



# KD140SX-1FBS

## CUTTING EDGE TECHNOLOGY

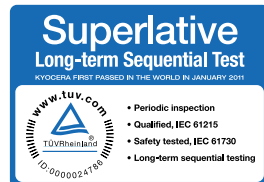
As a pioneer with over 38 years in the solar energy industry, Kyocera demonstrates leadership in the development of solar energy products. Kyocera's *Kaizen* Philosophy, commitment to continuous improvement, is shown by repeated achievement of world record cell efficiencies, supported by proven field 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
- Accessible junction box for flexible installation
- Supported by major mounting structure manufacturers
- Pass TUV surface load testing to 5400N/m<sup>2</sup>

## 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
- Performance leader at a number of real world system installations, confirmed with actual yield data.



## WARRANTY

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

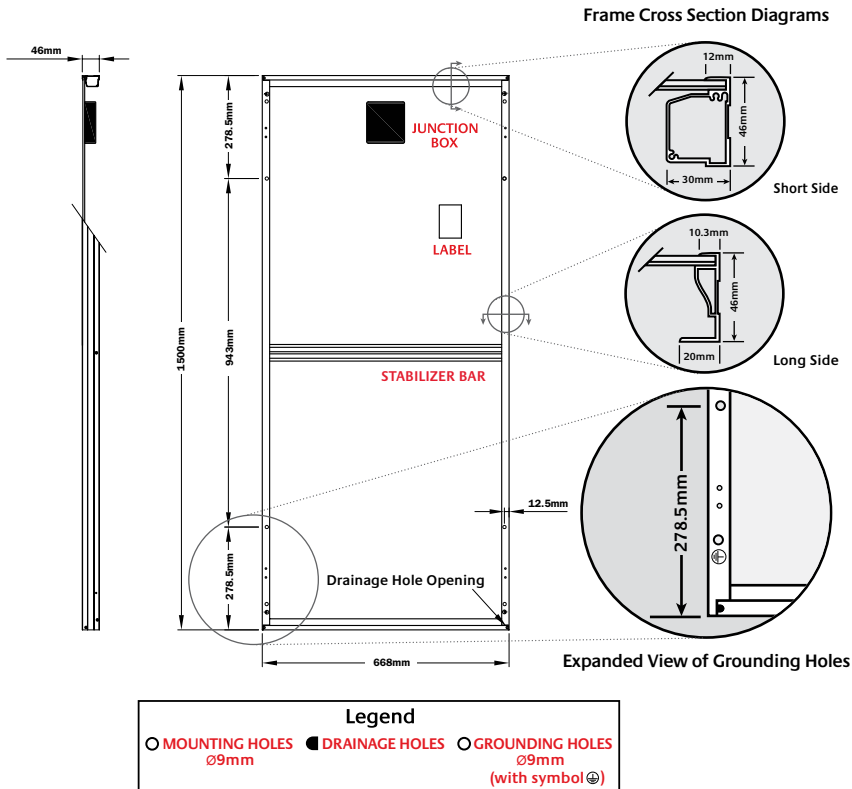


## QUALIFICATIONS AND CERTIFICATIONS



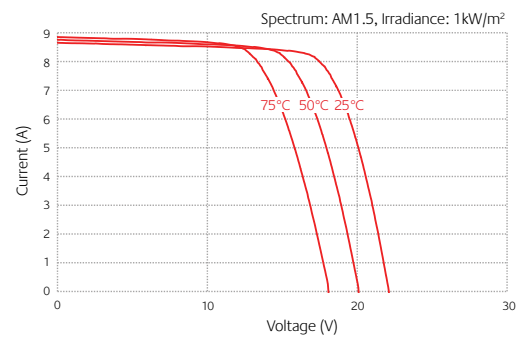
IEC 61215 ed.2 IEC 61730 and Application Class A  
Kyocera is ISO 9001 and ISO 14001 certified and registered.

## SPECIFICATIONS

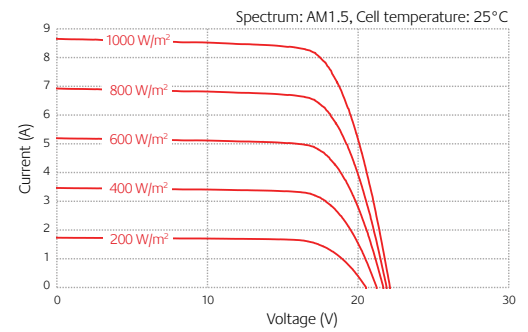


## ELECTRICAL CHARACTERISTICS

Current-Voltage characteristics at various cell temperatures



Current-Voltage characteristics at various irradiance levels



## ELECTRICAL PERFORMANCE

### At $1000\text{ W/m}^2$ (STC)\*

Maximum Power	140	W
Maximum Power Voltage ( $V_{mp}$ )	17.7	V
Maximum Power Current ( $I_{mp}$ )	7.91	A
Open Circuit Voltage ( $V_{oc}$ )	22.1	V
Short Circuit Current ( $I_{sc}$ )	8.68	A
Efficiency	13.9	%

### At $800\text{ W/m}^2$ (NOCT)\*\*

Maximum Power	101	W
Maximum Power Voltage ( $V_{mp}$ )	16.0	V
Maximum Power Current ( $I_{mp}$ )	6.33	A
Open Circuit Voltage ( $V_{oc}$ )	20.2	V
Short Circuit Current ( $I_{sc}$ )	7.03	A
NOCT	45	$^\circ\text{C}$

### 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 ( $\pm 2.5$ )	mm
Width	668 ( $\pm 2.5$ )	mm
Depth (Including Junction Box)	46	mm
Weight	12.9	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  $1000\text{ W/m}^2$ , airmass AM 1.5, and cell temperature of  $25^\circ\text{C}$ .

\*\* Electrical values under normal operating test conditions (NOCT) = irradiation of  $800\text{ W/m}^2$ , airmass AM 1.5, wind speed of  $1\text{ m/s}$ , and ambient temperature of  $20^\circ\text{C}$ .

KYOCERA reserves the right to modify these specifications without notice.