

SOLAR MODULE



Sunways SM 240U Eco-Line IC multicrystalline

Sunways SM 240U Solar Modules Eco-Line Industrial & Commercial (IC) present the best solution for solar projects with optimized yield and thus they are very suitable for the project business. The Sunways Solar Modules Industrial & Commercial may show small optical divergencies in the colour homogeneity of the Solar Cells or production related deviations of the processing tolerances of the EcoLine Modules. The possible variations and deviations in tolerance have no influence on the performance and guarantee of the solar module. Sunways SM 240U Solar Modules Industrial & Commercial are exclusively equipped with state-of-the-art multicrystalline Sunways Solar Cells and have a capacity of up to 245 Wp.

Product benefits

- **Attractive Pricing**
- **P3 Technology**
 - High efficiency from the beginning*
Protected against potential induced degradation („PID-Effect“)
High-performance Sunways Solar Cells, made in Germany
 - Guaranteed performance and safety*
Performance guarantee 90% over 12 years, 80% over 25 years according to the current warranty conditions
Safety through product warranty 10 years
 - High yields*
High efficiencies and minimised module mismatch through tight cell and module tolerances
- **Innovative Anti-reflective coating**
Minimization of reflection while increasing the energy yield
- **OutputPlus+**
Measured power exceeds the specified rated output (0 to 5 W)
- **SolidPlus+**
3.2 mm hardened safety solar glass, robust aluminium hollow section profile for stability and durability (5,400 Pa)

Product characteristics

Category:	multicrystalline
Module size (L x W x T):	1642 mm x 994 mm x 40 mm
Area:	1.63 m ²
Weight:	20 kg
Output classes:	245 / 240 / 235 / 230 / 225 Wp
Cells:	60 Sunways Solar Cells, multi-textured, 3 busbars
Cell format:	156 x 156 mm, full-square

Design

Front:	Anti-reflective coated safety solar glass, 3.2 mm
Encapsulation:	EVA (ethylene vinyl acetate)
Rear:	Polyamide laminated film
Frame:	hollow section profile, light anodized aluminium
Junction box:	certified junction box IP65 with 6 bypass diodes
Connectors & cables:	MC4 compatible, 2 x 1.2 m, cable cross-section 4 mm ²

Information and Sales

Sunways AG · Photovoltaic Technology · Macairestraße 3 - 5
D-78467 Konstanz · Telefon +49 (0)7531 996 77-0
Fax +49 (0)7531 996 77-444 · E-Mail info@sunways.de
www.sunways.de

sunways
Photovoltaic Technology

Technical Data SM 240U

Article No.	SM225UD2B	SM230UD2B	SM235UD2B	SM240UD2B	SM245UD2B
Output classes	225	230	235	240	245
Electrical data at STC ¹⁾					
Rated output P_{MPP} (W)	225	230	235	240	245
Voltage U_{MPP} (V)	29.9	29.9	30.0	30.0	30.1
Current I_{MPP} (A)	7.53	7.68	7.84	7.98	8.14
Open-circuit voltage V_{OC} (V)	36.7	36.8	36.8	36.9	37.2
Short-circuit current I_{SC} (A)	8.24	8.34	8.35	8.35	8.48
Reverse current capacity (A)	16.0	16.0	16.0	16.0	16.0

1) STC-Standard Test Conditions: Air mass AM 1.5 – Irradiance 1000 W/m² – Cell temperature 25°C; Measuring tolerance +/-3%

Electrical data at NOCT ²⁾					
Rated output P_{MPP} (W)	163	167	170	174	178
Voltage U_{MPP} (V)	26.7	27.1	27.4	28.0	28.1
Current I_{MPP} (A)	6.12	6.19	6.22	6.23	6.33
Open-circuit voltage V_{OC} (V)	33.8	33.9	33.9	34.0	34.3
Short-circuit current I_{SC} (A)	6.67	6.75	6.76	6.76	6.87
Reverse current capacity 200 W/m ² (%) ³⁾	< 6%	< 6%	< 6%	< 6%	< 6%

2) The NOCT values are typical values. NOCT: Nominal operating cell temperature (45°C); Measuring tolerance +/-3%

Typical cell temperature with: Irradiance 800 W/m² – Ambient temperature 20°C – Wind speed 1 m/s

3) Efficiency reduction for irradiance reduction from 1000 W/m² to 200 W/m², ambient temperature 25°C, EN60904-1 comp.


Other electrical parameters

Maximum system voltage (V)	1000
Temperature coefficient I_{SC} (% / K)	0.06
Temperature coefficient U_{OC} (% / K)	-0.31
Temperature coefficient P_{MPP} (% / K)	-0.42

Application

Permissible module temperature	-40°C ... +85°C
Snow load	5,400 Pa corresponds to 550 kg/m ² , i.e. snow load zone 3
Wind load	130 km/h (800 Pa), factor 3 for wind gusts
Hail test	Ice balls: Ø 25 mm, speed: 23 m/s
Application class	A
Installation / operation	Follow the installation and operating manual !

Qualifications and Certificates

IEC 61215 Ed.2, IEC 61730, CE, Protection class II 

Internal quality checks: at least twice the load specified in IEC Standard

Dimensional drawings

