

Datasheet Mystiek

Mystique solar roof tiles make seamless integration of solar panels in between roofing tiles and slates possible. The Mystique solar roof tile perfectly fits in between flat roof tiles and slates without making a compromise to the esthetics of the roof. An effective and powerful way to invisibly install solar panels on any new roof.

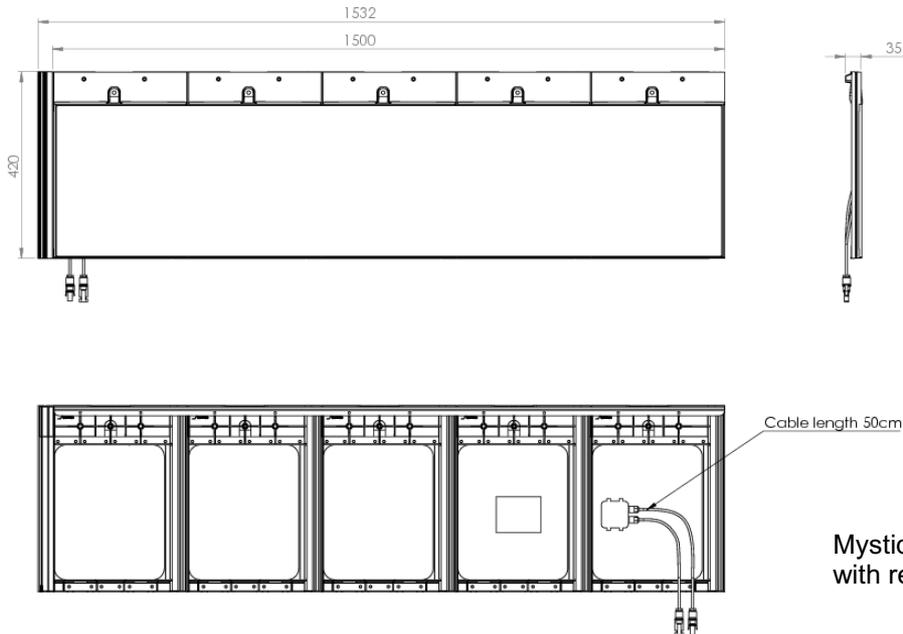
The Mystique solar roof tile is a high performance solar panel. Its yield is comparable to most of the regularly available roof mounted solar panels in the market today. High quality solar cells are integrated into the Mystique solar roof tile. An average installation of 50 Mystique solar roof tiles will bring about a yield of around 4100 kWh/yr. That is the same yield as will be achieved with 15 regular solar panels of 1 x 1.65 m² within the same roof area of 25 m².

Mystique is a high quality product which is designed and manufactured in The Netherlands. Manufacturing takes place with our own production and testing equipment. This makes it possible to deliver the highest production standards and a high quality solar roofing product. Mystique solar roof tiles are produced with the best materials, specifically designed and tested for its roof application in combination with regular tiles or slates.

Mystique is fast and easy to install which makes it a perfect solar roofing solution for home improvement or newly built houses.



Technical data



Mystique solar roof tiles are provided with regular MC-4 connectors.

Average working width	1500	mm
Average working length		
Lath work spacing absolute minimum*	320	mm
Lath work spacing advised minimum	330	mm
Lath work spacing maximum	350	mm
Effective height/thickness	26	mm
Minimum roof pitch (follow the instructions of the tiles supplier)	25	degrees
Maximum roof pitch	90	degrees
Weight	8	kg
Surface coverage at 333 mm lath work spacing	0.5	m ²

* At a lath work spacing smaller than 330mm, the electrical yield will diminish due to partial shading of the solar cells. As a rule of thumb, a decrease of power of 0,25% per mm overlap can be taken in mind.

All Mystique solar roof tiles have to get screwed into the lath beneath the solar roof tile through the holes presented at the top of the Mystique solar roof tile. Additionally, every Mystique has to get fixed with a tile safety hook. A more detailed description is found in the installation instruction.

Roof tiles and slates

The Mystique solar roof tile fits with several brands and models of flat tiles and slates, amongst which:

Nelskamp	Planum, S-9*
Wienerberger-Koramic	Actua 10 LT*, Actua 10 LG*
Monier	Stonewold, Tuile plat*, Signy-Finnez‡
Eternit	Concreto kapstadt, Domino‡
Jacobi Walther	Stylist*

* The use of these tiles requires an adjustment to the laths, as well as a minor adjustment to the tiles, to secure a seamless connection with the Mystique solar roof tile. These adjustments will eventually show no visibility from the outside.

‡ The use of these tiles requires an adjustment to the laths as well as the application of hidden drainage channels in order to make an esthetic seamless connection to the Mystique solar roof tile. Also the side connection of this tile needs to be polished away. These adjustments will eventually show no visibility from the outside.

Packaging data

Total width per piece	1532	mm
Total length per piece	420	mm
Total height per piece	35	mm
Dimensions of cardboard box (l x w x h)	155 x 33 x 47	cm
Amount included	8 or 9	pieces per box (depending on order size)
Dimensions of wooden pallet box (l x w x h)	157 x 110 x 59	cm
Amount included	29	pieces per wooden pallet box

Electrical data

Peakpower P_{MPP} (1000 W/m ² , temperature 25°C, spectrum AM1.5)	88	91	W
Powertolerance	0...+3		W
Temperaturecoefficient of P_{MPP} (Gamma)	-0.39		%/°C (= -0.32 W/°C)
Amount of solar cells	18		pieces
Powerdensity (at 330 mm lath work spacing)	175	180	W/m ²
Peak performance on a south oriented pitched roof	79-88	82-91	kWh/element per year
Open circuit voltage V_{OC}	11.86	12.03	V
Temperaturecoefficient of V_{OC} (Beta)	-0.30		%/°C (= -35 mV/°C)
Short circuit current I_{SC}	9.62	9.74	A
Temperaturecoefficient of I_{SC} (Alpha)	+0.06		%/°C (= +5.6 mA/°C)
Maximum power voltage V_{MPP}	9.90	10.06	V
Maximum power current I_{MPP}	8.92	9.06	A
Maximum systemvoltage*	600		V

* Even though good electrical insulation values are achieved at 1000V, we advise the amount of Mystique tiles connected in series to be maximized at 50 pieces (~4 kW). Within larger systems with a higher power, clusters of Mystique tiles are connected in parallel.

Warranties and certifications

Mystique has been tested by KIWA and BDA in accordance with Dutch Building Decree as specified in - *NEN 7250: Zonne-energiesystemen - Integratie in daken en gevels - Bouwkundige aspecten*.
Mystique has a product warranty of 10 years and a power warranty of 25 years from the moment of installation. Mystique has been tested and certified in accordance with the standards specified below.

UV testing in accordance with double ECE R110 automotive testing - sunlight exposure
Resistance to wind uplift testing in accordance with NEN-EN 14437:2004
Mechanical load testing in accordance with NEN-EN 1991-1-3
Weather tightness testing in accordance with NEN 2778
Fire performance testing in accordance with NEN 6063, for more details see NPRCEN/TS 1187:2012
Electrical power output warranty 25 years from date of installation; 80% of initial performance in accordance with IEC 61215: 2004
Constructive and electrical safety guaranteed in accordance with IEC 61730-1:2007 en IEC 61730-2:2004

