS

Frame Cross Section Diagrams

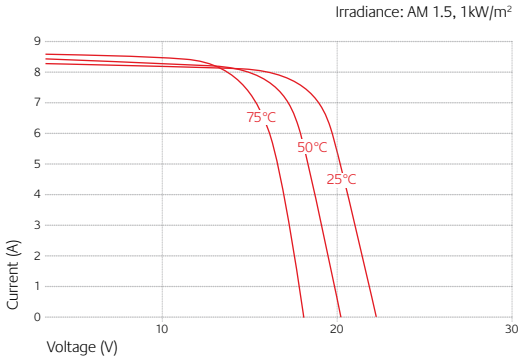


Legend

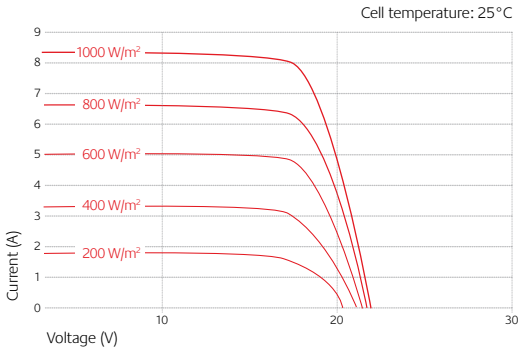
MOUNTING HOLES Ø9mm | DRAINAGE HOLES | GROUND SYMBOL Ø9mm

ELECTRICAL CHARACTERISTICS

Current-Voltage characteristics at various cell temperatures



Current-Voltage characteristics at various irradiance levels



ELECTRICAL PERFORMANCE

At 1000 W/m² (STC)*		
Maximum Power	135	W
Maximum Power Voltage (V_{mp})	17.7	V
Maximum Power Current (I_{mp})	7.63	A
Open Circuit Voltage (V_{oc})	22.1	A
Short Circuit Current (I_{sc})	8.37	A
Efficiency	13.4	%

At 800 W/m² (NOCT)**		
Maximum Power	97	W
Maximum Power Voltage (V_{mp})	16.0	V
Maximum Power Current (I_{mp})	6.1	A
Open Circuit Voltage (V_{oc})	20.2	A
Short Circuit Current (I_{sc})	6.78	A
NOCT	45	°C

Other Electrical Characteristics		
Power Tolerance	+5/-5	%
Maximum System Voltage	750	V
Maximum Reverse Current	15	A
Series Fuse Rating	15	A
Temperature Coefficient of (V_{oc})	-0.36	%/C
Temperature Coefficient of (I_{sc})	0.06	%/C
Temperature Coefficient of Max. Power	-0.46	%/C

MODULE CHARACTERISTICS

Dimensions		
Length	1500 (±2.5)	mm
Width	668 (±2.5)	mm
Depth (Including Junction Box)	46	mm
Weight	12.5	kg
Connection Type	Screw Terminals	
Junction Box	140 x 150 x 37.2	mm
Number of Bypass Diodes	2	
IP Code	IP65	

Cells		
Cell Per Module	36	
Cell Technology	multi-crystalline	
Cell Dimensions (Square)	156 x 156	mm
Cell Bonding	3 busbar	

* 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 test conditions (NOCT) = irradiation of 800 W/M², airmass AM 1.5, wind speed of 1m/s, and ambient temperature of 20°C.

KYOCERA reserves the right to modify these specifications without notice.

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OUR VALUED PARTNER