

## 220 - 255 Watt

*Polycrystalline photovoltaic module (alu and black)*

ZXP6-60 is ZNSHINE SOLAR's powerful 60-celled polycrystalline panel. Versatile and adaptable, with a power output ranging from 220 Wp to 255 Wp (black modules up to 250 Wp), it is perfect for residential rooftop systems as for ground-mounted installations.



High module conversion efficiency up to 15,67%



Insured output warranty of 25 years



Green Certification: PV-Cycle, Carbon Footprint and RoHS



Without Potential-Induced Degradation (PID-free)



Resistant against ammonia and salt mist



Certified to withstand extreme snowloads of 5.400 Pascal

This module is made of reliable and carefully selected components. With a 25-year output warranty and a 10-year workmanship warranty, ZXP6-60 meets rigorous quality controls and international standard such as ISO 9001, ISO 14001 and OHSAS 18001. The panel is tested by widely acknowledged certifying institutions such as TÜV Süd. The recycling of this module at the product's end of life follows the prescriptions of PV-CYCLE Association certification.



### 25 years power output guarantee insured by PowerGuard

ZNSHINE SOLAR is one of the first manufacturers whose modules participate in the PowerGuard insurance programme, guaranteeing an output of 92% for 10 years and of 85% for 25 years even in the unlikely case of manufacturer's insolvency.\*

\*Subject to self-insured retention. Please ask your dealer or ZNSHINE SOLAR directly for detailed information on insurance conditions



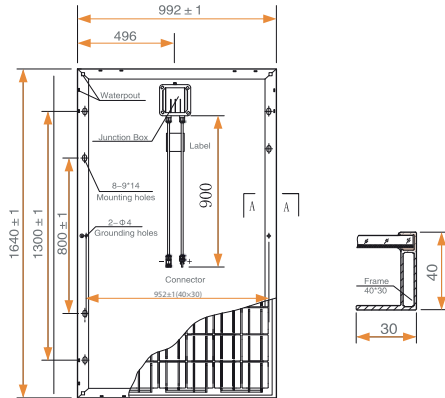
**CARBON FOOTPRINT**  
Sustainability Services

The carbon emission of this solar module is 255 kg CO<sub>2</sub> equivalent. This result was calculated in 07.2012.

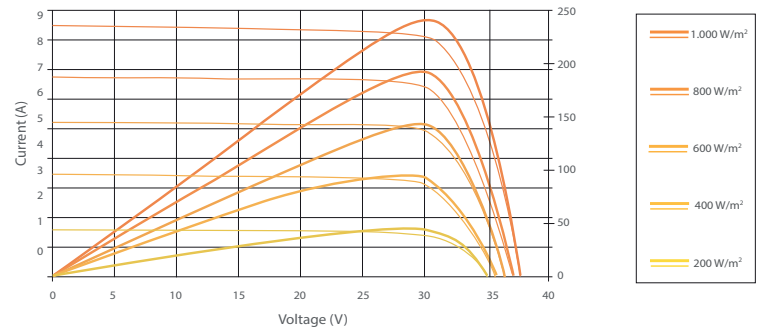
SGS Report No.: PCF SZ12122



## Dimensions of the PV module



## I-V Curves of the PV module



## Electrical Data

ZXP6-60-220/P ZXP6-60-225/P ZXP6-60-230/P ZXP6-60-235/P ZXP6-60-240/P ZXP6-60-245/P ZXP6-60-250/P ZXP6-60-255/P

|  |        |        |        |        |        |        |        |        |
|--|--------|--------|--------|--------|--------|--------|--------|--------|
| Nominal Power Watt $P_{max}$ ( $W_p$ ) | 220    | 225    | 230    | 235    | 240    | 245    | 250    | 255    |
| Power Output Tolerance $P_{max}$ (%)   | 0 ~ +3 | 0 ~ +3 | 0 ~ +3 | 0 ~ +3 | 0 ~ +3 | 0 ~ +3 | 0 ~ +3 | 0 ~ +3 |
| Maximum Power Voltage $V_{max}$ (V)    | 28.95  | 29.15  | 29.35  | 29.55  | 29.75  | 29.95  | 30.15  | 30.33  |
| Maximum Power Current $I_{Mpp}$ (A)    | 7.60   | 7.72   | 7.84   | 7.95   | 8.07   | 8.18   | 8.29   | 8.41   |
| Open Circuit Voltage $V_{oc}$ (V)      | 36.87  | 37.04  | 37.21  | 37.38  | 37.55  | 37.72  | 37.89  | 38.08  |
| Short Circuit Current $I_{sc}$ (A)     | 8.13   | 8.22   | 8.31   | 8.39   | 8.47   | 8.53   | 8.61   | 8.65   |
| Module Efficiency $\eta_m$ (%)         | 13.52  | 13.83  | 14.14  | 14.44  | 14.75  | 15.06  | 15.37  | 15.67  |
| Cell Efficiency $\eta_c$ (%)           | 15.13  | 15.50  | 15.88  | 16.26  | 16.64  | 17.02  | 17.44  | 17.79  |

## Mechanical Data

|                   |  |
|-------------------|--|
| Solar Cells       | Poly 156 × 156 mm  |
| Cells Orientation | 60 (6 × 10)  |
| Module Dimensions | 1640 × 992 × 40 mm   |
| Weight            | 19.5 kg  |
| Glass             | High transparency, low Iron, AR-coating, tempered glass 3.2 mm |
| Frame             | Anodized Aluminium alloy. Frame and backside in alu or black   |
| Junction Box      | IP 65  |
| Cables/Connector  | 4 mm <sup>2</sup> , 900 mm, MC4-compatible                     |
| Number of Diodes  | 6  |

## Temperature Ratings

|                                      |               |
|--------------------------------------|---------------|
| Nominal Operating Cell Temperature   | 45 °C (±2 °C) |
| Temperature Coefficient of $P_{mpp}$ | -0.42 %/K     |
| Temperature Coefficient of $V_{oc}$  | -0.33 %/K     |
| Temperature Coefficient of $I_{sc}$  | 0.06 %/K      |

## Working Conditions

|                               |                    |
|-------------------------------|--------------------|
| Maximum System Voltage        | 1000 V DC (TÜV)    |
| Operating Temperature         | from -40 to +85 °C |
| Maximum Series Fuse           | 15 A               |
| Maximum Load (Snow/Wind)      | 5400 Pa / 2400 Pa  |
| Ammonia-/Salt Mist Resistance | IEC 62716, 61701 ✓ |

## Warranty Information

10 years workmanship warranty  
 10 years warranty at 90% power output  
 + further 15 years warranty at 80% power output

## Packaging Information

|                             |                  |
|-----------------------------|------------------|
| Module per Box              | 28 pcs. (40 mm)  |
| Module per 40' HQ Container | 784 pcs. (40 mm) |

<sup>1</sup> Measurement Tolerance STC: ± 3% ( $P_{max}$ ), ± 10% ( $V_{max}$ ,  $I_{Mpp}$ ,  $V_{oc}$ ,  $I_{sc}$ ). Values at Standard Test Conditions STC (Air Mass AM 1.5, Irradiance 1000 W/m<sup>2</sup>, Cell Temperature 25 °C)  
 Remark: Please read safety and installation instructions before using the product | Subject to change without prior notice © ZNSHINE SOLAR 2013 | Versionscode: ZXP6-60-1310.E

