



KD320GH-4FB

CUTTING EDGE TECHNOLOGY

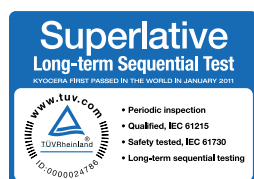
As a pioneer with over 38 years in the solar energy industry, Kyocera demonstrates leadership in the development of solar energy products. Kyocera's Kaizen Philosophy, commitment to continuous improvement, is shown by repeated achievement of world record cell efficiencies, supported by proven field performance.

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
- Proven junction box technology with encapsulation
- Pre-configured with connection wires and SMK plug connectors
- Frame reinforced on back side with two cross struts for added strength and durability
- Passed TUV surface load testing to 5400N/m²

PROVEN RELIABILITY

- First module manufacturer to pass rigorous Long-Term Sequential Test performed by TÜV Rheinland
- Proven superior field performance with more than 25 years of field data from a number of real world operating systems
- Confirmed as Potential Induced Degradation (PID) resistant by Fraunhofer CSP Testing, with zero degradation



QUALIFICATIONS AND CERTIFICATIONS



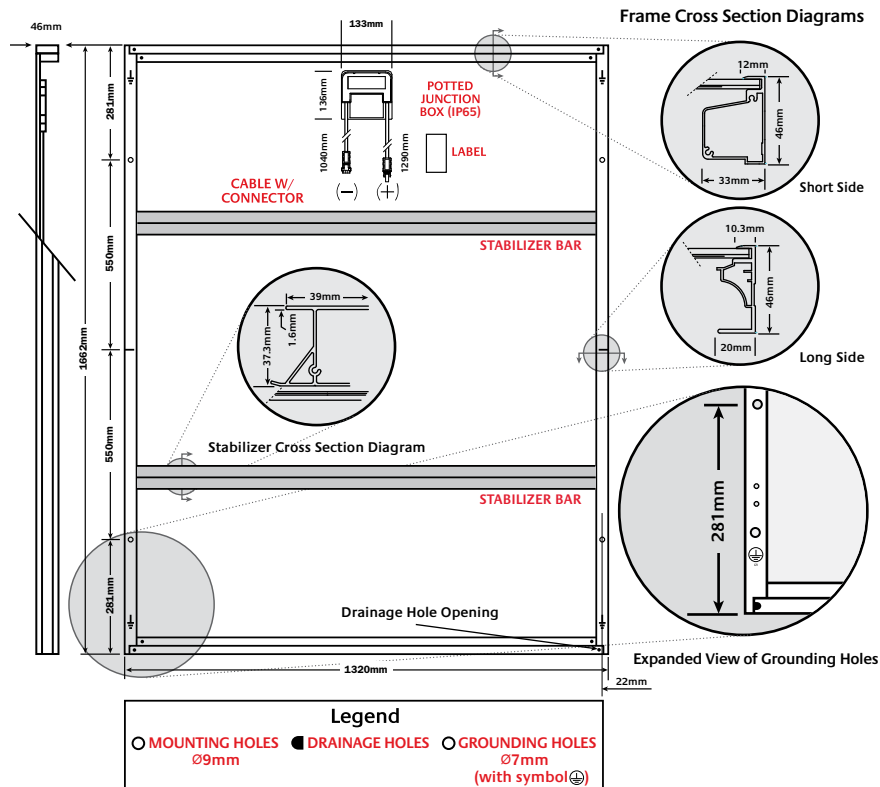
IEC 61215 ed.2 IEC 61730 and Application Class A
IEC 61701 (Salt Mist Corrosion Testing)

Kyocera is ISO 9001 and ISO 14001 certified and registered

WARRANTY

- Kyocera standard 25 year power output warranty
- 10 year workmanship warranty

SPECIFICATIONS



ELECTRICAL PERFORMANCE

At 1000 W/m² (STC)*

Maximum Power	320	W
Maximum Power Voltage (V _{mp})	40.1	V
Maximum Power Current (I _{mp})	7.99	A
Open Circuit Voltage (V _{oc})	49.5	V
Short Circuit Current (I _{sc})	8.60	A
Efficiency	14.5	%

At 800 W/m² (NOCT)**

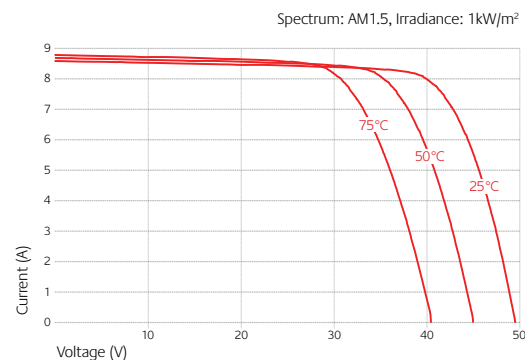
Maximum Power	230	W
Maximum Power Voltage (V _{mp})	36.1	V
Maximum Power Current (I _{mp})	6.40	A
Open Circuit Voltage (V _{oc})	45.3	V
Short Circuit Current (I _{sc})	6.96	A
NOCT	45	°C

Other Electrical Characteristics

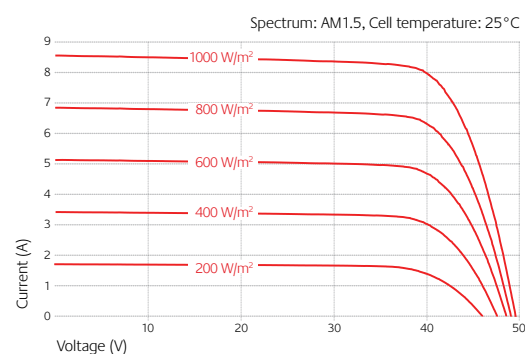
Power Tolerance	+5/-3	%
Maximum System Voltage	1000	V
Maximum Reverse Current	15	A
Series Fuse Rating	15	A
Temperature Coefficient of (V _{oc})	-0.36	%/C
Temperature Coefficient of (I _{sc})	0.060	%/C
Temperature Coefficient of Max. Power	-0.45	%/C

ELECTRICAL CHARACTERISTICS

Current-Voltage characteristics at various cell temperatures



Current-Voltage characteristics at various irradiance levels



MODULE CHARACTERISTICS

Dimensions

Length	1662 (±2.5)	mm
Width	1320 (±2.5)	mm
Depth (Including Junction Box)	46	mm
Weight	27.5	kg
Cable	(+) 1290 / (-) 1040	mm
Connection Type	R51-7/P51-7 (SMK PV-03 Series)	
Junction Box	133 x 136 x 16.5	mm
Number of Bypass Diodes	4	
IP Code	IP65	

Cells

Cell Per Module	80	
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.