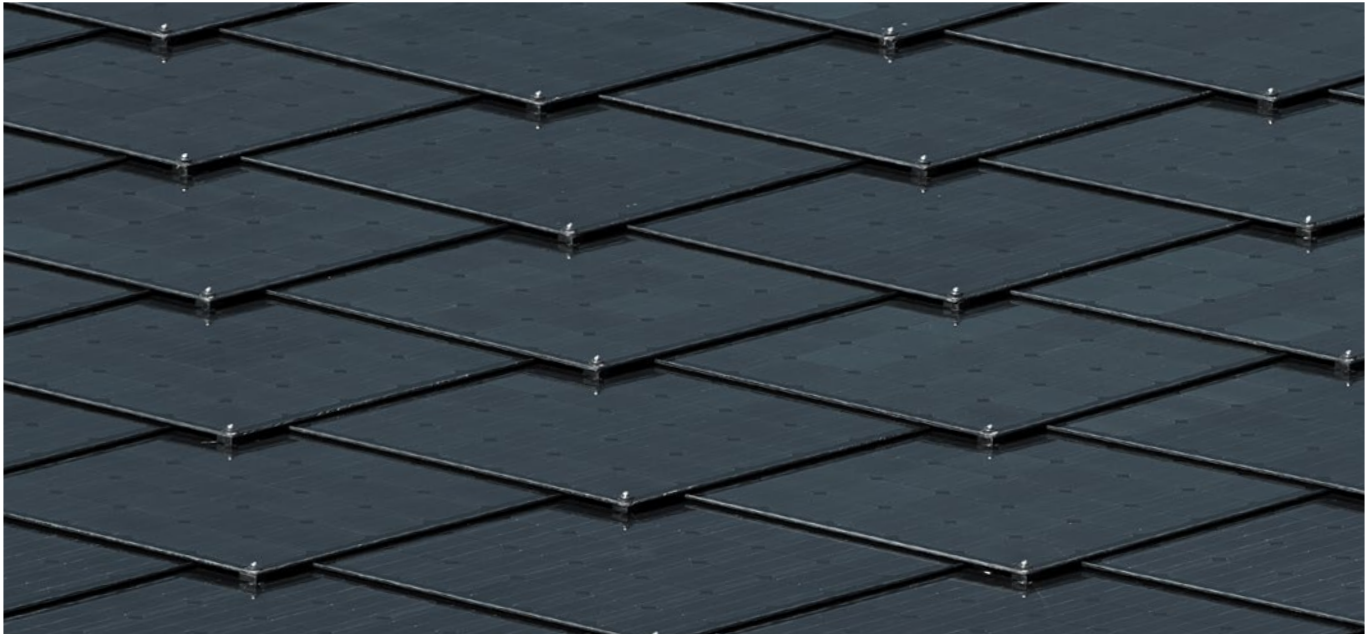




SUNSTYLE® PHOTOVOLTAIC ROOF

TECHNICAL DATA BLACK SHINGLES



GENERAL CHARACTERISTICS

Dimension basic shingle	34.25 × 34.25 inches, 870 × 870 mm
Solar cell type	Monocrystalline silicon cells
Laminate structure	Glass EVA Cells EVA Backsheet
Junction box	Certified according IEC62790
Bypass diode	One diode per shingle
Connection cable	Solar cable 4 mm ² , length 800 mm each
Connector	MC4 original
Glass thickness	6 mm
Glass properties	Tempered solar safety glass (ESG)
Weight	4 lbs/ft ² or 19.5 kg/m ²
Temperature range	-40°C to +85°C

ELECTRICAL PROPERTIES AT STC (1000 W/m², 25°C and AM 1.5)

Type of shingle	Black basic shingle
Nominal output	108 Wp per single
Nominal output per ft ² or m ²	15.2 Wp/ft ² or 164 Wp/m ²
Voltage U _{mp}	12.7 V
Current I _{mp}	8.5 A
Open circuit voltage U _{oc}	15.8 V
Short circuit current I _{sc}	8.9 A
Maximum system voltage	1000 V DC
Reverse current overload	20 A
Tolerance nominal output	±3 %

TEMPERATURE COEFFICIENTS

Temperature coefficient voltage (U _{oc})	-0.3%/K
Temperature coefficient nominal output (P _{mp})	-0.4%/K
Temperature coefficient short circuit current (I _{sc})	+0.05%/K

QUALITY AND WARRANTY

Product guarantee	10 years
Performance guarantee	10 years at 90 % of the nominal output 25 years at 80 % of the nominal output
Quality Standards	IEC 61215 IEC 61730 (Safety protection class II) HW 4 (withstands 40 mm Ø hailstones)

Certified pressure load	up to 15 400N/m ² (alpine)
Accessibility	Can be accessed without any guarantee restrictions