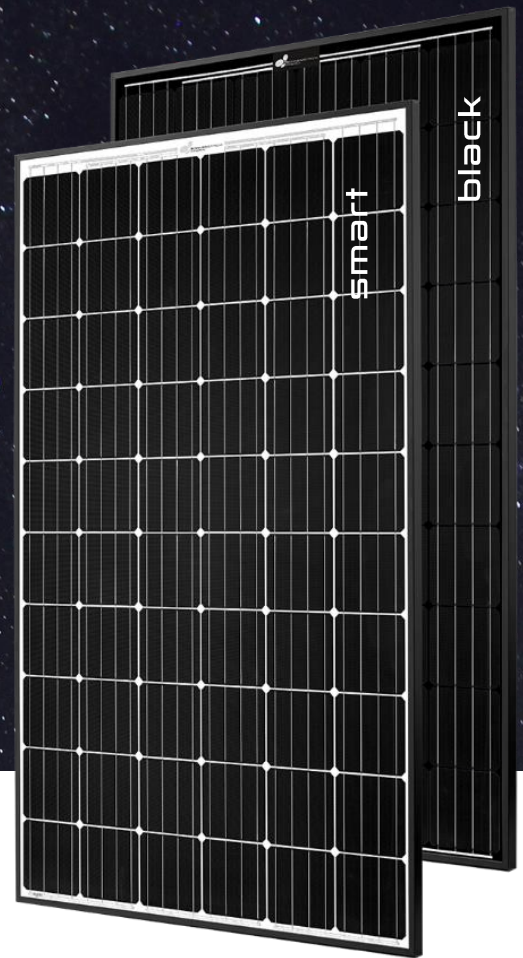


**Optional**  
**Snow load module edition**  
**1500 volts module edition**  
**Full black module edition**  
**Total Care for the entire system**  
**Extended product guarantee**



**EXCELLENT PERC60**  
**smart | black**

PERC 295-310 Wp

**Aesthetic design,  
simple installation and  
maximum stability**

Optionally available as full  
black edition

Extended clamping areas  
and upside down  
installation possible

Maximum test load  
8.100 Pascal <sup>2</sup>

Stability optimized for  
increased requirements  
due to slipping snow loads  
(optional)

**Optimized for  
performance**

PID-free PERC 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 <sup>3</sup>

PV-module  
safety qualification  
according to  
IEC 61730:2016 <sup>3</sup>

**Guaranteed  
performance <sup>1</sup>**

26 years of linear  
performance guarantee

12 years product  
guarantee, optional  
extension to 25 years

Total Care for the entire  
system (optional)

<sup>1</sup> For detailed information please consult the CS Wismar GmbH warranty conditions

<sup>2</sup> See backside for detailed test loads

<sup>3</sup> Subject to recertification

# EXCELLENT 295 | 300 | 305 | 310 PERC60 smart | black

## Performance STC

Under standard Test Conditions STC:  
1000 W/m<sup>2</sup>; spectrum AM 1.5;  
Cell temperature 25°C  
Measurement tolerance STC:  
P<sub>mpp</sub> ±3%; I<sub>sc</sub> ±10%; U<sub>oc</sub> ±10%

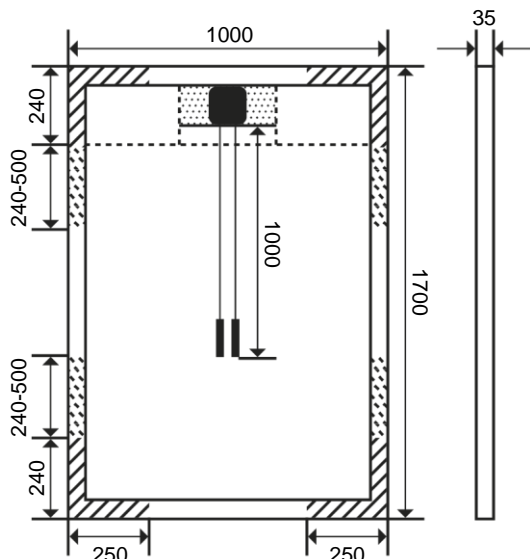
Nominal Power P <sub>mpp</sub> (Wp)	295	300	305	310
Open Circuit Voltage U <sub>oc</sub> (V)	39,15	39,28	39,62	39,82
Voltage U <sub>mpp</sub> (V)	32,52	32,72	32,94	33,16
Short Circuit Current I <sub>sc</sub> (A)	9,66	9,76	9,87	9,98
Current I <sub>mpp</sub> (A)	9,07	9,17	9,26	9,35
Efficiency η (%)	17,4	17,6	17,9	18,2

Reduction of module efficiency at reduction from 1000 W/m<sup>2</sup> to 200 W/m<sup>2</sup>: 2,5% ± 0,2% (relative)

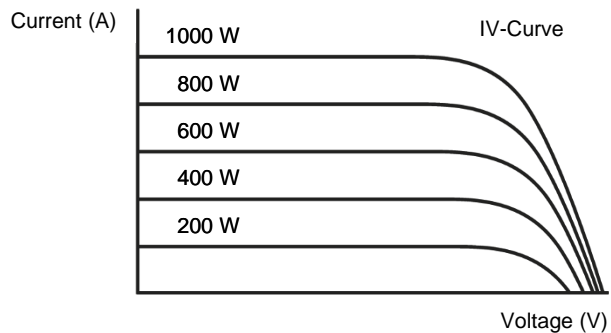
## Performance NMOT

Nominal operating temperature of module  
800 W/m<sup>2</sup>, NMOT, AM 1.5

Nominal Power P <sub>mpp</sub> (Wp)	231	235	239	243
Open Circuit Voltage U <sub>oc</sub> (V)	36,61	36,74	37,05	37,24
Voltage U <sub>mpp</sub> (V)	31,86	32,05	32,29	32,50
Short Circuit Current I <sub>sc</sub> (A)	7,81	7,89	7,97	8,06
Current I <sub>mpp</sub> (A)	7,24	7,32	7,39	7,46



measurements in mm



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

## Other Technical Specification

Max. system voltage	1000 V
Weight	19.0 ± 0.5 kg
Reverse Current Load I <sub>R</sub>	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 <sub>mpp</sub>	-0.39 %/K
TC U <sub>oc</sub>	-0.28 %/K
TC I <sub>sc</sub>	0.040 %/K
NMOT	45 +/- 2 °C

## Material Used

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

