




# Roofit 3x10/130W/RR33/B/A

Building integrated photovoltaic module


 High mechanical load resistance because of metal back sheet


 Snail trail free structure


 Strictly positive 0...+ 5W power tolerance Superior linear power warranty.


 Maximum 0.5 % degradation per year.


 Made in EU

 Outstanding low light performance

 Roofing material and photovoltaic module 2in1

 Suitable for historic buildings

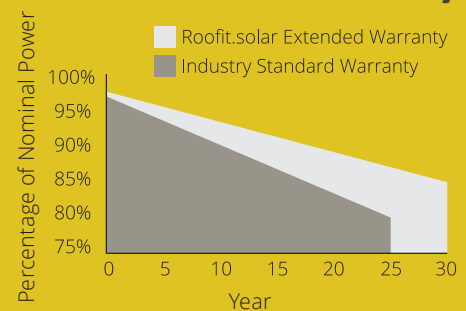
 Ideal photovoltaic solution for sloped roofs

 Patent pending technology

## Warranty

<b>First year</b>	97.5% of nominal power during the first year
<b>Linear power warranty</b>	85% power output after 30 years
<b>PUR coating warranty</b>	20 years
<b>Metal sheet technical warranty</b>	50 years

## Linear Power Warranty



## Mechanical Specifications

<b>Cells</b>	3 x 10 monocrystalline 156 mm x 156 mm cells
<b>Junction box</b>	decentralized junction box two bypass diodes protection class IP67 MC4 connections
<b>Effective roof coverage</b>	1655 mm x 515 mm
<b>Mounting method</b>	click technology
<b>Weight</b>	14.0 kg
<b>Front glass</b>	3.2 mm tempered low-iron glass with anti-reflective technology
<b>Back sheet</b>	0.5 mm metal sheet with highly durable PUR coating
<b>Impact resistance</b>	d = 35 mm hailstone 46 m/s = 165.5 km/h

<b>Minimum roof slope</b>	10 degrees
<b>Maximum distance between roof rafters</b>	1200 mm
<b>Purlins</b>	32 mm x 100 mm max. spacing 350 mm
<b>Minimum ventilation below</b>	50 mm

## Working Conditions

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

## Electrical Characteristics

**Standard Test Conditions (irradiance 1000 W/m<sup>2</sup>, cell temperature 25 °C, spectrum AM1.5)**

Nominal Power	$P_{mpp}$ (W)	130
Power Tolerance		0...+5 W
MPP Voltage	$V_{mpp}$ (V)	15.39
MPP Current	$I_{mpp}$ (A)	8.45
Open Circuit Voltage	$V_{oc}$ (V)	19.5
Short Circuit Current	$I_{sc}$ (A)	8.75

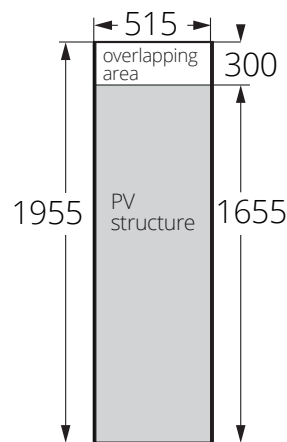
**Normal Operating Conditions (irradiance 800 W/m<sup>2</sup>, air temperature 20 °C, wind 1 m/s, spectrum AM1.5)**

Power	$P_{mpp}$ (W)	102
MPP Voltage	$V_{mpp}$ (V)	15.39
MPP Current	$I_{mpp}$ (A)	6.63
Open Circuit Voltage	$V_{oc}$ (V)	19.32
Short Circuit Current	$I_{sc}$ (A)	7.01

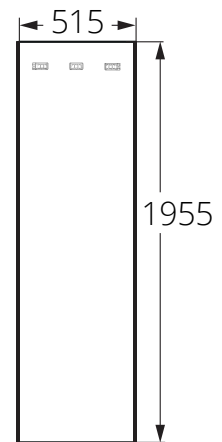
Power Measurement Tolerances  $\pm 3\%$   
Other Parameter Tolerances  $\pm 5\%$

## Engineering Drawings (units mm)

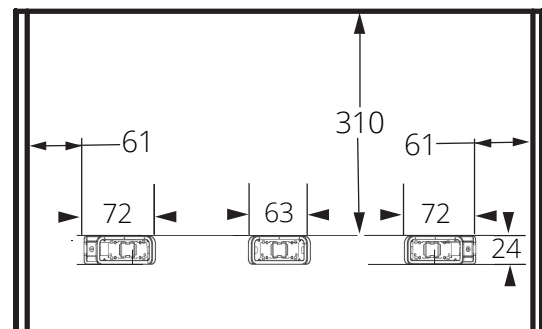
View from the Front



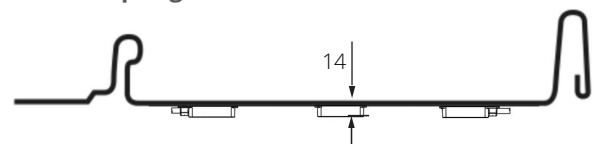
View from the Back



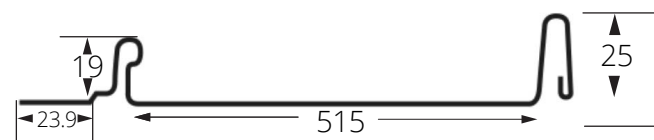
Details from the Back



View from the Top Edge



Standing Seam Joint



## Thermal Characteristics

Normal Operating Cell Temperature	NOCT	45 °C
Temperature Coefficient of $P_{mpp}$	$\gamma$	-0.42 %/K
Temperature Coefficient of $V_{oc}$	$\beta$	-0.32 %/K
Temperature Coefficient of $I_{sc}$	$\alpha$	0.05 %/K