

BLACK ROOF



X15-BR75 - 180Wp/m²

A complete watertight roof system
Including mounting system and fitting panels



SUPERIOR SOLAR PANELS | PRODUCED & INVENTED IN THE NETHERLANDS

EXASUN TECHNOLOGIE

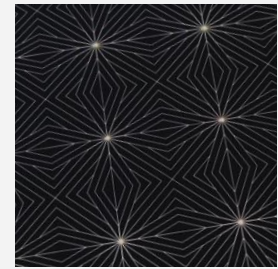
HIGH EFFICIENCY

> MWT cells.

Our PERC mono-crystalline Metal Wrap-Through cells have no bus-bars due to which it has reduced shadow losses. These advanced back-contact cells have both contacts applied to the rear side of the cell.

> Flex foil interconnectie.

A special copper foil series connects the cells which reduces the electrical resistance losses by a factor 6 compared to a standard module using 'tabs', increasing the efficiency.



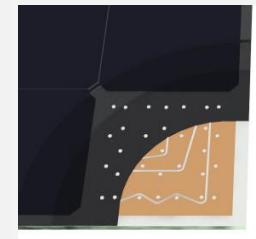
HIGH PERFORMANCE RATIO - kWh/kWp

> Higher light absorption and low resistance

Structured, ultra-clear glass coated with a durable anti-reflective coating ensures higher energy gain even with sunlight with a small inclination angle. Low electrical resistance causes the module to generate electricity with low light intensity.

> Lower NOCT.

The cell design, copper foil and the rear side glass have better thermal conductive properties. Together with a lower electrical resistance, it reduces the module temperature, resulting in a higher performance.



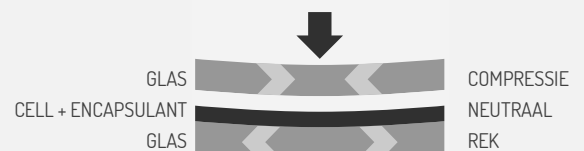
ZEER LANGE LEVENSDUUR

> Glass-Glass construction.

In conventionele modules, the rear side is made of plastic (e.g. PET). These foils are permeable to water vapour which leads to oxidation and degradation. Thanks to the use of 3.2 mm glass on the front and rear side along with an UV-stable encapsulant ensure an enduring performance.

> Tension free.

In a standard module the cells and cell connections suffer high mechanical load due to wind load and thermal expansion. This can result in to micro cracks or cell breakage disabling the module. In our Glass-Glass module one glass sheet undergoes pull forces and the other undergoes push forces. The cells are placed exactly in the middle where there is a tension-free zone; the neutral tension line. This minimizes the chance of cracks or cell breakage.

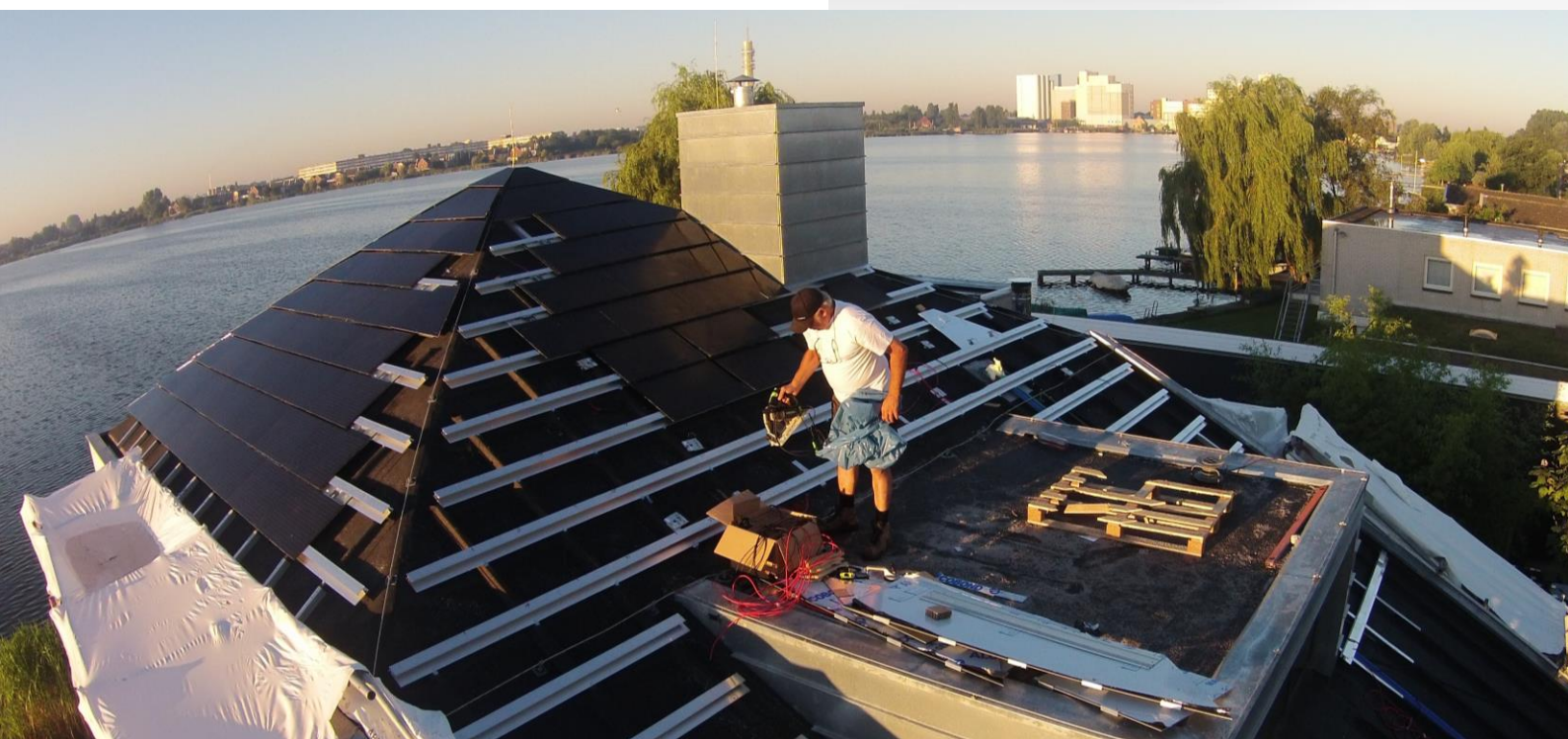
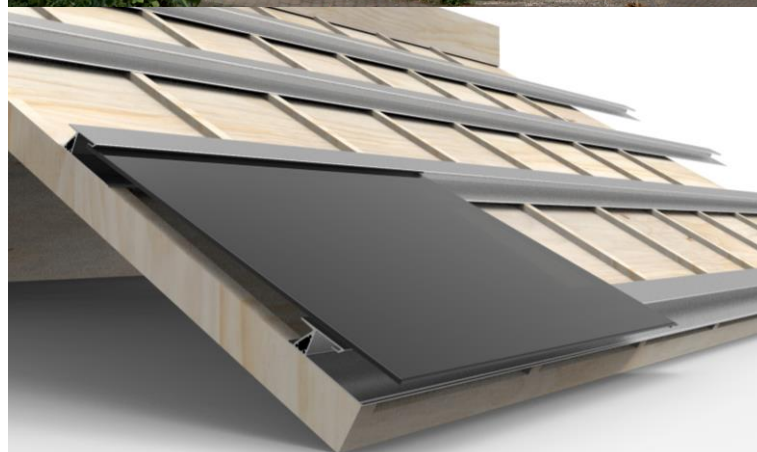


BLACK ROOF™

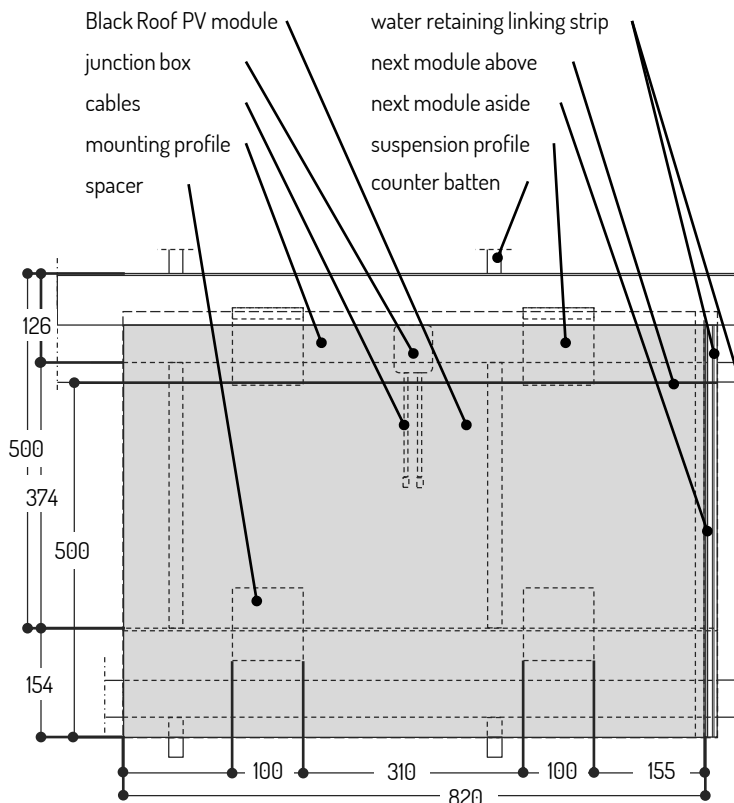
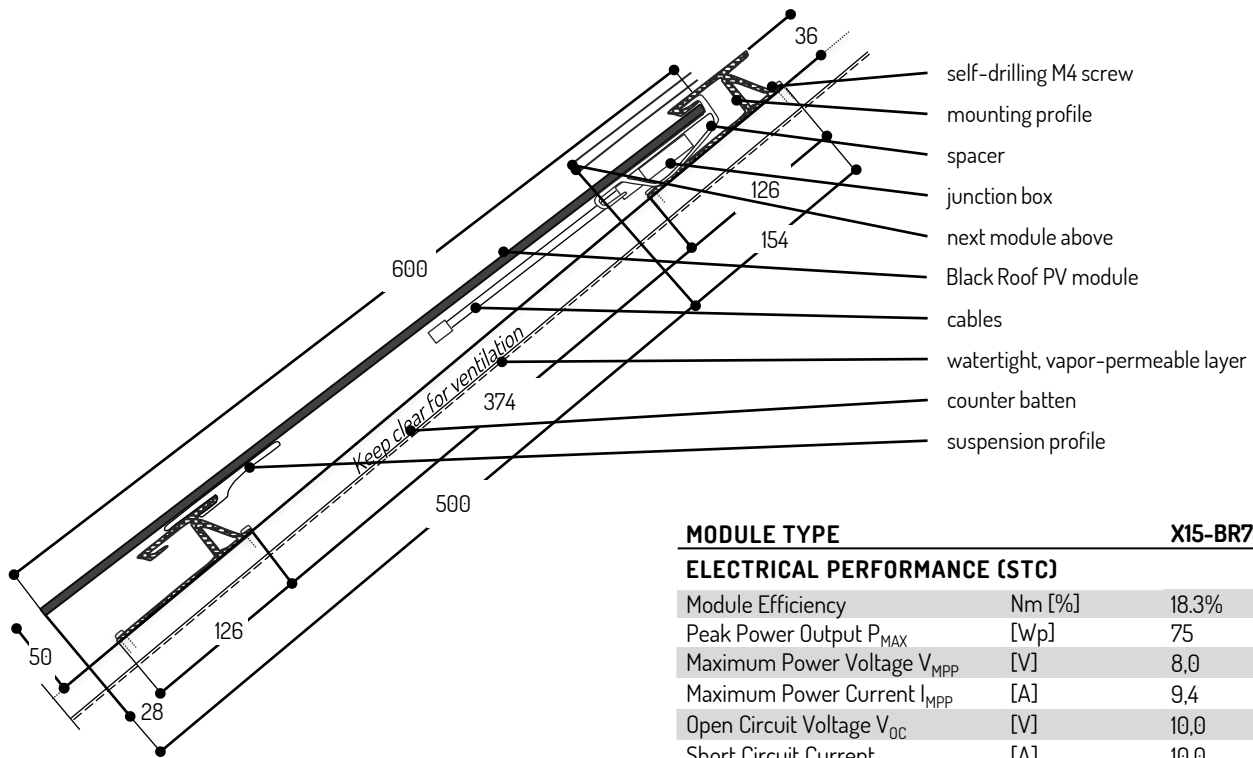


Complete system as replacement for roof tiles. With sawable fitting panels. The perfect solution for new construction, renovation and prefab roofs. For both individual housing and housing projects.

- > No roof tiles needed
- > Resistant to hail stones up to 8 cm
- > Optimal roof utilization
- > Good ventilation
- > Quick and easy installation



BLACK ROOF™ BIPV SYSTEM (15 cells)



MODULE TYPE X15-BR75

ELECTRICAL PERFORMANCE (STC)		
Module Efficiency	Nm [%]	18,3%
Peak Power Output P_{MAX}	[Wp]	75
Maximum Power Voltage V_{MPP}	[V]	8,0
Maximum Power Current I_{MPP}	[A]	9,4
Open Circuit Voltage V_{OC}	[V]	10,0
Short Circuit Current I_{SC}	[A]	10,0

STC: Irradiance at 1000 W/m²; Cell temp. 25°C AM 1.5 spectrum according to EN 60904-3

ELECTRICAL PERFORMANCE (NOCT)		
Maximum Power P_{MAX}	[Wp]	55,6
Maximum Power Voltage V_{MPP}	[V]	6,9
Maximum Power Current I_{MPP}	[A]	8,1

NOCT: Irradiance at 800 W/m²; Ambient Temp. 20°C, Wind speed 1 m/s

COMPONENTS & DIMENSIONS		
Cell Type	PERC - Monocrystalline Silicon - Metal Wrap Through	
Module	Frameless BIPV Glass-Glass	
Dimensions	mm 820 x 500 active area (820 x 600 full module)	
Thickness	mm 7.6 ± 0.2	
Weight	kg 9.1	
Mounting	Rear Side Mounting Plates for Black Roof Mounting Profile	
Frontside Glass	3.2 Hardened Ultraclear Glass (EN1863) AR Coated & Structured	
Backside Glass	3.2 mm Hardened Glass	
Diodes	3	
Connector	MC 4	

OPERATING CONDITIONS		
Max. Static Load Front	Snow	5400 Pa
Max. Static Load Back	Wind	2400 Pa
Max. Hail Stone Impact	mm at m/s	75 mm at 39.5 m/s
Temp. Coefficient Power	P_{MAX}	-0.375 %/K
Temp. Coefficient Voltage	V_{OC}	-0.294 %/K
Temp. Coefficient Current	I_{SC}	+0.041 %/K
Operating Temperature Range	°C	-40 to 125
Max System Voltage	V DC	1000
Max Series Fuse Rating	A	12

CERTIFICATIONS
 Certification ongoing
 IEC 61215 and IEC61730-1, -2



EXASUN endeavors to provide you with the correct specifications. This data sheet complies with the requirements of NEN EN 50380. Specifications are subject to change without prior notice. © EXASUN | 2018 | All Rights reserved



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