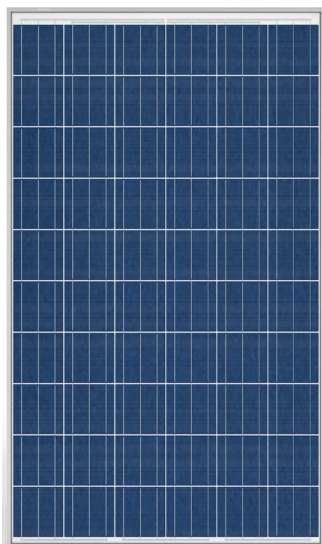


SOLARWATT solar modules

Glass-glass module: SOLARWATT 60P



The innovative glass-glass generation

- Ultra-light weight thanks to glass just 2 mm thick
- Exceptionally reliable yield rates
- Improved mechanical strength
- 100 % protection against PID
- Increased fire protection

SOLARWATT 60P

- Polycrystalline solar cells
- 250 Wp – 260 Wp (100 % added sorting)



*Test conditions, see reverse of data sheet



SOLARWATT Service



SOLARWATT Full Coverage
included (up to 1,000 kWp)



Product warranty
as per "Special Warranty Conditions for SOLARWATT solar modules"



Straightforward returns policy
as per the Terms of Delivery for SOLARWATT solar modules



Performance warranty
as per "Special Warranty Conditions for SOLARWATT solar modules"



Guarantee of origin
Quality from Germany

Product Quality



long-lasting



innovative



resistant against ammonia



resilient



low-glare



resistant against hail



high-yield



safe



resistant against salt mist

Item number	Module type	Power class (Wp)	Modules per pallet	Scaled price 1		Scaled price 2		Scaled price 3		Availability if different from standard
				Best price 1 – 29 modules per delivery		Best price 30 – 89 modules per delivery		Best price 90 or more modules per delivery		
				Euros/module	Euros/Wp	Euros/module	Euros/Wp	Euros/module	Euros/Wp	
900000491	SOLARWATT 60P	250	30	173	0,69	168	0,67	163	0,65	
900000492	SOLARWATT 60P	255	30	181	0,71	176	0,69	171	0,67	
900000493	SOLARWATT 60P	260	30	195	0,75	190	0,73	185	0,71	On request
900000475	SOLARWATT 60P with additional Crossrail equipment	250	30	178,00	0,712	173,00	0,692	168,00	0,672	
900000476	SOLARWATT 60P with additional Crossrail equipment	255	30	186,55	0,732	181,45	0,712	176,35	0,692	
900000477	SOLARWATT 60P with additional Crossrail equipment	260	30	200,50	0,771	195,30	0,751	190,10	0,731	On request

Technical Data Glass-Glass-Module: SOLARWATT 60P

Dimensions	
<p>* Approved stress loads (as per SOLARWATT Installation Instructions) for product version with additional feature „crossrail“: Applied load up to 5,500 Pa Test conditions: sliding load of 9,000 Pa (conditions take into account safety factors for snow overhang and ice load as per Eurocode 1)</p>	
L x B x D	1680 x 990 x 40 mm (+/-2 mm)
Connection technology	Cables 2 x 1,0 m/4 mm ² , PV4 - Connector, Plug in arrangement analog MC4
Weight	appr. 24 kg

Electrical Data (STC)			
STC: Standard Test Conditions: Irradiation intensity 1000 W/m ² , spectral distribution AM 1.5 temperatur 25±2 °C, in accordance EN 60904-3			
	SOLARWATT 60P		
Nominal power P _N	250 Wp	255 Wp	260 Wp
Nominal voltage U _{mpp}	30,6 V	30,9 V	31,2 V
Nominal current I _{mpp}	8,18 A	8,26 A	8,34 A
Open circuit voltage U _{oc}	37,4 V	37,7 V	38,0 V
Short circuit current I _{sc}	8,73 A	8,81 A	8,88 A
IR*	20 A		
Measurement tolerance in reference to P _{max} ±5%; Reduction of module efficiency when irradiance is reduced from 1000 W/m ² to 200 W/m ² (at 25 °C): 4 ± 2% (relative) / -0,6 ± 0,3% (absolute). * Reverse- current power rating: Operating modules with an external power source is only permissible if using a phase fuse with a tripping current of < 20 A.			

Electrical Data (NOCT)			
NOCT: Normal Operation Cell Temperature: Irradiation intensity 800 W/m ² , AM 1,5 temperatur 20 °C, Wind speed 1m/s, open circuit operation			
	SOLARWATT 60P		
Nominal power P _N	185 W	188 W	192 W
Nominal voltage U _{mpp}	28,2 V	28,5 V	28,8 V
Nominal circuit voltage U _{oc}	35,0 V	35,3 V	35,6 V
Short circuit current I _{sc}	7,06 A	7,13 A	7,19 A

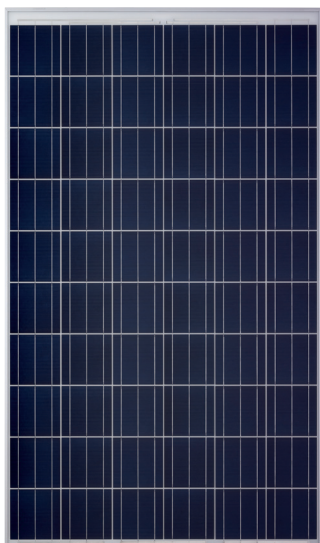
General Data	
Module technology	Glass- glass laminate, aluminum frame
Covering material	High-transparency solar glass, 2 mm
Encapsulation	EVA-solar cells-EVA, white
Backing material	Solar glass, 2 mm
Solar cells	60 polycrystalline solar cells
Cell dimensions	156 x 156 mm
Bypass diodes	3
Application class	Application class A (acc. to IEC 61730)
Max. system voltage	1000 V
Mechanical Ratings	Suction load up to 2,400 Pa as per IEC 61215 Ed.
Applied load up to 5,400 Pa	
Approved stress load	Applied load up to 3.500 Pa (when installed crosswise ¹⁾ as per SOLARWATT Installation Instructions Test condition: sliding load of 5,400 Pa (conditions take into account safety factors for snow overhang and ice load per Eurocode 1.) ¹⁾ Please refer to the specifications in the installation instructions.
Qualifications	IEC 61215 Ed.2 IEC 61730 (including Protection Class II)

Characteristic Lines	
Voltage characteristic line at different temperatures and irradiation	
Performance class 260 Wp SOLARWATT 60P	

Thermal Features	
Operating temperature range	
Ambient temperature range	
Temperature coefficient P _N	
Temperature coefficient U _{oc}	
Temperature coefficient I _{sc}	
NOCT	

SOLARWATT solar modules

Glass-film module: SOLARWATT BLUE 60P



Made in Dresden

- SOLARWATT BLUE 60P is also entirely produced in Germany.

Standard warranty

- 10-year product warranty
- 25-year staggered performance warranty

Extended warranty if SOLARWATT Full Coverage is purchased

- 12-year product warranty
- Linear 25-year performance warranty

According to the "Special Warranty Conditions for SOLARWATT Modules"



*Test conditions, see reverse of data sheet

SOLARWATT Service



SOLARWATT Full Coverage

optional (up to 1,000 kWp)



Product warranty

as per "Special Warranty Conditions for SOLARWATT solar modules"



Straightforward returns policy

as per the Terms of Delivery for SOLARWATT solar modules



Performance warranty

as per "Special Warranty Conditions for SOLARWATT solar modules"



Guarantee of origin

Quality from Germany

Product Quality



long-lasting



innovative



resistant against ammonia



resilient



low-glare



resistant against hail



high-yield



safe



resistant against salt mist

Item number	Module type	Power class (Wp)	Modules per pallet	Scaled price 1		Scaled price 2		Scaled price 3		Deviations from the standard scope of supply
				Best price 1 – 35 modules per delivery		Best price 36 – 179 modules per delivery		Best price 180 or more modules per delivery		
				Euros/module	Euros/Wp	Euros/module	Euros/Wp	Euros/module	Euros/Wp	
900000277	SOLARWATT BLUE 60P	250	36	143	0,57	138	0,55	133	0,53	
900000278	SOLARWATT BLUE 60P	255	36	150	0,59	145	0,57	140	0,55	
900000437	SOLARWATT BLUE 60P	260	36	164	0,63	159	0,61	153	0,59	On request

Technical Data Glass-Foil-Module: SOLARWATT BLUE 60P

Dimensions	
Lx B x D	1680 x 990 x 40 mm (+/-2 mm)
Connection technology	Cables 2 x 1,0 m/4 mm ² , PV4 - Connector, Plug in arrangement analog MC4
Weight	appr. 19 kg

Electrical Data (STC)				
STC: Standard Test Conditions: Irradiation intensity 1000 W/m ² , spectral distribution AM 1.5 temperatur 25±2 °C, in accordance EN 60904-3				
	SOLARWATT BLUE 60P			
Nominal power P _N	245 Wp	250 Wp	255 Wp	260 Wp
Nominal voltage U _{mpp}	30,1 V	30,2 V	30,4 V	30,6 V
Nominal current I _{mpp}	8,14 A	8,28 A	8,39 A	8,53 A
Open circuit voltage U _{oc}	37,4 V	37,6 V	37,8 V	38,0 V
Short circuit current I _{sc}	8,57 A	8,69 A	8,77 A	8,86 A
IR*	20 A			
Measurement tolerance in reference to P _{max} ±5 %; Reduction of module efficiency when irradiance is reduced from 1000 W/m ² to 200 W/m ² (at 25 °C): 4 ± 2 % (relative) / -0,6 ± 0,3 % (absolute). * Reverse- current power rating: Operating modules with an external power source is only permissible if using a phase fuse with a tripping current of < 20 A.				

Electrical Data (NOCT)				
NOCT: Normal Operation Cell Temperature: Irradiation intensity 800 W/m ² , AM 1,5 temperatur 20 °C, Wind speed 1m/s, open circuit operation				
	SOLARWATT BLUE 60P			
Nominal power P _N	180 W	184 W	188 W	191 W
Nominal voltage U _{mpp}	27,8 V	27,9 V	28,1 V	28,3 V
Nominal circuit voltage U _{oc}	31,1 V	35,3 V	35,5 V	35,7 V
Short circuit current I _{sc}	6,94 A	7,04 A	7,10 A	7,18 A

General Data	
Module technology	Glass-foil-laminate; aluminium frame
Covering material	High-transparency solar glass (tempered), 2 mm
Encapsulation	EVA-solar cells-EVA, white
Backing material	Multi-layer composite film
Solar cells	60 polycrystalline solar cells
Cell dimensions	156 x 156 mm
Bypass diodes	3
Application class	Application class A (acc. to IEC 61730)
Max. system voltage	1000 V
Mechanical Ratings	Suction load up to 2,400 Pa as per IEC 61215 Ed.
Applied load up to	5,400 Pa
Approved stress load	Applied load up to 3.500 Pa (when installed crosswise ¹⁾ as per SOLARWATT Installation Instructions Test condition: sliding load of 5,400 Pa (conditions take into account safety factors for snow overhang and ice load per Eurocode 1.) ¹⁾ Please refer to the specifications in the installation instructions.
Qualifications	IEC 61215 Ed.2 IEC 61730 (including Protection Class II)

Characteristic Lines	
Voltage characteristic line at different temperatures and irradiation	
Performance class 270 Wp SOLARWATT BLUE 60P	

Thermal Features	
	SOLARWATT BLUE 60P
Operating temperature range	-40 ... +85 °C
Ambient temperature range	-40 ... +45 °C
Temperature coefficient P _N	-0,38%/K
Temperature coefficient U _{oc}	-0,33%/K
Temperature coefficient I _{sc}	0,04%/K
NOCT	45 °C