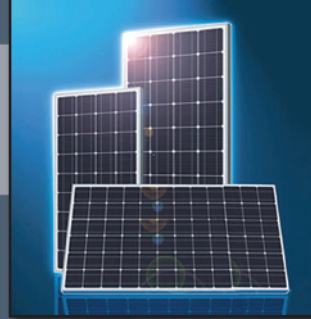


# ECOQUES Data Sheet

## Monocrystalline Solar Module



**+5**

**WATTS POSITIVE TOLERANCES**

**10**

**YEAR PRODUCT GUARANTEE**

**30**

**YEAR POWER GUARANTEE**

## ECOQUES Triple Plus Advantage

ECOQUES modules use a Monocrystalline cell technology with an electrical efficiency of up to 17.5%. The ECOQUES Panel has positive tolerance of up to +5W guaranteed maximum power, so the nominal power is always obtained or even exceeded.

The 10 year product guarantee far surpasses government requirements and the 30 year power guarantee means that after 30 years, the modules will still produce 80% of their nominal power.

Low-iron tempered solar-glass ensures very high mechanical strength and maximum solar exposure to each PV cell. Due to their engineered hollow section 50mm frame the extremely robust modules can resist a maximum pressure of 5400 Pa.

### Guarantees & Certifications:

Product Guarantee	10 years
Power Guarantee 90%	10 years
Power Guarantee 80%	30 years



- Qualified, IEC 61215
- Safety tested, IEC 61730
- Periodic inspection

# ECO KES Data Sheet



## Technical Specifications

### High Quality Solar Modules

With 72 cells and 3 bypass diodes in power classes of 170-200 Wp.

### Reliable

The high quality level guarantees a long life-time and high return on investment.

### Solid

Aluminium hollow-chamber frame combined with low-iron tempered solar-glass ensures a very high mechanical strength.

### Performance Guarantee

Performance guarantee on nominal power output at 90% for 10 years and 80% for 30 years.

### Certificates

IEC61215 Edition 2 & IEC61730 (TÜV Rheinland); Safety Class II, UL1703.

### Electrical Characteristics

Type	ECO KES 170M	ECO KES 180M	ECO KES 185M	ECO KES 190M	ECO KES 195M	ECO KES 200M
Power-Class +5W	170W	180W	185W	190W	195W	200W
Max. Power Voltage ( $U_{mpp}$ )* at STC**	36.1V	36.7V	35.9V	36.2V	36.45V	36.7V
Max. Power Current ( $I_{mpp}$ ) at STC	4.70A	4.90A	5.15A	5.25A	5.35A	5.45A
Open Circuit Voltage ( $U_{oc}$ ) at STC	43.3V	44.3V	44.5V	44.8V	45.1V	45.4V
Short Circuit Current ( $I_{sc}$ ) at STC	5.0A	5.2A	5.5A	5.6A	5.7A	5.8A
Module Efficiency	13.3%	13.7%	14.5%	14.9%	15.3%	15.7%

Max. System Voltage	1000V/DC
Temperature-Coefficient $I_{sc}$	1.8mA/°C
Temperature-Coefficient $U_{oc}$	-149mV/°C
Temperature-Coefficient $P_{mpp}$	-0.7722W/°C
NOCT***	45°C

\* MPP: Maximum Power Point \*\* STC (Standard Test Conditions): 1000 W/m<sup>2</sup>, 25°C, AM 1.5 \*\*\* Normal Operating Cell Temperature

### Specifications

Dimensions	1580mm x 808mm x 50mm
Weight	15.5 kg
Frame	Aluminium hollow-chamber frame on each side
Glass	Low-iron toughened glass
Cells	72 pcs monocrystalline glass Si-cells (125mm x 125mm)
Cell Embedding	EVA
Back-Foil	TPT/TPE/BBF
Junction Box	With Tuv certified
Cable	4mm <sup>2</sup> solar-cabel 2 x 900mm
Temperature Range	-40°C to +85°C
Certificates	IEC61215 Edition 2, Safety-class II, IEC61730, UL1703.
Power-Guarantee	10 Years 90%, 30 Years 80%

