

Solar Module

Smart-60

275/280 Wp poly

300/305/310 Wp mono

KIOTO
SOLAR

SMART! Module optimizing

The intelligent KIOTO Smart photovoltaic module is ideal for generators with possible shadowing. Due to the module optimizer all panels react independently from each other and always provide the production optimum. There is no negative influence on the complete string because of shadowing. The generator design is more flexible, also roof surfaces with different orientations can be equipped with modules. Losses, temperature differences as well as contaminations are compensated. Every module can be set in a safety state and will be de-energized in case of maintenance or fire. Therefore the austrian guideline R11-01 is completely fulfilled.

Advantages:

- // Module integrated MPP-tracking
- // Yield surplus up to 25 %
- // More flexibility in generator design (various directions, shadowing,...)

Ready for:

- // Integrated monitoring on module-, string- and generator level
- // System safety due to automatic shut down on module level

SMART



Optimized by
solaredge



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SMART-60

KPV PE NEC 275/280 Wp poly

KPV ME NEC 300/305/310 Wp mono

Module specifications

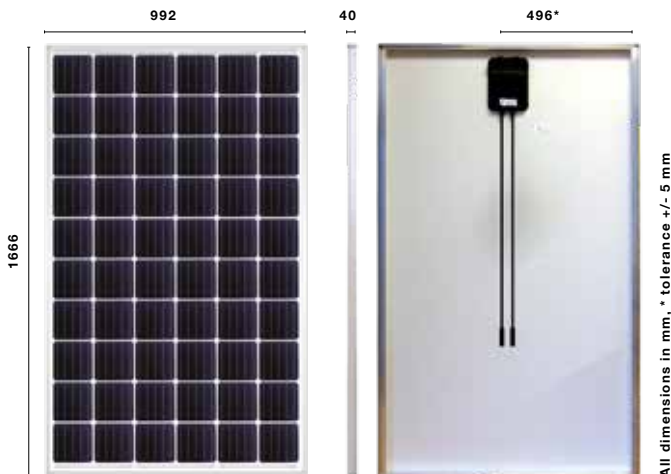
Type	P _{mpp} [W _p]	U _{mpp} [V]	I _{mpp} [A]	U _{oc} [V]	I _{sc} [A]	efficiency rate	area per kWp
275 poly	275 Wp	32,24 V	8,53 A	38,64 V	9,08 A	16,64%	6,00m ²
280 poly	280 Wp	32,61 V	8,59 A	38,82 V	9,13 A	16,94%	5,90m ²
300 mono PERC	300 Wp	32,28 V	9,29 A	38,23 V	9,69 A	18,15%	5,50m ²
305 mono PERC	305 Wp	32,68 V	9,35 A	38,82 V	9,78 A	18,45%	5,42m ²
310 mono PERC	310 Wp	32,91 V	9,42 A	39,28 V	9,85 A	18,76%	5,33m ²

Electrical data

60 crystalline cells	156mm x 156mm
Connecting System	SolarEdge OPJ300, MC4 - compatible connector 6 mm ²
Max. system voltage	1000V DC
Power tolerance	(+ 5 W / - 0 W) Measurement: STC (standard test conditions)
Temperature coefficients	poly: P _{mpp} -0,405%/K U _{oc} -114mV/K I _{sc} +4,1mA/K mono: P _{mpp} -0,37%/K U _{oc} -90,7mV/K I _{sc} +2,85mA/K
Max. reverse over current	15A
Operation temperature	+85°C up to -40°C
Cable length	2 x 1000mm
Bypass diodes	3 pcs.
Efficiency guarantee	min. 97% in the first year, afterwards max. 0,70 % reduction p.a. up to 25 years
Product guarantee	12 years (excluding power electronics)

Technical data

incl. aluminium frame	1666 mm x 992 mm x 40 mm (+/- 2 mm)
Weight	20,00 kg
Glass specification	Solar glass ESG 3,2 mm with high-strength antireflective coating
Encapsulation material	STRE
Backside material	Isovoltaic
Test certificate	IEC 61215, Ed. 2 incl. mechanical load test up to 5400 Pa, IEC 61730; IP 65, MCS - Zertifikat
Extended hail test	Grainsize 25 mm, max. velocity of 46 m/s (165,6 km/h) and Grainsize 55 mm, max. velocity of 33,5 m/s (120,6 km/h)
Salt mist corrosion test	A minimum of 96 hours continuous exposure to a highly concentrated salt mist
Ammonia Resistance	1500h at 750ppm Ammonia concentration
Packaging	24 modules / pal.



Intelligent junction box

- // Per module one MPP-tracker
- // Ready for*: Maximum safety standard - R11-01
- // Ready for*: Monitoring and surveillance on module level

* in combination with original Solaredge inver



The customer carries the sole responsibility the the goods ordered and delivered are suitable for his purposes. Applicational advices, whether verbal, in writing or by making tests are conducted to the best of KIOTO Photovoltaics GmbH's knowledge, whether verbal, in writing or by way of trials or otherwise, is provided to the best of our knowledge, but without any guarantee or liability. Special technical constructions may be subject to of ficial approval. The constructor or the client is responsible for obtaining such of ficial approval. The customer must bear any costs caused by changes or alterations because of special technical constructions, especially for tests or calculations. A project-related, static pre-dimensioning as well as the correct use of the glasses was not carried out or tested by us.
Measurement tolerance ±3%