

It is our primary concern at Energy Solutions to produce high quality photovoltaic panels. This is achieved by using new, state-of-the-art equipment and raw materials from leading European and US suppliers.

The strict quality control and testing in different stages of the production process ensure that the end product reaches the final customer flawless. Regular measurements of the gel content with values over 80% guarantee excellent lamination quality.

Using Energy Solutions' panels you get the best out of solar energy. The thermally processed solar glass guarantees high light permeability and offers protection from weather conditions such as hail, snow and ice. The junction box with three bypass diodes prevents the solar cells from creating the hot-spot-effect. The pre-fitted solar cables with connectors allow a fast and easy connection between the panels. In addition Energy Solutions guarantees that the performance of the modules will not fall below 80% of their rated power after at least 25 years of operation.



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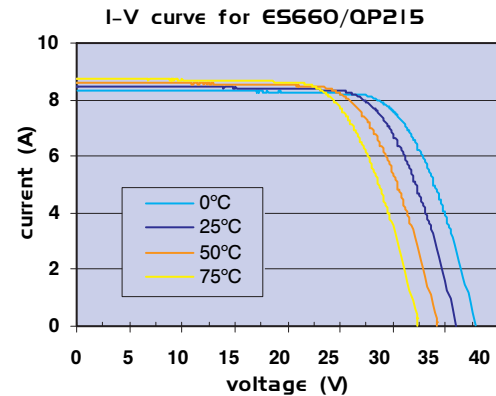
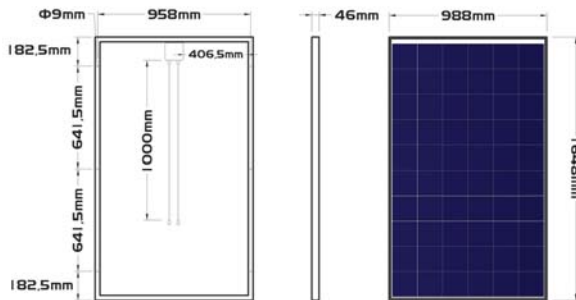
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Mechanical Characteristics

Dimensions	1,648 mm x 988 mm x 46 mm (ES636/QP - framed) 1,642 mm x 981 mm (ESL636/QP - laminate)
Cells	60 poly-crystalline cells 156mm x 156 mm by Q.Cells
Frame	Anodized Al (ES660/QP only)
Junction box	TYCO with 3 bypass diodes
Cabling	0.9 m with TYCO connectors
Weight	~17 kg



Electrical Characteristics*

Nominal power, P_{max}	200W	205W	210 W	215 W	220 W	225 W	230 W
Power tolerance	+3% (-0%)						
Open circuit voltage, V_{oc}	35,6 V	36,1 V	36,1 V	36,1 V	36,4 V	36,4 V	36,4 V
Short circuit current, I_{sc}	7,88 A	8,00 A	8,27 A	8,40 A	8,40 A	8,55 A	8,79 A
Max power voltage, V_{mpp}	27,3 V	27,4 V	27,4 V	28,0 V	28,0 V	28,0 V	28,2 V
Max power current, I_{mpp}	7,35 A	7,49 A	7,71 A	7,80 A	7,90 A	8,03 A	8,22 A
System voltage	890 V Max.						
Temperature Coefficients	P_{MPP} : -0.43 [%/K]						
	V_{oc} : -0.35 [%/K]						
	I_{sc} : +0.07 [%/K]						
NOCT**	46.1°C						
Certifications	Under Certification with TÜV						
Power guarantee	25 years (-20%)						
Product guarantee	5 years						

* measured at STC (Standard Test Conditions: 1000W/m², 25°C, 1,5AM)

** Normal Operating Cell Temperature: 800 W/m², 20°C, 1,5AM



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Please contact our Energy Solutions dealer: