Roofit.solar
Photovoltaic metal roofs

Roofit 3x12/160W/RR33/B/DS

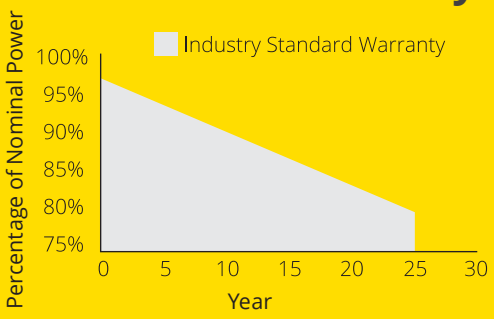
Building integrated photovoltaic module

- High mechanical load resistance because of metal back sheet
- Snail trail free structure
- +5W Strictly positive 0...+5 W power tolerance
- Superior linear power warranty Maximum 0.8 % degradation per year
- EU Made in EU
- Outstanding low light performance
- 2in1 Roofing material and photovoltaic module 2in1
- Suitable for historic buildings
- Ideal photovoltaic solution for sloped roofs
- Patent pending technology

Warranty

First year	97.5% of nominal power during the first year
Linear power warranty	80% power output after 25 years
Product warranty	10 years

Linear Power Warranty



Mechanical Specifications

Cells	3 x 12 mono PERC
Junction boxes	decentralized three bypass diodes protection class IP67 PV4 connections
Effective roof coverage	1973 mm x 550 mm
Mounting method	double seam technology
Weight	16.5 kg (pc) = 15.5 kg/m² (installed)
Front glass	3.2 mm tempered low-iron glass
Back sheet	0.5 mm metal sheet with highly durable Pural coating
Impact resistance	d = 35 mm hailstone 46 m/s = 165.5 km/h
Minimum roof slope	10 degrees
Minimum ventilation below	50 mm

Working Conditions

Maximum System Voltage	1000 VDC
Operating Temperature	-40 °C ... +85 °C
Maximum Series Fuse Rating	15 A

Electrical Characteristics

Standard Test Conditions (irradiance 1000 W/m², cell temperature 25 °C, spectrum AM1.5)		
Nominal Power	P_{mpp} (W)	160
Power Tolerance	0...+5 W	
MPP Voltage	V_{mpp} (V)	19.00
MPP Current	I_{mpp} (A)	8.44
Open Circuit Voltage	V_{oc} (V)	23.9
Short Circuit Current	I_{sc} (A)	9.00
Normal Operating Conditions (irradiance 800 W/m², air temperature 20 °C, wind 1 m/s, spectrum AM1.5)		
Power	P_{mpp} (W)	116.8
MPP Voltage	V_{mpp} (V)	17.41
MPP Current	I_{mpp} (A)	6.71
Open Circuit Voltage	V_{oc} (V)	21.87
Short Circuit Current	I_{sc} (A)	7.20

Power Measurement Tolerances ±3 %
Other Parameter Tolerances 0...5 %

Thermal Characteristics

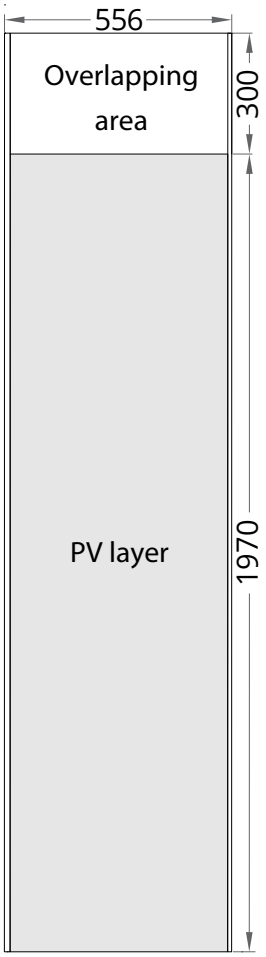
Normal Operating Cell Temperature	NOCT	42.1 ± 4.0°C
Temperature Coefficient of P_{mpp}	γ	-0.363 %/K
Temperature Coefficient of V_{oc}	β	-0.276 %/K
Temperature Coefficient of I_{sc}	α	0.043 %/K

Roofit.solar modules have been tested according to the following PV standards:

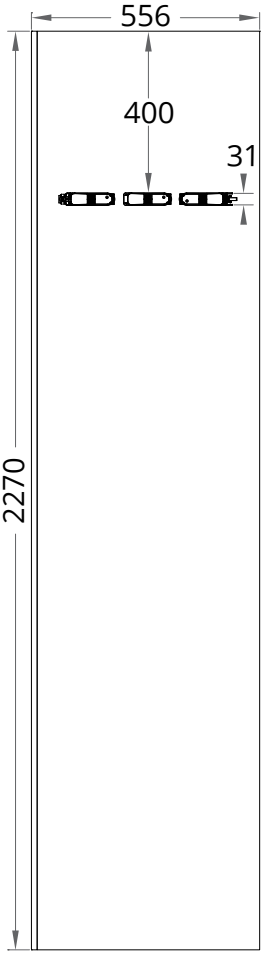
- IEC 61215-1:2016/IEC 61215-1-1:2016/IEC 61215-2:2016
  IEC 61730-1:2016/IEC 61730-2:2016
  IEC 61701
  IEC 62716
- CEN TS 1187 for fire safety and comply with EN 13501-5:2016 B_{roof}(t2) classification criteria when installed.

Engineering Drawings (units mm)

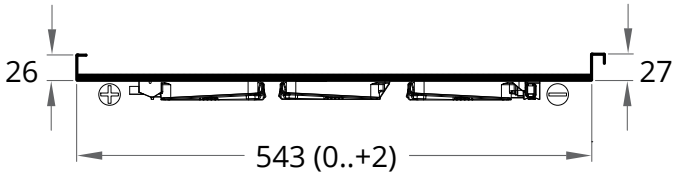
View from the Front



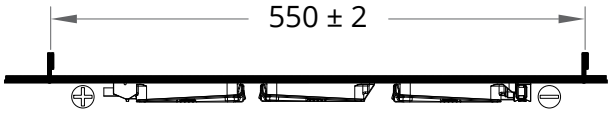
View from the Back



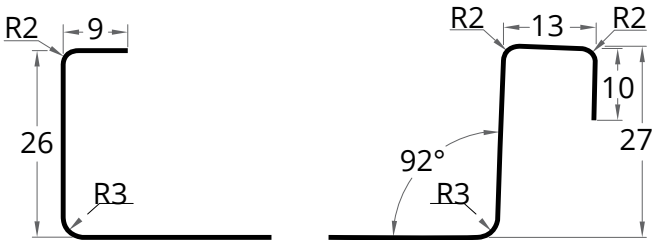
View from the Bottom Edge



Effective Area of Installed Modules



Metal Seam Dimensions



Roofit Solar Energy OÜ
Härgmäe 21, Tallinn 13525, Estonia
https://roofit.solar / info@roofit.solar

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