

Roofit.Solar

Velario[®]

145/3x10/002

V2

Extremely Weatherproof

Our solar roof is equipped to withstand any weather condition, including snow, ice, hail, and wind.

2-in-1 solution

Combining roof and solar panel into one product (2-in-1) reduces material and labor costs for both manufacturing and installation.

Built to last

Premium quality materials and a strong metal backsheet.

Warranty

25-year power warranty and 10-year product warranty.

Ideal for Sloped Roofs

Ideal photovoltaic solution for sloped roofs with minimum pitch of 10°.

Dreamed in Europe. Made in Europe.

We commit to the highest quality and European standards in the production and installation of our solar roofs.

Tried-and- tested

Installed using traditional well-known double-lock standing seam roofing technology.

Timeless design

Accepted by authorities for protected and heritage buildings.



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**Working
Conditions**

Maximum System Voltage	1000 V DC
Operating Temperature	-40 °C ... +85 °C
Maximum Series Fuse Rating	16A
Safety Class	Class II
Tested Positive Load	10 000 Pa = 1020 kg/m²
Tested Negative Load	7100 Pa
Impact Resistance	HW4 - hailstone up to 40 mm in size
Minimum Roof Slope	10 degrees

**Mechanical
Specifications**

Cells	158.75 mm monocrystalline PERC 3x10 configuration
Encapsulant	POE
Front glass	3.2 mm tempered low-iron glass
Roofing material as a backsheet	0.5 mm steel 255 g/m² zinc-aluminium galvanized 65 µm Colorcoat Prisma RAL 9005 Gloss level 40%
Junction boxes	3 bypass diodes, IP68, potted
Connectors	QC4:10
Cabels	4 mm² H1Z2Z2-K solar cabel lenght 700 mm
Effective roof coverage	1698 mm x 550 mm
Mounting method	Double Seam technology
Weight	14.0 kg (pc) = 15.5 kg/m² (installed)

Packing

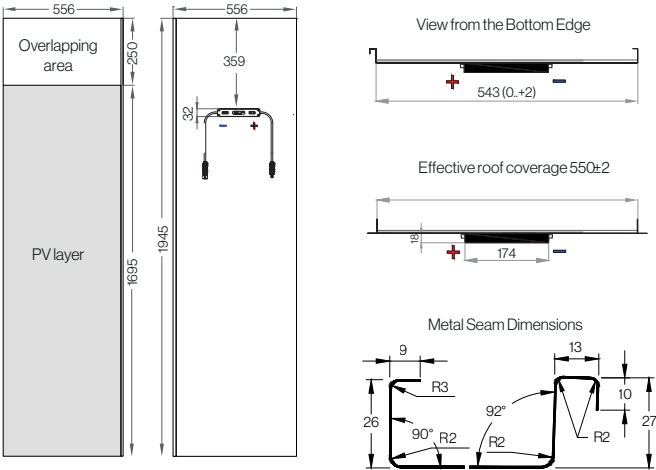
Packaging Configuration	32 modules per pallet
Pallet (LxWxH)	2000 x 1130 x 750 mm

Certification

IEC 61215-1:2021 (PV Module Reliability)
IEC 61730-1:2016 (PV Module Safety)
MCS 005 (Product certification for UK market)
MCS 010 (Production control for UK market)
EN 13501-5:2016 (Fire safety)
Broof (t1) by GTC
Broof (t2) by Eurofins Expert Services Oy
Broof (t4) by Efectis



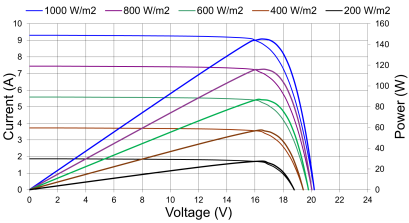
Engineering Drawings (units mm)



**Electrical
Characteristics**

		STC ¹	NMOT ²
Nominal Power	P _{mpp} (W)	145	99.2
MPP Voltage	V _{mpp} (V)	16.5	14.7
MPP Current	I _{mpp} (A)	8.8	6.75
Open Circuit Voltage	V _{OC} (V)	20.2	18.4
Short Circuit Current	I _{SC} (A)	9.3	7.19
Module efficiency	η (%)	16.2	

Power Tolerances ±3 %
Current and Voltage Tolerances ±3 %
¹Standard Test Conditions (irradiance 1000 W/m², cell temperature 25 °C, spectrum AM1.5)
²Nominal Module Operating Temperature (irradiance 800 W/m², air temperature 20 °C, wind 1 m/s, spectrum AM1.5)



**Thermal
Characteristics**

Temperature Coefficient of	P _{mpp}	-0.363 %/K
Temperature Coefficient of	V _{OC}	-0.276 %/K
Temperature Coefficient of	I _{SC}	0.043 %/K