POLYCRYSTALLINE

# MODUL CSM240P-B-60

CALRAYS™
ENERGY SYSTEMS

Certified Quality

IEC CE TÜV Rheinland

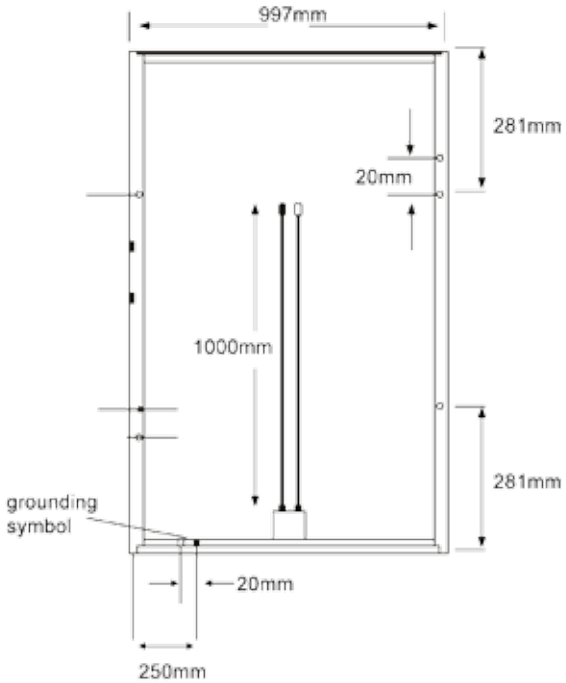
## 60 pcs 156 x 156 mm polycrystalline silicon cell

The CSM240P-B-60 Poly series modules consists of 60 pcs 156×156 mm polycrystalline silicon solar cells which are in high efficiency, individually characterized and electronically matched before interconnection. Laminated with high quality toughened glass, EVA and TPT, the operating characteristics of solar cells can be ensured under any climatic conditions.

After assembled by anodized aluminum alloy frame and MC type junction box, cable with connector, the CALRAYS solar modules are designed for long service life, easy to install, withstand the storm, high wind and hail impact etc..

**The Junction box is available in black or silver.**

*Module Diagram (measures: mm)*




OUR TECHNOLOGY. **YOUR ENERGY.**

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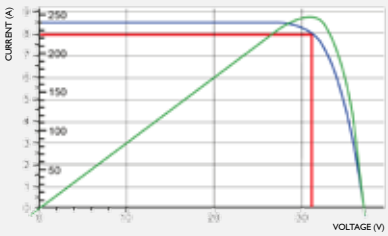


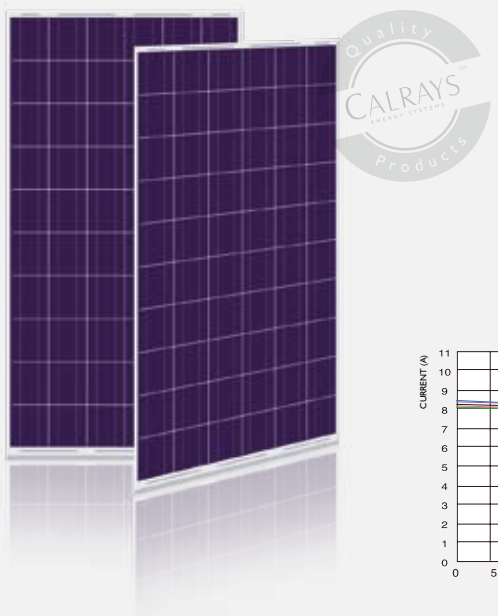


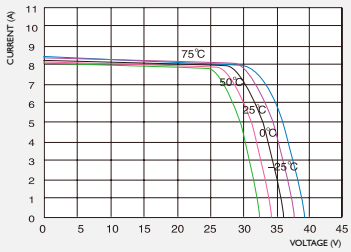


| SPECIFICATIONS | |
|---|---|
| Cell | Polycrystalline silicon solar cells 156 mm × 156 mm |
| No. of cells and connections | 60 (6 × 10) |
| Dimension of module | 1666 mm × 997 mm × 42 mm |

| OUTPUT | |
|---|---|
| Cable | 4.0 mm² (TÜV) |
| Lengths | 1100 mm |
| Connecter | MC Type |

| TEMPERATURE COEFFICIENTS | | |
|---|---|---|
| NOCT | | 46°C ±2°C |
| Short-circuit current temperature coefficient | α (Isc) | 0.05 %/°C |
| Open-circuit voltage temperature coefficient | β (Voc) | -0.35 %/°C |
| Peak power temperature coefficient | γ (Pmax) | -0.46 %/°C |

NOCT: Nominal Operating Cell Temperature above data is only for reference

| MODUL CSM60P-240-POLY | | |
|---|---|---|
| Maximum Power (Pmax) | **240 W** | **250 W** |
| Encapsulation | Glass / EVA / Cells / EVA / TPT | |
| Size and Number of cells | 156 mm × 156 mm 60/6 × 10 Stk. | |
| Power Tolerance | ±3 % | |
| Cell Efficiency | 17,2 % | 17,4 % |
| Open Circuit Voltage (Voc) | 37,50 V | 37,87 V |
| Short Circuit Current (Isc) | 8,6 A | 8,9 A |
| Maximum Power Voltage (Vmp) | 29.8 V | 30.96 V |
| Maximum Power Current (Imp) | 8,05 A | 8,46 A |
| Max.syst. Oper. Voltage | 1000 V | |
| Diodes | 6 by-pass | |
| Dimension | 1666 × 997 × 42 mm | |
| Weight | 21 kg | |
| Operate Temp. scope | -40 | +85 °C | |
| Relative humidity | 0 to 100 % | |
| Resistances | 227g steel ball fall down from 1m height and 60m/s wind | |
| Warranty | Pm is not less than 90% in 10 years and 80% in 25 years | |

Test condition: @STC 1000W/m². AM1.5, 25°C