

# Mono-crystalline Solar Module

## Engcotec HG-270S-290S

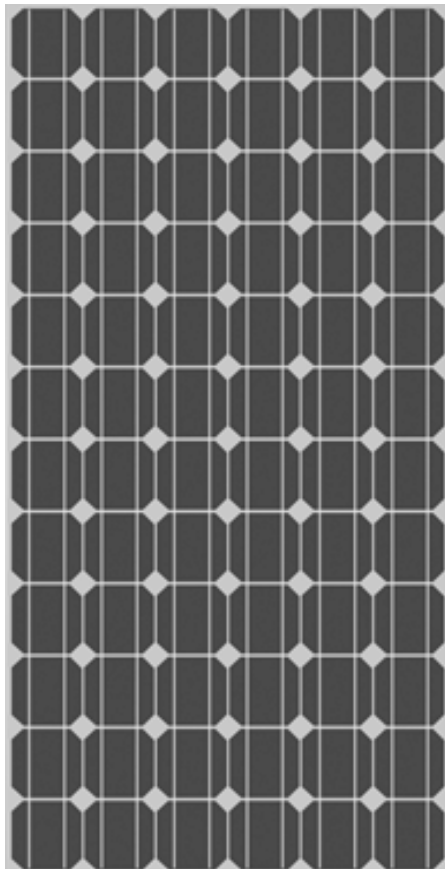
HG-270S

HG-275S

HG-280S

HG-285S

HG-290S



- High-efficiency mono-crystalline silicon cells (156 x 156 mm)
- Manufacturer's power tolerance: -0% to +3%
- Ready-made with Tyco plugs
- Corrosion-resistant, double-layered aluminium frame
- Simple, cost-saving assembly
- Robust, flat junction box
- Tempered low-iron glass for better light transmission
- Manufacturer's power warranty 25 years:  
12 years on 90% of nominal power  
25 years on 80% of nominal power
- Manufacturer's product guarantee: 5 years.

### Certificates

High quality standards proved by the following certificates:

- Produced acc. ISO 9001
- VDE IEC 61215 ed. 2
- Safety Class II

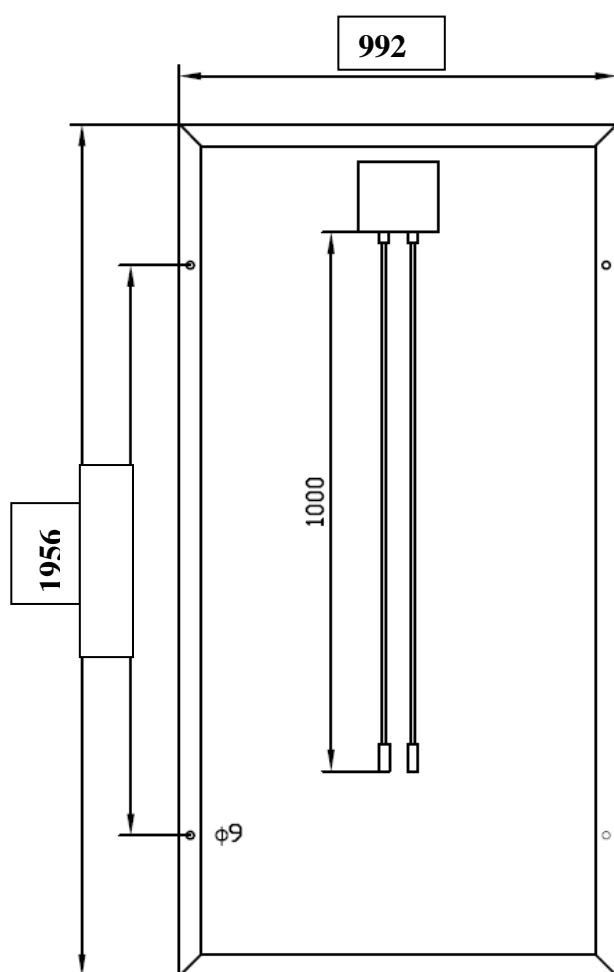
### Engcotec HG-270S-290S

Engcotec solar modules are designed and constructed to provide high performance and reliability. We constantly improve our products to ensure product performance and reliability.

The mono-crystalline cells lie behind a hardened-glass glazing and are embedded in transparent EVA (ethylenevinyl-acetate).

## Data Sheet Solar Module Engcotec HG-270S-290S

Electrical Data	HG-270 S	HG-275 S	HG-280 S	HG-285 S	HG-290 S
Max. Power PMPP	270 W	275 W	280 W	285 W	290 W
Voltage at maximum power point $V_{MPP}$	36.1 V	36.4 V	36.8 V	36.7 V	36.9 V
Current at maximum power point $I_{MPP}$	7.48 A	7.55 A	7.65 A	7.77 A	7.86 A
Open-circuit voltage $V_{OC}$	44.5 V	44.7 V	44.8 V	44.9 V	44.9 V
Short-circuit current $I_{SC}$	8.32 A	8.36 A	8.36 A	8.39 A	8.41 A
Module efficiency	15.4%	14.2%	16.1%	14.7%	14.9%
Cell efficiency	13.9%	15.8%	14.4%	16.3%	16.5%



Mechanical Data	
Dimensions (L x W x H)	1956 x 992 x 50 mm
Weight	appr. 23.6 kg

Characteristic Data	
Cells per module	72
Cell type	mono-crystalline
Cell dimensions	156 x 156 mm
Connections	Ready-made with Tyco plugs
Cable lengths	100 cm
NOCT	49°C

Limit Values	
Max. system voltage	1000 V
Tested wind resistance	200 km/h
Operating temperature	-40°C - +85°C

Temperature Coefficients	
Pm	-0.490%/°C
Isc	+0.050%/°C
Open-circuit voltage	-152mv/°C

Certificates	
VDE IEC 61215 ed. 2	
ISO 9002	



Engcotec Advanced Technology GmbH, P.O. Box 100852, 70011 Stuttgart / GERMANY  
 Phone +49 (0)711 222 96 76, Fax +49 (0)711 222 96 777  
 Email: [engcotec@engcotec.de](mailto:engcotec@engcotec.de), website: [www.engcotec.de](http://www.engcotec.de)