



GTS 190 M36

mono-crystalline Solar Module



Electrical Data - nominal

Maximum Power [P_{mpp}]	190 W _p
Output tolerance	± 3 %
Nominal Voltage [V_{mpp}]	37,30 V _{DC}
Nominal Current [I_{mpp}]	5,09 A _{DC}
Open circuit Voltage [V_{oc}]	44,50 V _{DC}
Short circuit current [I_{sc}]	5,48 A _{DC}
Maximum system voltage [V]	1.000 V _{DC}
Cell Efficiency [η_c]	> 17,0 %
Solar Module Efficiency [η_M]	> 14,8 %

STC AM 1,5 1.000 W/sq m 25 Degree Centigrade

The technical data are on average base and may vary due to the tolerances.

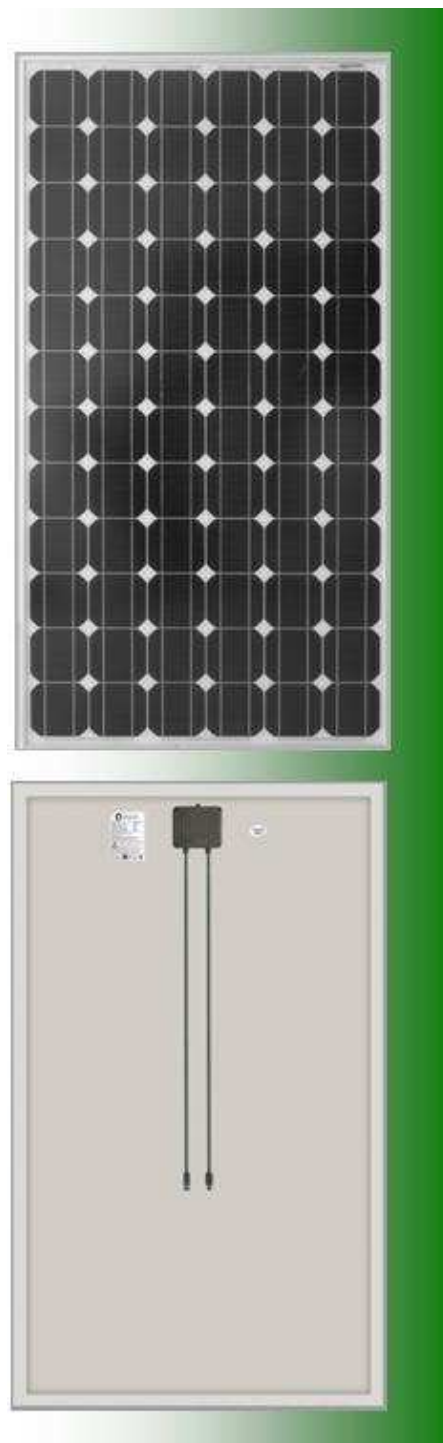
Temperature Coefficients

Power Temperature Coefficient TC [P_{mpp}]	-0,38 %/°C
Voltage Temperature Coefficient TC [U_{oc}]	-0,36 %/°C
Current Temperature Coefficient TC [I_{sc}]	+0,03 %/°C
NOCT (Nominal Operating Cell Temperature)	47 ± 2 °C

The technical data are on average base and may vary due to the tolerances.

Mechanical Data

Solar cells	72 Stk. mono-crystalline
Size of cells	125 x 125 mm
Size of module	1.580 x 808 x 40 mm
Size of glass	1.574 x 802 x 3,2 mm
Front build-up	low iron tempered security glass, 3,2 mm EVA-Laminat
Frame (material)	40 mm anodised Aluminium
Junction Box	plastic, IP 65
Output Cable	900 mm
Type of Connector	MC, Type 4 (4 – 6 sq mm)
Electrical safety to IEC 61730-1 and IEC 61730-2	SK- II electrical protected
Weight per Module	14,8 kg
Mechanical Load Test EN IEC 61215:2005	2400 Pa 5400 Pa (last cycle)
Hailstorm safety	Ø 25 mm with 23 m/s
Operating Temperature	-40 ... +85 °C





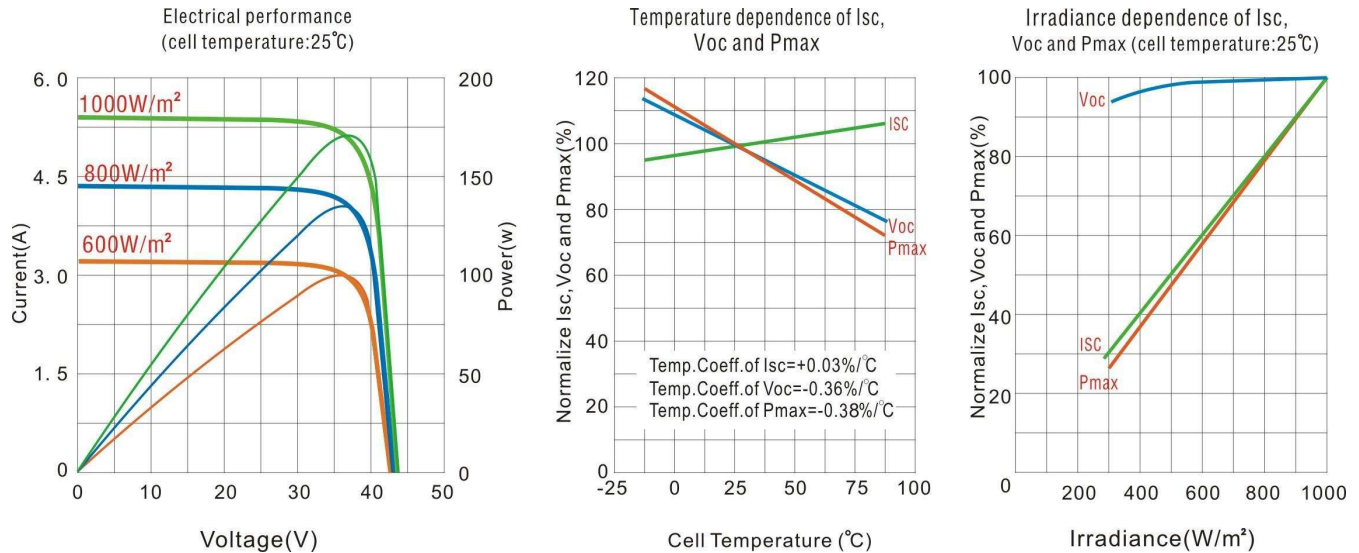
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**German Tech
Future®**

Typical electrical characteristics Current / Voltage / Power



Your benefits

- ▲ **10 years international product warranty (workmanship)**
 - 10 years warranty of 90 % power performance
 - 25 years warranty of 80 % power performance
- ▲ High efficiency solar cells (100 % pre-selected) ensures high performance of the solar module and create more power in peak hours.
- ▲ Individual scanning of each solar module with full documentation about the quality performance.
- ▲ International insurance partner RSA Group Royal Sun Alliance, founded 1710 in London.

Certificate



Dimension

