



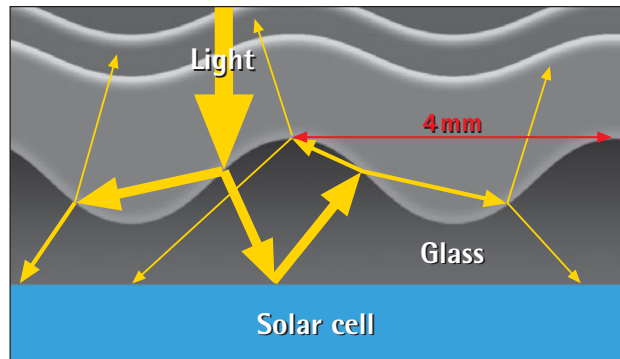
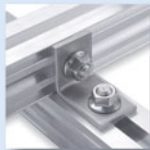
A special product deserves a special name

alfasolar Pyramid Solar module series

At alfasolar we have been working for 15 years on the improvement of solar modules. During this period we have experienced that the right selection not only of materials but also of the production process is the basis for durable products such as solar modules.

With the new "alfasolar Pyramid" solar modules we present you an innovative and exclusive product line with a multitude of benefits: so that it is that much easier for you to decide from the wide range of products available on the market.

- **Higher solar-module efficiency, up to 14.7%**
 - Market leader in efficiency of polycrystalline solar modules
 - Excellent value for money
- **Higher energy yield**
 - Up to 5% more yield through Pyramid technology
 - Outstanding partial load performance through particularly efficient soldering and selected solar cells
- **Long service life**
 - 4mm glass and extremely strong aluminium frame
 - Secure embedding of sensitive glass edge using UV-resistant silicon
 - Very strong 3-layer rear foil with high insulation-breakdown resistance
- **Matching supplementary components**
 - alfasolar A2 installation stand for high strength, fast assembly and 10-year guarantee
 - Proven Radox and Titanex solar cable
 - Grid inverters from market leaders
- **Best guarantee conditions**
 - 6-year workmanship warranty, 25-year power warranty (10 Years 90% and 25 Years 80% of the nominal power)
- **Environmentally friendly production**
 - Our solar modules are manufactured using hydroelectric power



- New pyramid-structured glass with self-cleaning effect
- 3.5% more performance from perpendicular irradiance
- 20% more performance from oblique irradiance (80°)

alfasolar modules were always something special. Find out more by reading our flyer "Benefits of the alfasolar Pyramid solar module series", which we will send to you on request.

We look forward to hearing from you!

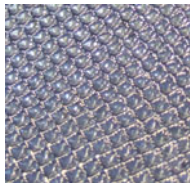
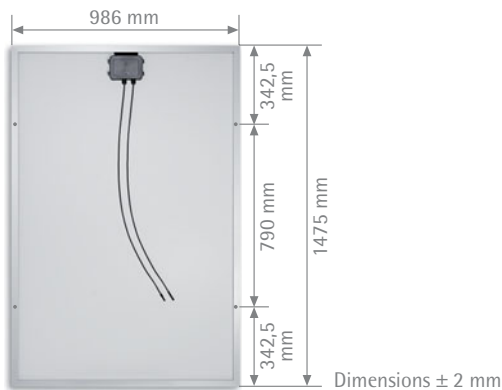
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● **Our free service**

- Optimum system design
- Yield and economy calculation
- Our service team comes to you to perform warranty work!
- Our field representatives answer your queries on site
- Flash measurement data available as an Excel file
- Average rating of system modules is rated performance or above



- Very strong and reliable polycrystalline high-performance cells with an efficiency of 16.3%
- New glass for even more yield at medium angles of the irradiance



High-quality, service-friendly connector box



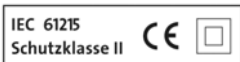
Environmental management system to SS European standard ISO 14001: 2004



Quality management system to SS European standard ISO 9001: 2000



Qualified, IEC 61215 Periodic Inspection



Physical data	
Dimensions/weight	1475 x 986 x 35 mm/19.5 kg
Cell type	54 polycrystalline solar cells 156 x 156 mm
Connector box	IP 65 with H+S connectors 2 x 1.0 m Radox cable 1 x 4 mm ²
Bypass diodes	3 x 10 A/1000 V
Vertical hole spacing	790 mm/hole size M 6

Limiting values /Qualifications	
Permissible module temperature range	-40 to +85 °C
Maximum permissible system voltage	1000 V
Surface pressure	5400 N/m ²
Hailstorm/ Hailstones	Ø 25 mm /v=23 m/s
Humidity at 85 °C	85 % relative
Rating tolerance	-2 Wp/+3 Wp

Thermal data	
α [I_{sc}]	+5.5 mA/°C
β [U_{oc}]	-108.0 mV/°C
γ [P_{mpp}]	-0.4 %/°C
NOCT	45 ± 2 °C

Electrical data Output at STC (Wp)	alfasolar 180PQ6L A				
	195	200	205	210	215
Short-circuit current I_{sc} (A)	8.66	8.72	8.80	8.89	8.95
Open-circuit voltage U_{oc} (V)	33.18	33.21	33.28	33.49	33.54
Current in MPP I_{mpp} (A)	7.82	7.95	8.10	8.21	8.32
Voltage in MPP U_{mpp} (V)	25.06	25.27	25.32	25.58	25.86
Bulk factor (%)	68.2	69.4	70.0	70.5	71.7
Power output (W/m ²)	134.08	137.52	140.96	144.39	147.83

Electrical data (800 W/m ² , NOCT, AM 1.5)	alfasolar 180PQ6L A				
	195	200	205	210	215
Output (W)	145.0	148.6	151.7	155.4	159.2
Short-circuit current I_{sc} (A)	6.92	6.96	7.03	7.10	7.15
Open-circuit voltage U_{oc} (V)	30.53	30.55	30.62	30.81	30.86
Current in MPP I_{mpp} (A)	6.21	6.31	6.43	6.52	6.60
Voltage in MPP U_{mpp} (V)	23.36	23.55	23.60	23.84	24.10

Outstanding partial-load performance; at low irradiance level of 200 W/m², 97% +/-1.5% of the STC efficiency is achieved.

Information valid as of 06/2008 · This data sheet complies with the regulations of European standard 50380. alfasolar reserves the right to change specifications.