



ptimum *new range*



Solar module (60 cells 6")
A-xxxM GS (280/285/290/295 W)

- **Optimize your instalations.**
- High module **efficiency** and stable power output based on leading process technology.
- **Outstanding electrical performance** under high-temperature conditions or low-irradiance conditions.
- Ease of installations due to the **innovative engineering design.**
- **Rigorous quality control** meets the highest international standard.
- **Warranty, 10-year** workmanship and **25-year** performance (80% power output).




A-xxxM GS (ES) (xxx = rated power)

Electrical characteristics	A-280M GS	A-285M GS	A-290M GS	A-295M GS
Maximum Power (P _{max})	280 W	285 W	290 W	295 W
Maximum Power Voltage (V _{mp})	32.20 V	32.40 V	32.60 V	32.80 V
Maximum Power Current (I _{mp})	8.70 A	8.80 A	8.90 A	9.00 A
Open Current Voltage (V _{oc})	37.80 V	38.00 V	38.30 V	38.50 V
Short Circuit Current (I _{sc})	9.36 A	9.47 A	9.58 A	9.70 A
Module Efficiency (%)	17.21	17.51	17.83	18.13
Power Tolerance (W)			0/+5	
Maximum Series Fuse Ratings (A)			15	
Maximum System Voltage (TUV)			DC 1000 V	
Normal Operating Cell Temperature (°C)			45±2	

Electrical characteristics tested at Standard Test Conditions (STC), defined as: Irradiance of 1000 w/m², spectrum AM 1.5 and temperature of 25 °C.
Tolerance measures STC: ±3% (P_{mp}); ±10% (I_{sc}, V_{oc}, I_{mp}, V_{mp}).
Best in Class AAA solar simulator (IEC 60904-9) used, power measurement uncertainty is within +/- 3%

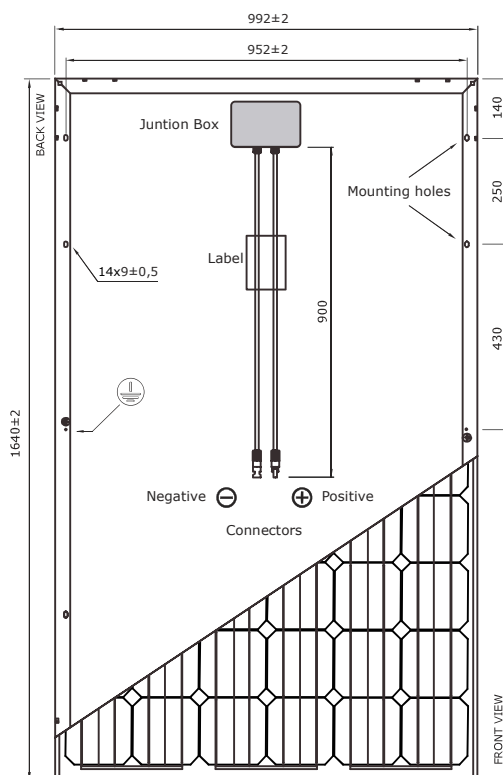
Mechanical specifications

Dimensions (± 2 mm.)	1640x992x35 mm
Weight (± 0,5 kg)	17.75 kg
Max. static load, front (snow & wind)	5400 Pa
Max. static load, back (wind)	2400 Pa
Max. hailstone impact (diameter/velocity)	25 mm / 23 m/s

Construction materials

Front cover (material /type/thickness) (*)	Tempered Glass,High Transmission/Low Iron/3.2 mm
Cell (quantity/type/dimensions)	60 cells (6x10)/Monocrystalline/156.75 x 156.75 mm
Frame (material/color)	Anodized aluminium alloy /silver
Junction box (protection degree)	IP67
Cable (length/cross-section area)/Connector	900 mm / 4 mm ² / Combinable MC4

(*) With anti-reflective coating

Panel construction generic view


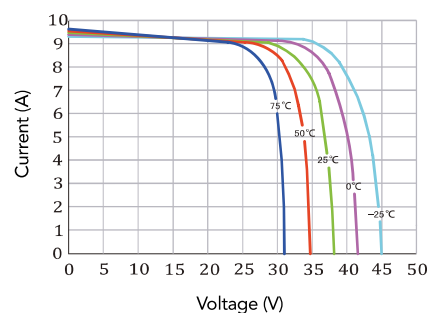
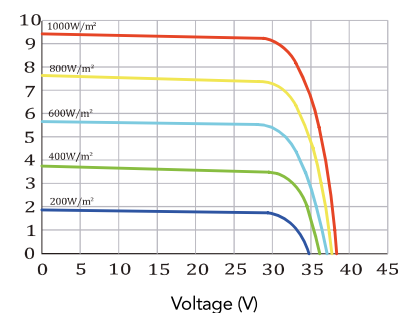
The drawing is not to scale

Temperature characteristics

Temp. Coeff. of I _{sc} (TK I _{sc})	0.08558% /°C
Temp. Coeff. of V _{oc} (TK V _{oc})	-0.29506% /°C
Temp. Coeff. of P _{max} (TK P _{max})	-0.38001% /°C
Operating Temperature	-40 to +85 °C

Packaging

Modules/pallet	30 pcs
Pallets/container 40' HQ	28 pallets
Modules/container 40' HQ	840 pcs
Pallets/container 20'	12 pallets
Modules/container 20'	360 pcs

Various Temperature (A-290M GS)

Various Irradiance (A-290M GS)


NB: The data contained in this documentation are subject to modification without prior notification.



IEC 61215
IEC 61730

