



EXCELLENT M60
Low Carbon

MONOCRYSTALLINE 305-315 WP

Long lifetime even under extreme conditions

Sustainable manufacturing certified by Certisolis

Carbon emissions during production are 50% lower than industry average



Optimized for performance

PID-free polycrystalline high performance solar cells

Antireflective-coated solar glass

Low-light optimized

Positively classified -0/+4.99 Wp

Industry-leading NMOT values

Highest quality standards

Manufactured according to
DIN EN ISO 9001:2015
DIN EN ISO 14001:2015
DIN EN ISO 45001:2018

PV-module type approval according to IEC 61215:2016 ³

PV-module safety qualification according to IEC 61730:2016 ³

Guaranteed performance ¹

26 years of linear performance guarantee

12 years product guarantee, optional extension to 25 years

Total Care for the entire system (optional)

¹ For detailed information please consult the CS Wismar GmbH warranty conditions

² See backside for detailed test loads

³ Subject to recertification

EXCELLENT 305 | 310 | 315 M60 LOW CARBON

Performance STC

Under standard Test Conditions STC:
1000 W/m²; spectrum AM 1.5;
Cell temperature 25°C
Measurement tolerance STC:
P_{mpp} ±3%; I_{sc} ±10%; U_{oc} ±10%

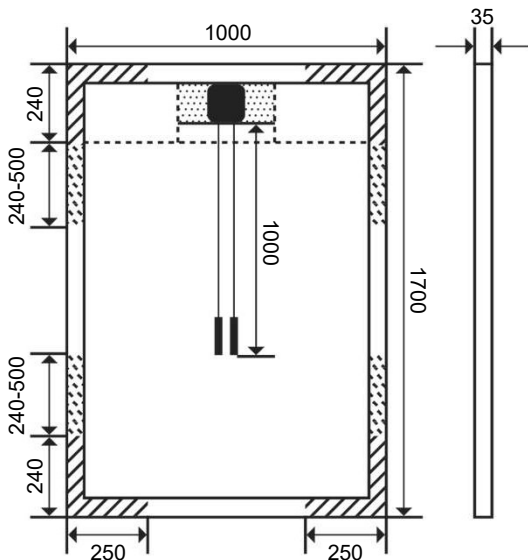
Nominal Power P _{mpp} (Wp)	305	310	315
Open Circuit Voltage U _{oc} (V)	39,62	39,82	40,03
Voltage U _{mpp} (V)	32,94	33,16	33,37
Short Circuit Current I _{sc} (A)	9,87	9,98	10,09
Current I _{mpp} (A)	9,26	9,35	9,44
Efficiency η (%)	18,2	18,5	18,8

Reduction of module efficiency at reduction from 1000 W/m² to 200 W/m²: 2,6% ± 0,1% (relative)

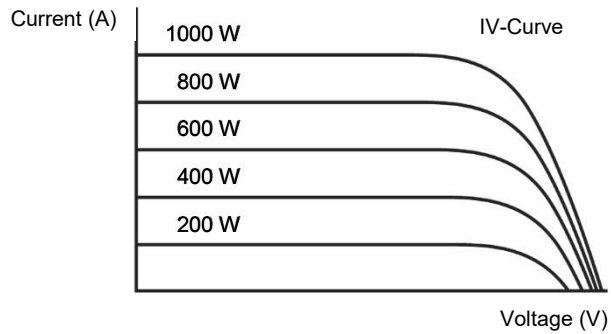
Performance NMOT

Nominal operating temperature of module
800 W/m², NMOT, AM 1.5

Nominal Power P _{mpp} (Wp)	239	243	246
Open Circuit Voltage U _{oc} (V)	37,05	37,24	37,44
Voltage U _{mpp} (V)	32,29	32,50	32,71
Short Circuit Current I _{sc} (A)	7,97	8,06	8,15
Current I _{mpp} (A)	7,39	7,46	7,53



measurements in mm



clamping area
 approved up to 2.400 Pa (suction & pressure)
 approved up to 2.400 Pa (suction)/
 5.400 Pa (pressure) no contact between junction box and mounting profile permitted in this area.

Other Technical Specification

Max. system voltage	1000 V
Weight	19.0 ± 0.5 kg
Reverse Current Load I _R	15 A
Junction box	IP 67 with 3 bypass diodes
Connectors	IP 67, MC4
Fire rating	class C
Operating temperature	-40°C ... +85°C
Design load: snow	5.400 Pa *
Max test load	8.100 Pa
Design load: wind	2.400 Pa *
Max test load	3.600 Pa

* safety factor 1.5

Thermal Properties

TC P _{mpp}	-0.39 %/K
TC U _{oc}	-0.28 %/K
TC I _{sc}	0.040 %/K
NMOT	45 +/- 2 °C

Material Used

No. of cells	60 cells
Type of cells	monocrystalline
Front	hardened solar glass
Frame	anodized aluminium
Frame height	35 mm

