



MODEL SV96 E F GG22 HCG12R

TOPCon technology

Bifacial

460 W

Maximum power output

-0/+4,9 W

Positive power sorting

23,02%

Maximum Efficiency



Premium quality



100% EL testing



Power output range
450-460 W



Mechanical load
up to 5400 Pa*



Low weight



EN IEC 61215-1,-1-1,-2
EN IEC 61730-1,-2



Module efficiency
up to **23,02%**



Made in Europe



Transizione 5.0



Made-in-Europe-Bonus

Warranty:

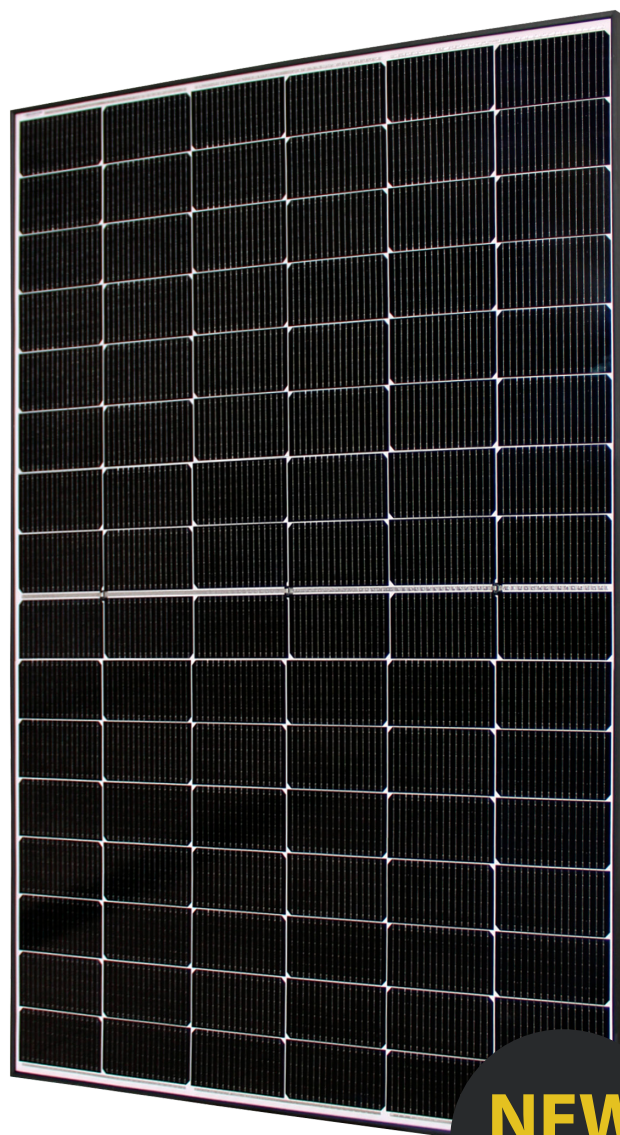
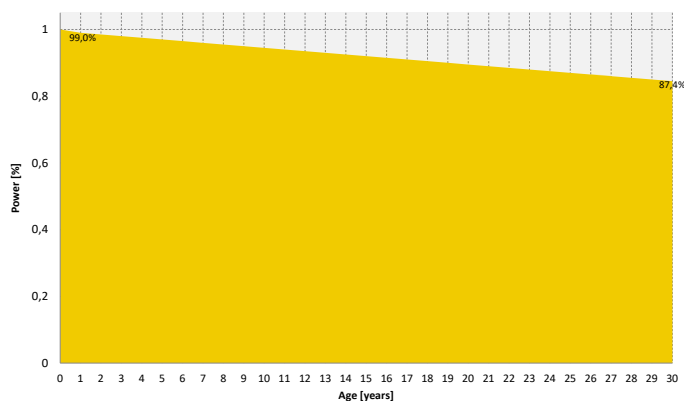


years manufacturing
defects



years limited,
87,4% output power

Module power degradation:



NEW MODULE



GG22_HCG12R_Global_P+_30_20250725

Electrical parameters at Standard Test Conditions (STC)

MODEL		SV96-450 E F GG22 HCG12R	SV96-455 E F GG22 HCG12R	SV96-460 E F GG22 HCG12R
Peak power P_{MPP}	[W]	450	455	460
Peak power sorting	[W]	-0/+4,9		
Short circuit current I_{SC}	[A]	15,90	16,00	16,10
Open circuit voltage V_{OC}	[V]	35,72	35,84	35,96
Rated current I_{MPP}	[A]	15,20	15,30	15,40
Rated voltage V_{MPP}	[V]	29,61	29,74	29,88
Module efficiency	[%]	22,52	22,77	23,02
Cell efficiency	[%]	>25,2	>25,4	>25,6

STC: 1000 W/m² irradiance, 25 °C cell temperature, AM 1,5 g spectrum according to EN 60904-3. Machine measurement tolerance: +/- 3%. Machine measurement rating: AAA. Primary electrical value for product type rating is P_{MPP} . I and V values can vary up to +/- 10% for the same P_{MPP} rating. Average relative efficiency reduction of 3,4% at 200 W/m² according to EN 60904-1.

Electrical parameters at Nominal Module Operating Temperature (NMOT)

MODEL		SV96-450 E F GG22 HCG12R	SV96-455 E F GG22 HCG12R	SV96-460 E F GG22 HCG12R
Peak power P_{MPP}	[W]	340,7	344,5	348,3
Short circuit current I_{SC}	[A]	12,85	12,93	13,01
Open circuit voltage V_{OC}	[V]	33,9	34,0	34,2
Rated current I_{MPP}	[A]	12,13	12,17	12,26
Rated voltage V_{MPP}	[V]	28,1	28,3	28,4

NMOT: module operating parameters at 800 W/m² irradiance, 20 °C ambient temperature, 1 m/s wind speed.

Electrical parameters at Bifacial Name Plate Irradiance (BNPI)

MODEL		SV96-450 E F GG22 HCG12R	SV96-455 E F GG22 HCG12R	SV96-460 E F GG22 HCG12R
Peak power P_{MPP}	[W]	495	501	506
Short circuit current I_{SC}	[A]	17,62	17,73	17,84
Open circuit voltage V_{OC}	[V]	35,72	35,84	35,96
Rated current I_{MPP}	[A]	16,72	16,85	16,93
Rated voltage V_{MPP}	[V]	29,61	29,74	29,88

MECHANICAL DATA

Dimensions (H x W x D)	[mm]	1762 x 1134 x 30
Weight	[kg]	24,9
Solar cells		TOPCon, 96 cells, mono-Si, 182x105 mm ± 1 mm
Front		AR Coated, heat strengthened glass, 2,0 mm
Back		heat strengthened glass 2,0 mm, transparent or with black or white mesh
Frame		Black anodized aluminium frame with twin-wall profile and drainage holes
Junction box		IP68 with 3 Bypass diodes
Cable and connectors		Solar cable 4 mm ² , length 1100 mm, Stäubli MC4/EVO2 connectors

OPERATING CONDITIONS

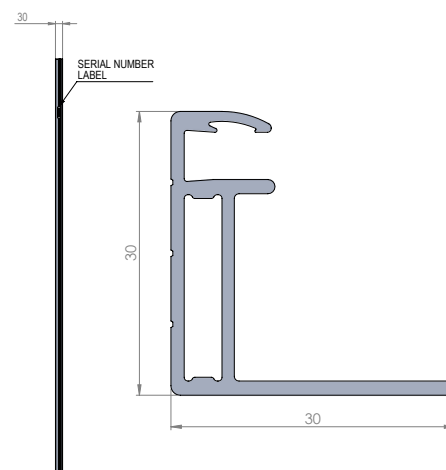
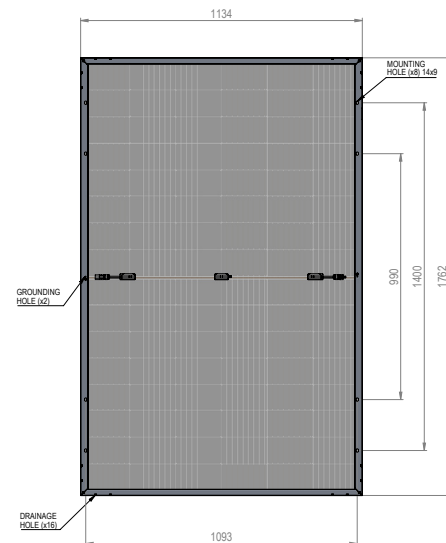
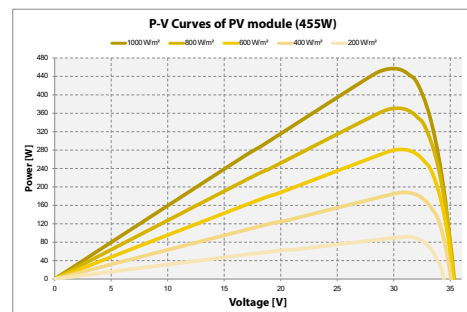
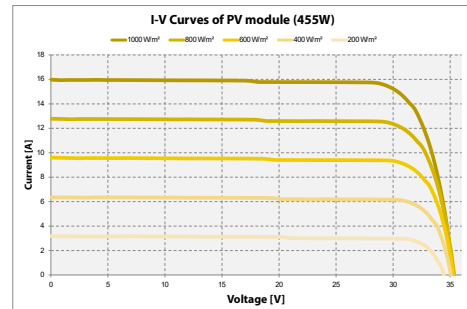
Temperature range	[°C]	-40 to +85
Maximum system voltage	[V]	1500
Max. series fuse rating	[A]	30
Limiting reverse current	[A]	25
Maximum surface load capacity	[Pa]	Down: 5400* Up: 2400
Resistance against hail		Max. diameter of 25 mm with impact speed 23 m/s

THERMAL CHARACTERISTICS

Temperature coefficient of P_{MPP}	[%/K]	-0,29
Temperature coefficient of I_{SC}	[%/K]	0,045
Temperature coefficient of V_{OC}	[%/K]	-0,24

PACKAGING:

Quantity/Pallet	pcs	36
Truck	pcs	900
Pallets	pcs	25



*Please refer to installation manual

