Roofit.solar
Photovoltaic metal roofs

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

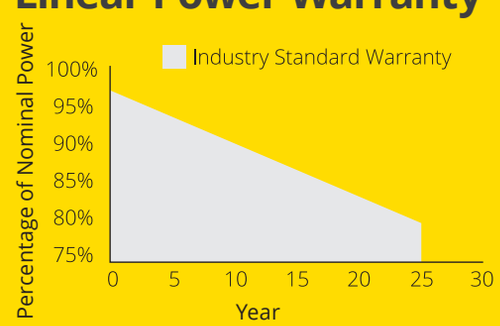
Building integrated photovoltaic module

- High mechanical load resistance because of metal back sheet
- Snail trail free structure
- +5W Strictly positive 0...+5W power tolerance
- Superior linear power warranty. Maximum 0.5 % 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
Aesthetic warranty	5 years
Metal sheet technical warranty	25 years

Linear Power Warranty



Mechanical Specifications

Cells	3 x 12 mono PERC
Junction box	decentralized junction box three bypass diodes protection class IP67 MC4 connections
Effective roof coverage	1970 mm x 545 mm
Mounting method	double seam technology
Weight	16.6 kg
Front glass	3.2 mm temperad low-iron glass with anti-reflective technology
Back sheet	0.5 mm metal sheet with highly durable PUR coating
Impact resistance	d = 35 mm hailstone 46 m/s = 165.5 km/h

Minimum roof slope	10 degrees
Maximum distance between roof rafters	1200 mm
Purlins	32 mm x 100 mm max. spacing 350 mm
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)	18.4
MPP Current	I_{mpp} (A)	8.67
Open Circuit Voltage	V_{oc} (V)	23.4
Short Circuit Current	I_{sc} (A)	8.90
Normal Operating Conditions (irradiance 800 W/m², air temperature 20 °C, wind 1 m/s, spectrum AM1.5)		
Power	P_{mpp} (W)	128
MPP Voltage	V_{mpp} (V)	18.4
MPP Current	I_{mpp} (A)	6.93
Open Circuit Voltage	V_{oc} (V)	23.3
Short Circuit Current	I_{sc} (A)	7.13
Power Measurement Tolerances ±3 % Other Parameter Tolerances ±5 %		

Thermal Characteristics

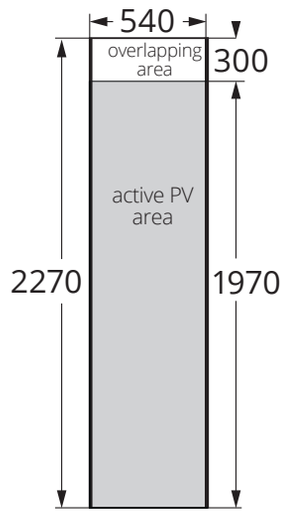
Normal Operating Cell Temperature	NOCT	45 °C
Temperature Coefficient of P_{mpp}	γ	-0.42 %/K
Temperature Coefficient of V_{oc}	β	-0.32 %/K
Temperature Coefficient of I_{sc}	α	0.05 %/K

- Roofit.solar modules are tested according to **CEN TS 1187** for fire safety and comply with **EN 13501-5:2016 B_{roof}(t2)** classification criteria when installed.
- Roofit.solar modules completed and passed **Electrical Shock Hazard Tests by Kiwa Inspecta** according to standard **EVS-EN IEC 61730-2:2018.**
- Metal parts of Roofit.solar modules are **CE** marked according to standard **EN 14782:2006.**

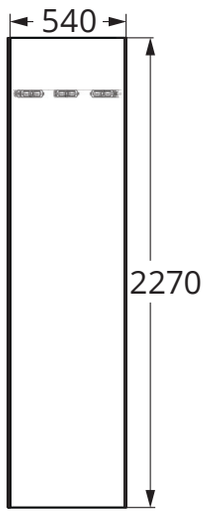
*For roofs with the slope less than 10 degrees, please contact with Roofit.solar

Engineering Drawings (units mm)

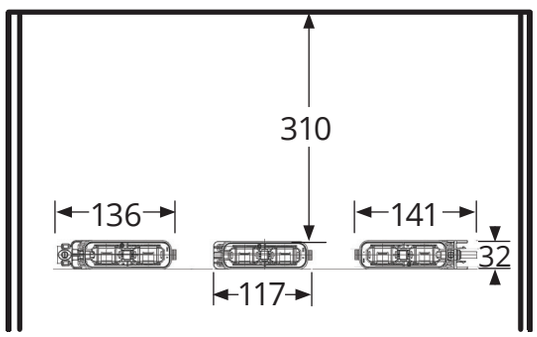
View from the Front



View from the Back

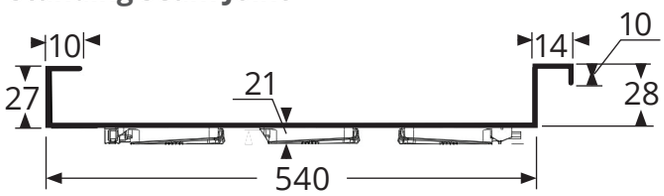


Details from the Back



View from the Top Edge

Standing Seam Joint



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