



**SONNENSTROM
FABRIK**



EXCELLENT P72 **Low Carbon**

POLYCRYSTALLINE 320-335 WP

Certified sustainable manufacturing

Sustainable manufacturing certified by Certisolis

Carbon emissions during production are 50% lower than industry average

**low
CO₂**



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
BS OHSAS 18001:2007

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 320 | 325 | 330 | 335 P72 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%

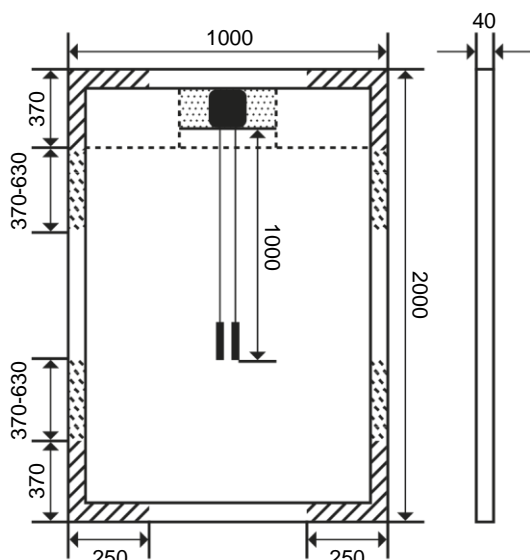
	320	325	330	335
Nominal Power P _{mpp} (Wp)	320	325	330	335
Open Circuit Voltage U _{oc} (V)	46,15	46,37	46,60	46,83
Voltage U _{mpp} (V)	37,42	37,65	37,73	37,91
Short Circuit Current I _{sc} (A)	9,10	9,18	9,27	9,35
Current I _{mpp} (A)	8,60	8,70	8,84	8,95
Efficiency η (%)	16,0	16,3	16,5	16,8

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

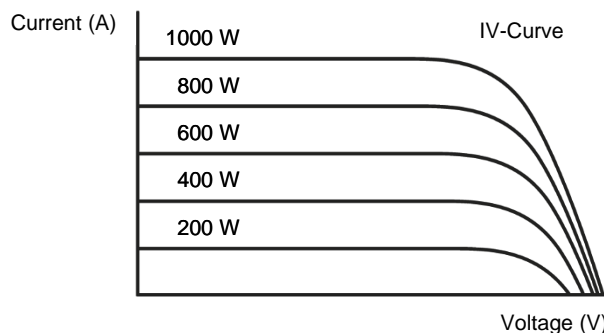
Performance NMOT

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

	253	258	263	268
Nominal Power P _{mpp} (Wp)	253	258	263	268
Open Circuit Voltage U _{oc} (V)	42,92	43,12	43,34	43,55
Voltage U _{mpp} (V)	36,81	37,04	37,15	37,34
Short Circuit Current I _{sc} (A)	7,38	7,44	7,51	7,58
Current I _{mpp} (A)	6,89	6,97	7,08	7,17



measurements in mm



clamping area
 approved up to 2.400 Pa
 approved up to 5.400 Pa
 no contact between junction box and mounting profile permitted in this area.

Other Technical Specification

Max. system voltage	1000 V
Weight	22.5 ± 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}	-0.40 %/K
TC U _{oc}	-0.305 %/K
TC I _{sc}	0.053 %/K
NMOT	45 +/- 2 °C

Material Used

No. of cells	72 cells
Type of cells	polycrystalline
Front	hardened solar glass
Frame	anodized aluminium
Frame height	40 mm

