



General Characteristics

Shingle dimension	34.25 × 34.25 in, 870 × 870 mm
Construction	Glass EVA Cells EVA Glass
Solar cell type	PERC Monocrystalline silicon cells
Glass thickness	3.2 mm (front) + 3.2 mm (back)
Glass properties	(ESG) Tempered solar safety glass
Weight	4.4 lbs/ft ² or 21.5 kg/m ²
Temperature range	-40°F to +185°F
Junction box	TE Connectivity or equal
Bypass diode	One diode per shingle
Connection cable	Solar cable 4 mm ²
Connection cable length	800 mm
Connector	TE Connectivity (PV4) or equal
Roof pitch	3:12 or greater

Temperature Coefficients

Temperature coefficient voltage (VOC)	-0.33%/K
Temperature coefficient nominal output (PMPP)	-0.44%/K
Temperature coefficient short circuit current (ISC)	+0.0003%/K

Electrical Properties at STC (1000 W/m², 25°C And Am 1.5)

Type of shingle	Black basic shingle
Nominal output	110 Wp per single
Efficiency	17%
Voltage at Mpp Vmpp	13.1 V
Current at Mpp Impp	8.4 A
Open circuit voltage Voc	16.1 V
Short circuit current Isc	9.2 A
Maximum system voltage	1000 V DC
Reverse current overload	18 A
Tolerance nominal output	±3%

Quality and Warranty

Product guarantee	30 years
Performance guarantee	10 years at 90% nominal output 25 years at 80% nominal output
Certified pressure load	5,400 N/m ²
Fire rating	UL1703: Class A
Certifications	Both UL- and IEC-certified