



**INTEGRATION GLASS/GLASS
M60**

MONOCRYSTALLINE 320-330 WP

Schweizer



**Exquisitly designed
in-roof panel**

Inroof system, BIPV-Typ EN 50583, Category A

2 x 2 mm strong, hardened and scratchresistant solar glass

Protection of cells against microcracks through double glass composite

Easy to install, reliable operation

Rainproof like a tiled roof (SIA 232/1)

Excellent mechanical load values, compressive load up to 5,400 Pa ²

Hail class HW 3

**Optimized for
performance**

PID-free monocrystalline 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

Fire class: hard roofing (Euro class E)

**Guaranteed
performance ¹**

30 years of linear performance guarantee

20 years product guarantee, optional extension to 30 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

INTEGRATION GLASS/GLASS 320 | 325 | 330 M60

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%

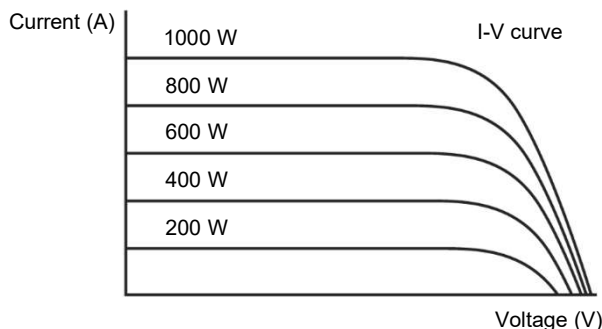
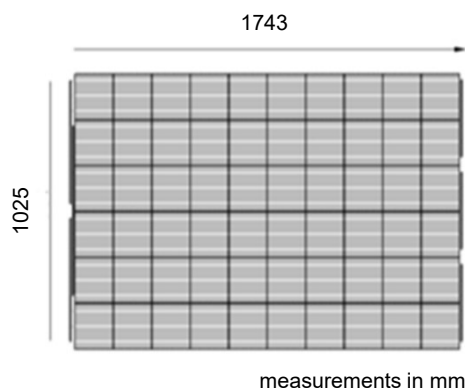
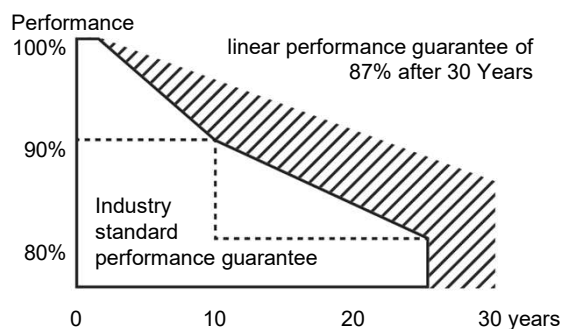
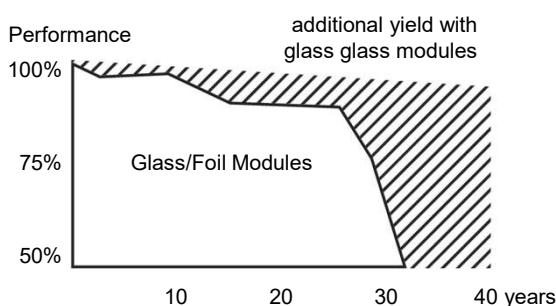
Nominal Power P _{mpp} (Wp)	320	325	330
Open Circuit Voltage U _{oc} (V)	40,22	40,41	40,60
Voltage U _{mpp} (V)	33,61	33,85	34,09
Short Circuit Current I _{sc} (A)	10,20	10,31	10,42
Current I _{mpp} (A)	9,52	9,60	9,68
Efficiency η (%)	17,9	18,2	18,5

Reduction of module efficiency at reduction from 1000 W/m² to 200 W/m²: 3,3% ± 0,5% (relative)

Performance NMOT

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

Nominal Power P _{mpp} (Wp)	250	254	258
Open Circuit Voltage U _{oc} (V)	37,61	37,79	37,97
Voltage U _{mpp} (V)	32,94	33,17	33,40
Short Circuit Current I _{sc} (A)	8,24	8,33	8,42
Current I _{mpp} (A)	7,60	7,66	7,72



Other Technical Specification

Max. system voltage	1000 V
Weight	22.0 ± 0.5 kg
Reverse Current Load IR	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	3.600 Pa *
Max test load	5.400 Pa
Design load: wind	1.600 Pa *
Max test load	2.400 Pa
Outer dimensions	1743 x 1025 mm
Raster dimensions	1725 x 993 mm

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	Solrif frame
Frame height	16 mm
Module height	35 mm

* safety factor 1.5

