

SOLYCO Smart

R-TG 108n.4 /445



Maximum reliability and efficiency: The bifacial TOPCon double-glass bestseller optimized for residential buildings



Maximum energy generation

TOPCon double-glass module with an impressive efficiency of 22.3 %, providing higher energy yield.



Increased output through bifaciality

More energy thanks to a very good bifaciality coefficient of 80 %.



Extended longevity

Special combination of embedding materials guarantees maximum longevity and reliability.



Best cell quality

Exceptional reliability thanks to the exclusive use of Grade A cells. 100 % EL tested.



Improved warranty

Up to 30 years product warranty and 87.4 % performance guarantee after 30 years due to exceeded standards.

Certificates

- IEC 61215:2021 (module reliability)
- IEC 61730:2016 (module safety)
- IEC TS 62804-1:2015 (PID resistance)
- IEC 61701:2020 (salt mist resistance)
- IEC 62716:2013 (ammonia resistance)



Superior Solar Solutions

 German
Warranty Provider



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Mechanical data

Cell technology	TOPCon, monocrystalline
Cell size and quantity	182 mm x 93.4 mm; 108 half cells
Module dimensions	1762 mm x 1134 mm x 30 mm
Module weight	24.5 kg
Frame	Black anodised aluminium
Front glass	2.0 mm tempered solar glass with anti-reflective coating
Back glass	2.0 mm tempered solar glass
Junction box and IP rating	3 pcs with one bypass diode each, potted in accordance with IP68
Cable and connector	4 mm ² solar cable, length 120 cm, STÄUBLI MC4-Evo 2 connector

Electrical data

Conditions	STC	NMOT	BNPI
STC power output P _{max} (Wp)	445	335	492
Nominal power voltage V _{mp} (V)	33.12	30.86	33.75
Nominal power current I _{mp} (A)	13.44	10.89	14.57
Open circuit voltage V _{oc} (V)	39.60	37.51	40.05
Short circuit current I _{sc} (A)	13.90	11.25	15.51
Bifacial coefficient (%)	80 ± 5		
Module efficiency (%)	22.3		

STC (nominal data under standard test conditions): irradiance 1000 W/m²; AM 1.5 spectrum; module temperature 25 °C; sorting for P_{max} 0 to +5 W. NMOT (nominal data at Nominal Module Operating Temperature): irradiance 800 W/m²; AM 1.5 spectrum; ambient temperature 20 °C; wind velocity 1 m/s. BNPI (Bifacial Nameplate Irradiance): irradiance 1000 W/m² at the front and 135 W/m² at the back; applied according to a method defined in IEC TS 60904-1-2. P_{max} tolerance: ±3.0 %; V_{oc}, V_{mp}, I_{sc}, I_{mp} tolerances: ±5.0 %.

Connection and operating conditions

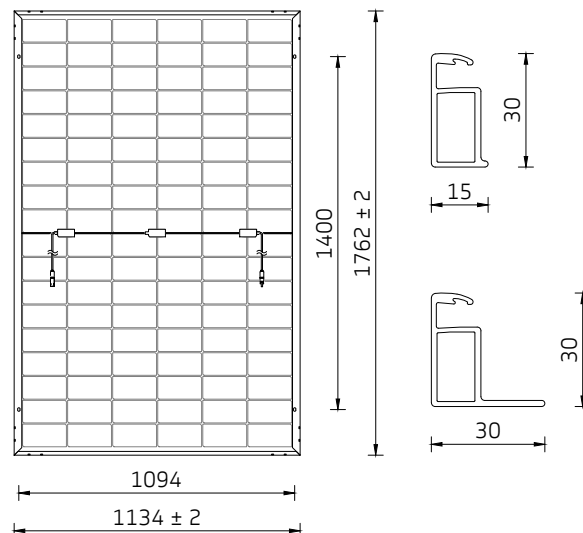
Maximum system voltage	1500 V
Operating temperature range	-40 °C ... +85 °C
Mechanical resilience ¹	Pressure resistance tested at 5400 Pa Wind suction load resistance tested at 2400 Pa
Safety class	II
Reverse current overload	30 A
Fire classes ²	A (UL 790) B _{ROOF} (t1) according to DIN EN 13501-5:2016
Hail resistance	Hailstones up to 30 mm in size and at a speed of 23.9 m/s (HW3)

¹ Specified pressure load resistance: 3600 Pa and suction load resistance: 1600 Pa;

² For all roof slopes.

Temperature coefficients

TC of the maximum power (P _{max})	-0.29 %/°C
TC of open circuit voltage (V _{oc})	-0.25 %/°C
TC of short circuit current (I _{sc})	+0.048 %/°C
Nominal module operating temperature (NMOT)	42 ± 2



Packaging



36
modules vertically per pallet



936
modules per truck



936
kg per pallet

