

# 120–150 watt photovoltaic module

**KDM**  
Kingdom Solar



## 120–150 watt photovoltaic module

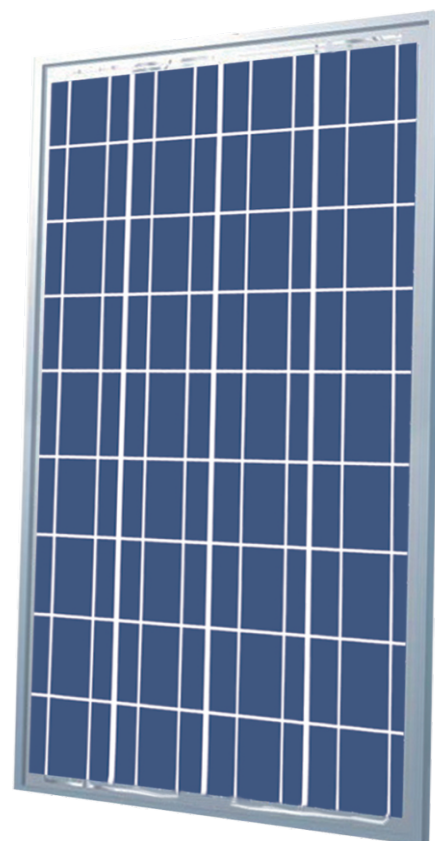
KD-P120 120Wp KD-P125 125Wp KD-P130 130Wp KD-P135 135Wp  
KD-P140 140Wp KD-P145 145Wp KD-P150 150Wp  
POLY-CRYSTALLINE SOLAR PANEL

## EFFICIENCY

- . Low voltage-temperature coefficient allows higher power output at high-temperature condition
- . High efficient, high reliable solar cells ensure our product output stability

## MATERIALS

- . Advanced EVA encapsulation system with triple-layer back sheet meets the most stringent safety requirements for high-voltage operation
- . The sturdy, anodized aluminum frame allows the modules to be mounted on a variety of standard racking systems and to withstand harshest conditions
- . Ultra reliable bypass diodes prevent damage through overheating due to shaded or defective cells
- . Innovative, environmentally friendly packing method using pile-edges ensure modules arrived in perfect condition
- . New frame design incorporating hexagonal shaped drainage holes, with more grounding holes, provide flexible installation and use



## BENEFITS

- . Manufactured in an ISO 9001:2000 certified plant
- . High efficiency, high safety, high reliability
- . Output power tolerance +3/-0%
- . 10 years limited warranty on materials and workmanship, 25 years limited warranty on power output
- . 10 years limited warranty for 90% power output, 25 years limited warranty for 80% power output

## NOTE

This publication summarizes product warranty and specifications, which are subject to change without notice. Additional information could be found on our web site: [www.kingdomsolar.net](http://www.kingdomsolar.net)

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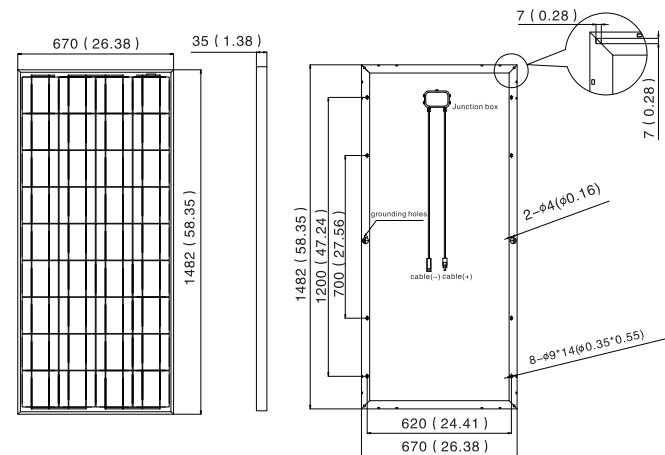
| Electrical Characteristics   | KD-P120                                 | KD-P125 | KD-P130 | KD-P135 | KD-P140 | KD-P145 | KD-P150 |
|------------------------------|---|---------|---------|---------|---------|---------|---------|
| STC                          | <b>120-150 watt photovoltaic module</b> |         |         |         |         |         |         |
| Maximum Power Voltage(Vmp)   | 17.05V                                  | 17.10V  | 17.16V  | 17.37V  | 17.64V  | 17.88V  | 18.12V  |
| Maximum Power Current(Imp)   | 7.04A                                   | 7.31A   | 7.58A   | 7.77A   | 7.94A   | 8.11A   | 8.28A   |
| Open Circuit Voltage(Voc)    | 21.50V                                  | 21.80V  | 22.00V  | 22.25V  | 22.38V  | 22.60V  | 22.82V  |
| Short Circuit Current(Isc)   | 7.97A                                   | 8.10A   | 8.20A   | 8.31A   | 8.45A   | 8.55A   | 8.68A   |
| Maximum Power at STC(Pmax)   | 120W                                    | 125W    | 130W    | 135W    | 140W    | 145W    | 150W    |
| Module Efficiency            | 12.1%                                   | 12.6%   | 13.1%   | 13.6%   | 14.1%   | 14.6%   | 15.1%   |
| Operating Module Temperature | -40°C ~ +85°C                           |         |         |         |         |         |         |
| Maximum System Voltage       | DC 1000V                                |         |         |         |         |         |         |
| Maximum Series Fuse Rating   | 15A                                     |         |         |         |         |         |         |
| Power Tolerance              | +3/-0%                                  |         |         |         |         |         |         |
| Mechanical Loading           | 5400Pa                                  |         |         |         |         |         |         |

STC: Irradiance 1000W/m<sup>2</sup>, module temperature 25°C, AM=1.5;

## Mechanical Characteristics

|               |  |
|---------------|--|
| Solar Cell    | Poly crystalline Silicon 156 × 156mm(6 inches)   |
| No. of Cells  | 36(9 × 4)  |
| Dimensions    | 1482 × 670 × 35mm(58.3 × 26.38 × 1.38 inches)  |
| Weight        | 11.5Kg(25.56 lbs)  |
| Front Glass   | 3.2mm(0.13 inches) tempered glass  |
| Frame         | Anodized aluminium alloy   |
| Junction Box  | IP65 rated   |
| Output Cables | 4.0mm <sup>2</sup> (0.006 inches <sup>2</sup> , symmetrical lengths(-)<br>900mm(35.5 inches) and (+)900mm(35.5 inches) |
| Connectors    | MC4 connectors   |

## PHYSICAL CHARACTERISTICS Unit:mm(inch)

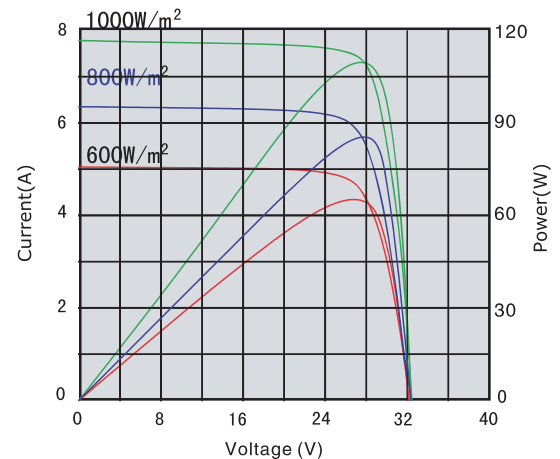


## Temperature Characteristics

|  |             |
|--|-------------|
| Nominal Operating Cell Temperature(NOCT) | 48 ± 2°C    |
| Temperature Coefficient of Pmax          | -0.537%/°C  |
| Temperature Coefficient of Voc           | -0.379%/°C  |
| Temperature Coefficient of Isc           | +0.0565%/°C |

## ELECTRICAL CHARACTERISTICS

Electrical performance  
(cell temperature: 25°C)



## Packing Configuration

### 35mm frame

|                       |     |      |      |
|-----------------------|-----|------|------|
| Container             | 20  | 40   | 40G  |
| Pieces per pallet     | 46  | 46   | 54   |
| Pallets per container | 10  | 22   | 22   |
| Pieces per container  | 460 | 1012 | 1144 |