

Quality – Reliability – Performance

Bosch Solar Module c-Si M 60

NA42117

Invented for life

Solar modules from Bosch Solar Energy



BOSCH

Bosch's 60-cell monocrystalline modules include the following benefits

Focus on quality: A reliable and durable design developed from the ability to control and monitor the manufacturing process from raw materials to module production.

German-engineered reliability: Positive power sorting, proven US and German components, structured front glass and a robust anodized frame are combined to produce required energy now and for the future.

Performance: The Bosch Gen IV solar cell and proprietary Light Harvesting String cell interconnection system promote higher module output and energy yield.

Long-term bankability: With over 125 years of history, Bosch's module testing goes beyond international standards, backed by a 10-year product warranty and 25-year performance guarantee.



Quality

Certified UL 1703 and CEC registered
Salt corrosion resistance per IEC 61701
Ammonia resistance per IEC 62716



Product features

Performance sorting $-0/+4.99$ Wp
Temperature coefficient $P_{mpp} -0.44\%$ K



Value chain

Crystal – Wafer – Cell – Module



Components

Structured frontglass, MC4 connectors,
Light Harvesting String, Bosch Solar Gen IV cell
"Made in Germany"



Warranty

10 years product and
25 years performance guarantee
(90% up to 10 years, 80% up to 25 years)



Power classes

245–255 Wp



Length [x]	Width [y]	Frame height [z]	Weight	Junction box	Plug connector type	Cable [l negative] [l positive]	Front glass surface
65.35 in 1660.0	38.98 in 990.0	1.97 in 50.0	46.30 lb 21.0	Spelsberg	MC4	-31.50 in (-800) +47.24 in (+1200)	Structured
If not stated differently, x, y, l in mm, ±2; z in mm, ±0.3; weight in kg ±0.5							

Crystalline solar module	
Performance classes	245 Wp, 250 Wp, 255 Wp
Performance sorting	-0/+4.99 Wp
Structure	Glass-foil laminate <ul style="list-style-type: none"> ▶ Anodized aluminum frame ▶ Junction box (IP 65) with 3 bypass diodes ▶ Weather-resistant back sheet (white)
Cells	60x monocrystalline solar cells in 156 mm x 156 mm format
Mechanical load	5400 Pa superimposed load, 2400 Pa suction load, in accordance with IEC 61215 (extended test)

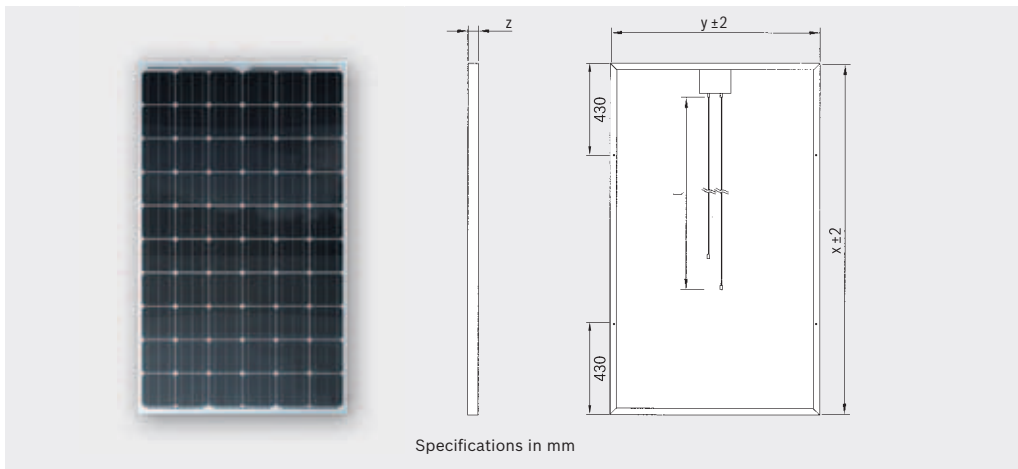
Electrical characteristics for STC¹:

Designation	P _{mpp} [W _p]	V _{mpp} [V]	I _{mpp} [A]	V _{oc} [V]	I _{sc} [A]	Reverse-current load capacity [A]
255 Wp	255	30.51	8.36	38.00	8.92	17
250 Wp	250	30.31	8.25	37.90	8.82	17
245 Wp	245	30.11	8.14	37.80	8.72	17
Reduction in module efficiency with decrease in irradiation level from 1000 W/m ² to 200 W/m ² (at 25 °C): -0.32% (absolute); measuring tolerance P _{mpp} ±3%						

Electrical characteristics for NOCT¹:

Designation	P _{mpp} [W]	V _{mpp} [V]	V _{oc} [V]	I _{sc} [A]
255 Wp	185	27.54	34.92	7.19
250 Wp	182	27.36	34.82	7.11
245 Wp	178	27.19	34.73	7.03
NOCT: Normal Operation Cell Temperature 48.4 °C; Irradiation level 800 W/m ² , AM 1.5, temperature 20 °C, wind speed 1 m/s, electrical open circuit operation				

Dimensions²:



Notes on assembly:

- ▶ See installation and operating manual at: www.bosch-solarenergy.com/products
- ▶ Module may be mounted in portrait or landscape orientation
- ▶ System voltage max. 600 V
- ▶ Operating temperature range -40 to 85 °C

Weak light performance:

Intensity [W/m ²]	V _{mpp} [%]	I _{mpp} [%]
800	0.0	-20
600	0.0	-40
400	-0.18	-60
200	-2.36	-80
100	-5.45	-90
The electrical data applies for 25 °C and AM 1.5.		

Thermal characteristics:

Temperature coefficient	TK [%/K]
P _{mpp}	-0.44
U _{oc}	-0.31
I _{sc}	0.031

¹ Electrical parameters are typical mean values from historical production data. No guarantee is made for the accuracy of this data for future production batches.

² Drawings are not to scale. For detailed dimensions and tolerances, see above.

Bosch Solar Energy Corporation
 2988 Campus Dr. Suite 100
 San Mateo, CA 94403
 USA
 Phone: +1 650 356 3100
 Fax: +1 650 525 0830
sales.se@us.bosch.com
www.bosch-solarenergy.com