

THE NEW VALUE FRONTIER



# KC130TM

HIGH EFFICIENCY MULTICRYSTAL PHOTOVOLTAIC MODULE



## HIGHLIGHTS OF KYOCERA PHOTOVOLTAIC MODULES

Kyocera's advanced cell processing technology and automated production facilities produce a highly efficient multicrystal photovoltaic module.

The conversion efficiency of the Kyocera solar cell is over 16%. These cells are encapsulated between a tempered glass cover and a pottant with back sheet to provide efficient protection from the severest environmental conditions.

The entire laminate is installed in an anodized aluminum frame to provide structural strength and ease of installation.



## APPLICATIONS

- Microwave / Radio repeater stations
- Electrification of villages in remote areas
- Medical facilities in rural areas
- Power source for summer vacation homes
- Emergency communication systems
- Water quality and environmental data monitoring systems
- Navigation lighthouses, and ocean buoys
- Pumping systems for irrigation, rural water supplies and livestock watering
- Aviation obstruction lights
- Cathodic protection systems
- Desalination systems
- Railroad signals
- etc.

## QUALIFICATIONS

- **MODULE** : UL 1703 certified  
Hazardous Locations Class I, Div 2, Groups A, B, C and D
- **FACTORY** : ISO9001 and ISO 14001

## QUALITY ASSURANCE

Kyocera multicrystal photovoltaic modules have passed the following tests.

- Thermal cycling test ● Thermal shock test ● Thermal / Freezing and high humidity cycling test ● Electrical isolation test
- Hail impact test ● Mechanical, wind and twist loading test ● Salt mist test ● Light and water-exposure test ● Field exposure test

## LIMITED WARRANTY

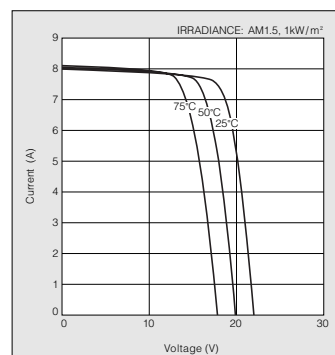
※1 year limited warranty on material and workmanship

※20 years limited warranty on power output: For detail, please refer to "category IV" in Warranty issued by Kyocera

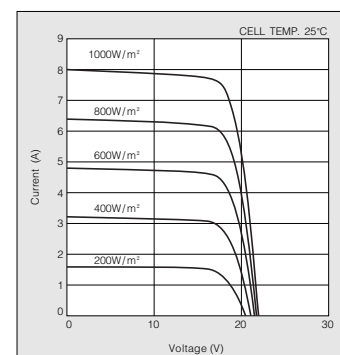
(Long term output warranty shall warrant if PV Module(s) exhibits power output of less than 90% of the original minimum rated power specified at the time of sale within 10 years and less than 80% within 20 years after the date of sale to the Customer. The power output values shall be those measured under Kyocera's standard measurement conditions. Regarding the warranty conditions in detail, please refer to Warranty issued by Kyocera)

## ELECTRICAL CHARACTERISTICS

Current-Voltage characteristics of Photovoltaic Module KC130TM at various cell temperatures



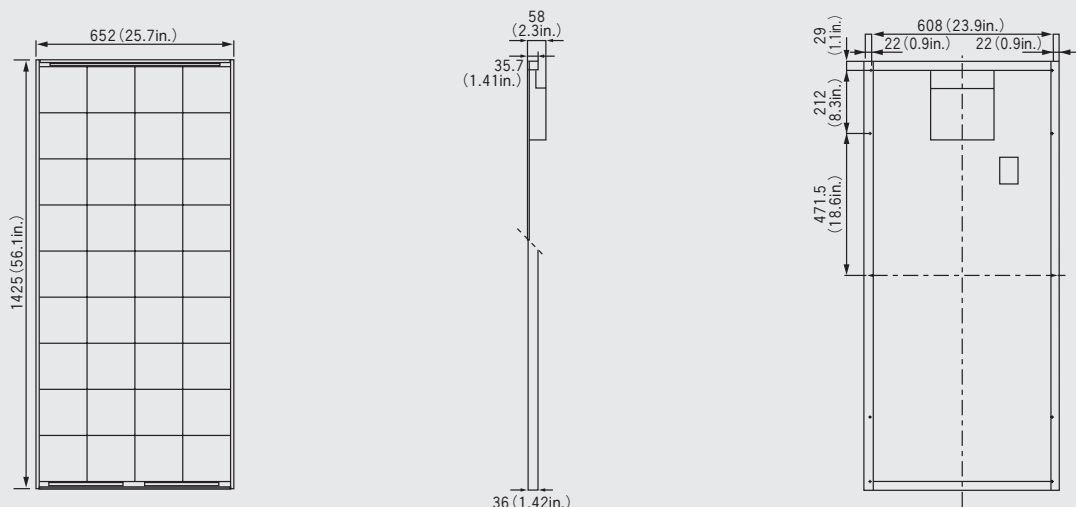
Current-Voltage characteristics of Photovoltaic Module KC130TM at various irradiance levels



MODEL  
KC130TM

## Physical Specifications

Unit : mm (in.)



## Specifications

### Electrical Performance under Standard Test Conditions (\*STC)

|  |                             |
|--|-----------------------------|
| Maximum Power (P <sub>max</sub> )          | 130W (+10%/−5%)             |
| Maximum Power Voltage (V <sub>mpp</sub> )  | 17.6V                       |
| Maximum Power Current (I <sub>mpp</sub> )  | 7.39A                       |
| Open Circuit Voltage (V <sub>oc</sub> )    | 21.9V                       |
| Short Circuit Current (I <sub>sc</sub> )   | 8.02A                       |
| Max System Voltage                         | 600V                        |
| Temperature Coefficient of V <sub>oc</sub> | −8.21×10 <sup>−2</sup> V/°C |
| Temperature Coefficient of I <sub>sc</sub> | 3.18×10 <sup>−3</sup> A/°C  |

\*STC : Irradiance 1000W/m<sup>2</sup>, AM1.5 spectrum, module temperature 25°C

### Electrical Performance at 800W/m<sup>2</sup>, NOCT, AM1.5

|   |       |
|---|-------|
| Maximum Power (P <sub>max</sub> )         | 92W   |
| Maximum Power Voltage (V <sub>mpp</sub> ) | 15.5V |
| Maximum Power Current (I <sub>mpp</sub> ) | 5.94A |
| Open Circuit Voltage (V <sub>oc</sub> )   | 19.9V |
| Short Circuit Current (I <sub>sc</sub> )  | 6.47A |

NOCT (Nominal Operating Cell Temperature) : 47°C

### Cells

|                   |    |
|-------------------|----|
| Number per Module | 36 |
|-------------------|----|

### Module Characteristics

|                        |  |
|------------------------|--|
| Length × Width × Depth | 1425mm(56.1in)×652mm(25.7in)×58mm(2.3in) |
| Weight                 | 11.9kg(26.8lbs.)                         |

### Junction Box Characteristics

|                        |   |
|------------------------|---|
| Length × Width × Depth | 170.6mm(6.7in)×191.6mm(7.5in)×51.5mm(2.0in) |
| IP Code                | IP65  |

### Reduction of Efficiency under Low Irradiance

|           |      |
|-----------|------|
| Reduction | 4.3% |
|-----------|------|

Reduction of efficiency from an irradiance of 1000W/m<sup>2</sup> to 200W/m<sup>2</sup> (module temperature 25°C)