

NEW

Data sheet

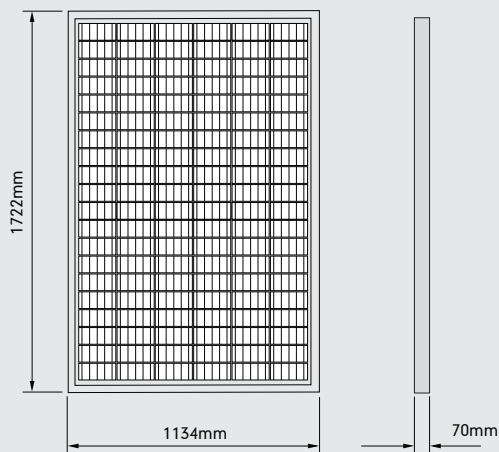
Marley SolarTile®



Marley SolarTile® 445Wp photovoltaic panels feature the latest in solar cell technology. N-type TOPCon cells are encapsulated between glass sheets - to the front and rear, to improve panel lifetime and offer a higher power output guarantee.



- ▲ Integrated with full Marley roof system and all tile types
- ▲ Renewable energy to reduce household bills
- ▲ Very low profile and unobtrusive
- ▲ Large panel size means rapid installation
- ▲ Certified fire and flame performance
- ▲ Exceptional wind resistance performance
- ▲ 15 year guarantee as part of a Marley full roof system

15
YEARMARLEY ROOF
SYSTEM WARRANTY30
YEAR87% EFFICIENCY
GUARANTEE60
YEAREXPECTED
PANEL LIFESPAN

PITCHED ROOF INTEGRATION

Sleek, low-profile integrated solar that replaces the roof covering for an improved aesthetic and simple roof maintenance.

WIND RESISTANCE

The certified wind resistance for Marley SolarTile® makes it a suitable solution for even the most exposed locations.

FIRE

Marley SolarTile® is a roof-integrated solar system accredited with high resistance to spread of flame and fire penetration in all European fire safety tests, achieving B_{ROOF} T1, T2, T3 and T4.

TECHNICAL DATA

Size of 445Wp panel	1134mm wide x 1722mm high
Aperture area	1.885m ²
Minimum pitch	20°
Maximum pitch	60°
Body thickness (nominal)	70mm
Weight	28.3kg
Static roof loading	14.5kg/m ² (distributed)
Characteristic wind resistance	4.65kPa
Ultimate design load**	4.65kPa
Positive design load (IEC 61215)	5.4kPa
Fire rating EN 13501-5	B_{ROOF} (T1, T2, T3, T4)
Authority*	IEC 61215, 61730, TUV, MCS05, MCS12
Compatible roof coverings	All Marley concrete and clay plain, and interlocking tiles. Also compatible with tiles and slates of other manufacturers

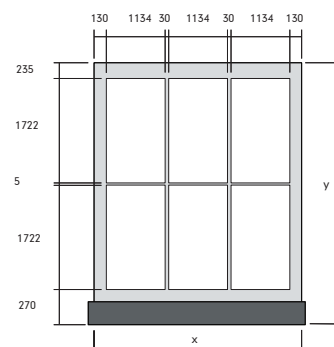
** Design resistance to ultimate loads includes a partial material safety factor of 1.0

TYPICAL CONFIGURATION

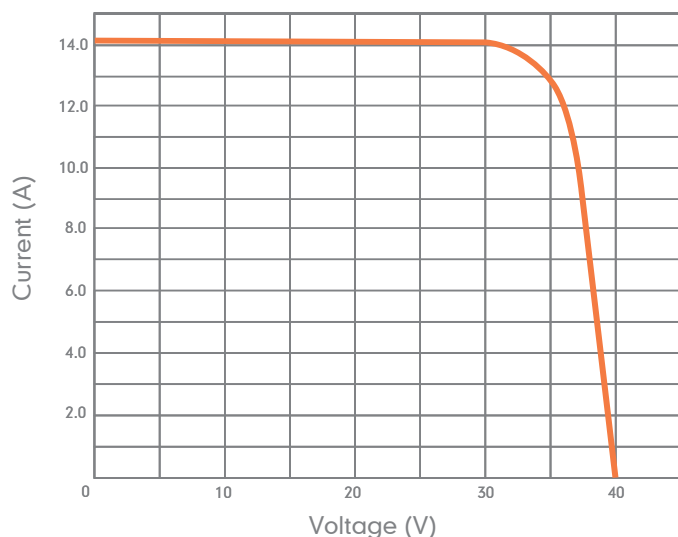
$$n \times m$$

$$x = (m \times 1164) + 230$$

$$y = (n \times 1722) + 500$$



IV CURVE



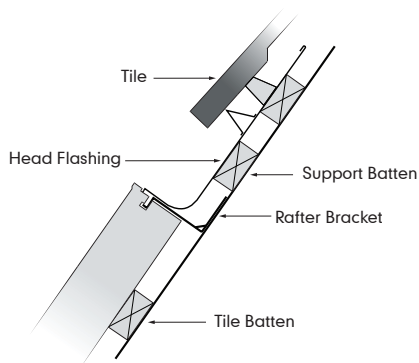
445 PANEL - ELECTRICAL DATA

Model	MAPV445AG-M10
Peak power	445Wp
Efficiency*	23.6%
No. of cells	54x2
Max. power voltage (V_{mpp})	33.02V
Max. power current (I_{mpp})	13.48A
Open circuit voltage (V_{oc})	39.90V
Short circuit current (I_{sc})	14.18A
NOCT**	42°C
Cell type	N-Type TOPCon
Power temperature co-efficient	-0.29%/°C
Current temperature co-efficient	0.04%/°C
Voltage temperature co-efficient	-0.25%/°C
Max. system voltage	1000 V_{DC}
Max. fuse rating (A)	30
Safety classification	Class II
Electrical connectors	Genuine Stäubli MC4 PV-KST4, PV-KBT4

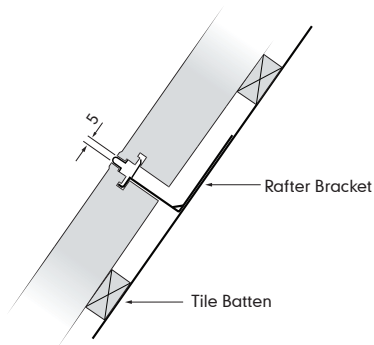
* Based on aperture area

** Nominal Operating Cell Temperature Electrical specification measured under standard test conditions: Irradiation 1 kW/m² with light spectrum AM 1.5 and a cell temperature of 25°C.

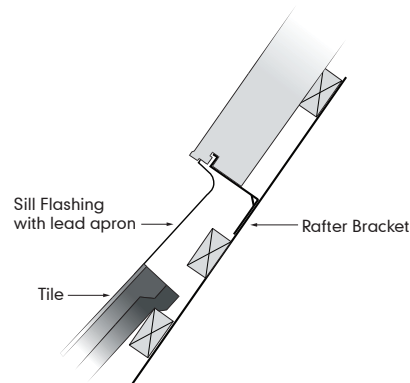
HEAD DETAIL



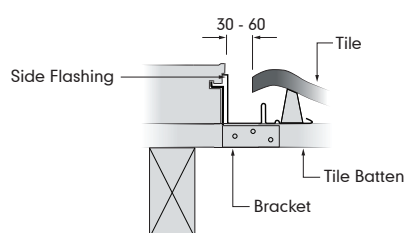
JOIN DETAIL



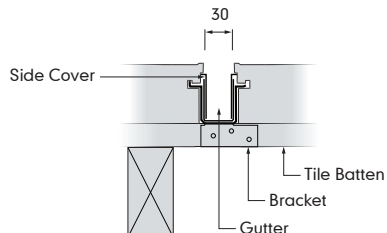
SILL DETAIL



SIDE DETAIL



GUTTER DETAIL



Specification toolkit

Marley provides a comprehensive technical service and a range of online tools to ensure design performance and compliance to the latest Building Regulations and NHBC Technical Standards.

- ▲ Fixing specifications
- ▲ NBS clause
- ▲ CAD details

Visit marley.co.uk/specifying

Tell me more

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Or visit marley.co.uk/solar

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Marley