



▲ MARLEY SOLAR ROOF SYSTEM



With Marley SolarTile®, the integrated solar roof system has come of age.

We offer the highest quality with desirable aesthetics at competitive prices, and the ability to capitalise on the design, installation and long-term performance benefits of the full Marley Roof System.

Solar power has developed into an in-demand home improvement requirement, with the genuine cost-saving benefits of using renewable energy to help power our homes. Add to this, the sleek aesthetics of Marley SolarTile and true kerb appeal can be added to long-lasting, maintenance-free performance.

- y Integrated with full Marley roof system and all tile types
- y Renewable energy to reduce household bills
- y Very low profile and unobtrusive
- y Lightweight, compact and simple to install
- y Market-leading fire performance\*
- y Exceptional industry leading wind resistance performance
- y 15 year guarantee

**15**  
**YEAR**  
**MARLEY ROOFING**  
**SYSTEM WARRANTY**

The illustration to the right shows Marley SolarTile® used with Modern interlocking tiles. Marley SolarTile can be integrated with any of Marley's ranges of tiles, or those of other manufacturers.

A JB Red machine-graded, BS 5534-compliant battens

B Vapour permeable underlay system with superb wind-uplift resistance

C Flush-fitting (level with roof covering), Marley SolarTile® solar panels with excellent wind resistance and full integratability with all elements of the Marley roof system.

D Aluminium push fit flashing for durability and high fire rating with robust lead flashing to minimise wind uplift

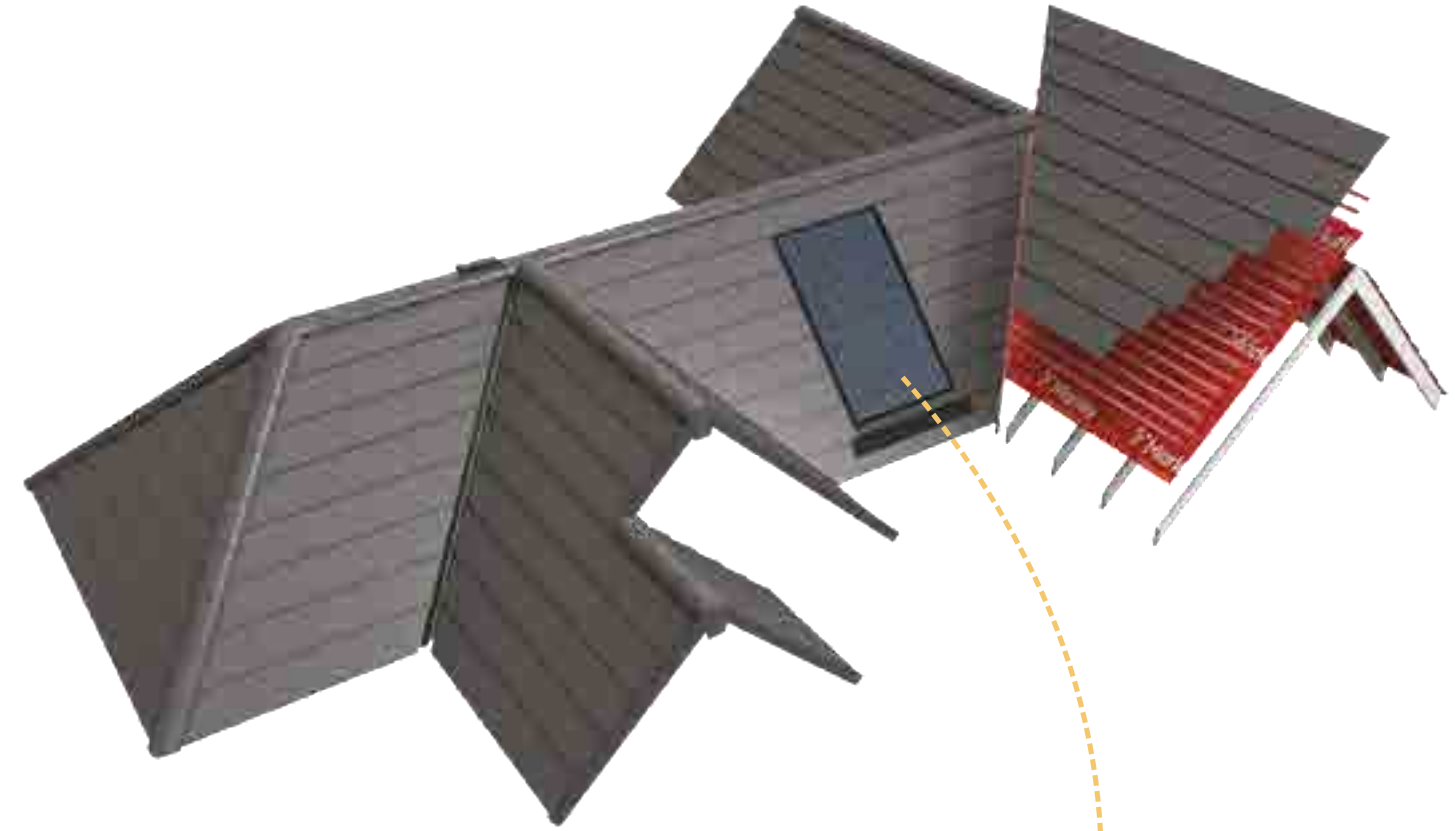
E Concrete or clay interlocking or plain tiles, available in a range of colours and options (Modern shown)



\* Marley SolarTile® is Clearline Fusion a Viridian Solar product and the only roof-integrated solar system accredited with the highest resistance to spread of flame and fire penetration in all European fire tests.

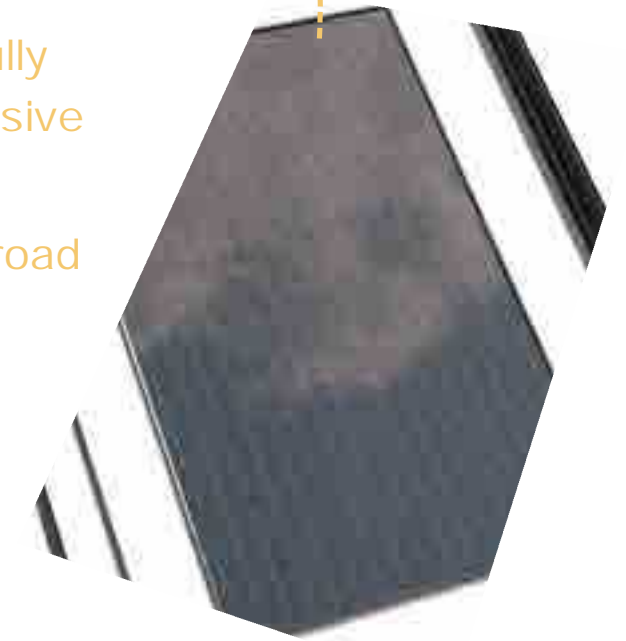


## MARLEY SOLAR ROOF SYSTEM



Marley SolarTile® can be used as a fully integrated element of our comprehensive roof system.

This brings with it all the benefits of broad design scope, simple, fast installation with long life, high-performance outcomes, a 15 year guarantee, and now added to all that, visually appealing, renewable energy options.



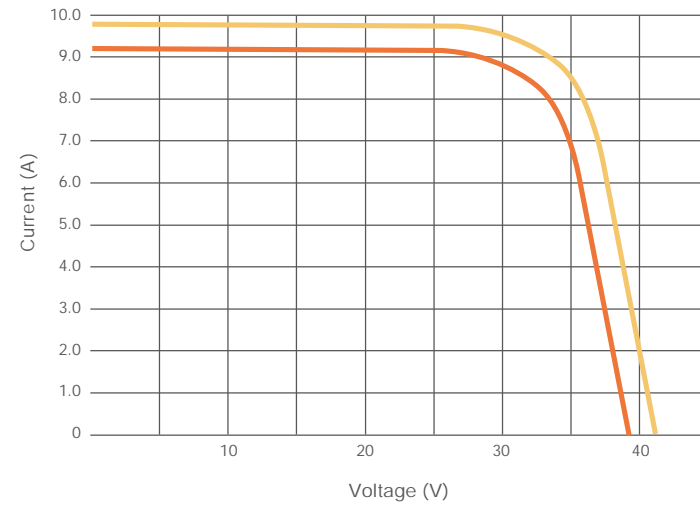
# PRODUCT DATA

## TECHNICAL DATA

Size of PV16 panel	992mm wide x 1640mm high
Aperture area	1.6m <sup>2</sup>
Minimum pitch	20°
Maximum pitch	60°
Body thickness (nominal)	69mm
Weight	21kg
Static roof loading	12.9kg/m <sup>2</sup> (distributed)
Characteristic wind resistance	5.32kPa
Ultimate design load*	5.32kPa
Positive design load (IEC 61215)	5.4kPa
Fire rating EN 13501-5	B <sub>ROOF</sub> (T1, T2, T3, T4)
Auth ority**	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  
 \*\* Marley SolarTile® is Clearline Fusion a Viridian Solar product

## IV CURVES

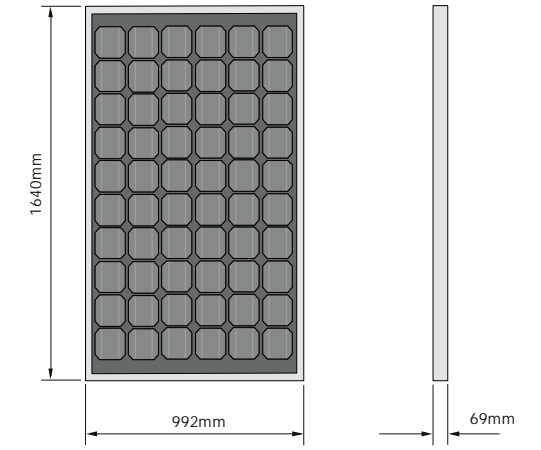


■ PV16-320 ■ PV16-270P

## ELECTRICAL DATA

Model	PV16-270P	PV16-300	PV16-320
Peak power	270Wp	300Wp	320Wp
Efficiency	17.3%	19.2%	20.5%
No. of cells	60	60	60
Max. power voltage ( $V_{mpp}$ )	30.7V	33.1V	34.0V
Max. power current ( $I_{mpp}$ )	8.8A	9.1A	9.4A
Open circuit voltage ( $V_{oc}$ )	37.3V	40.1V	41.6V
Short circuit current ( $I_{sc}$ )	9.3A	9.6A	9.8A
NOCT*	45°C	45°C	45°C
Cell type	Poly	Mono	Mono
Power temperature co-efficient	-0.4%/°C	-0.45%/°C	-0.45%/°C
Current temperature co-efficient	0.06%/°C	0.06%/°C	0.06%/°C
Voltage temperature co-efficient	-0.30%/°C	-0.34%/°C	-0.34%/°C
Max. system voltage	1000 V <sub>DC</sub>	1000 V <sub>DC</sub>	1000 V <sub>DC</sub>
Safety classification	Class II	Class II	Class II

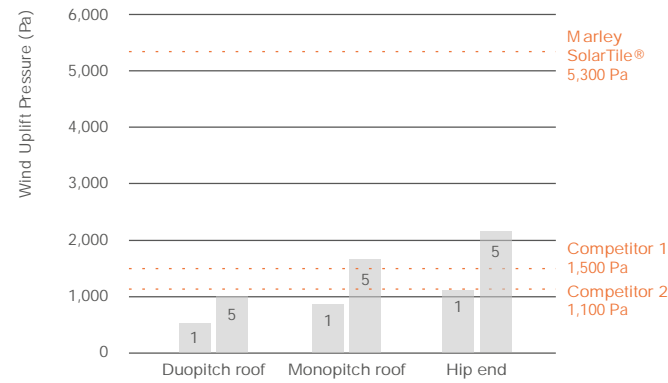
\*Nominal operating cell temperature



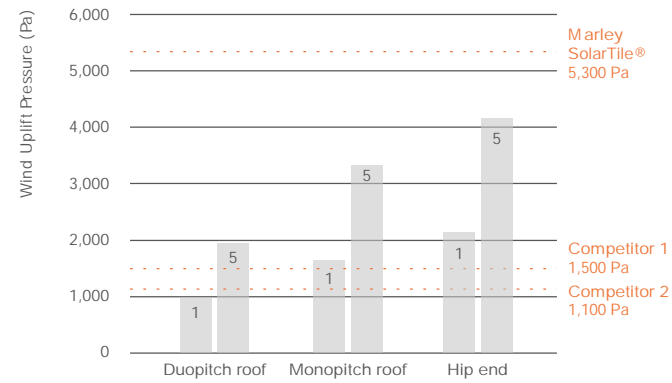
The certified wind resistance for Marley SolarTile® is more than four times higher than competitor products and suitable for even the most exposed locations.

Marley SolarTile is the only roof-integrated solar system accredited with the highest resistance to spread of flame and fire penetration in all European fire safety tests, achieving B<sub>Roof</sub> T1, T2, T3 and T4.

TOWN CENTRE, INLAND, SEA LEVEL  
Wind Zones 1 and 5 shown.

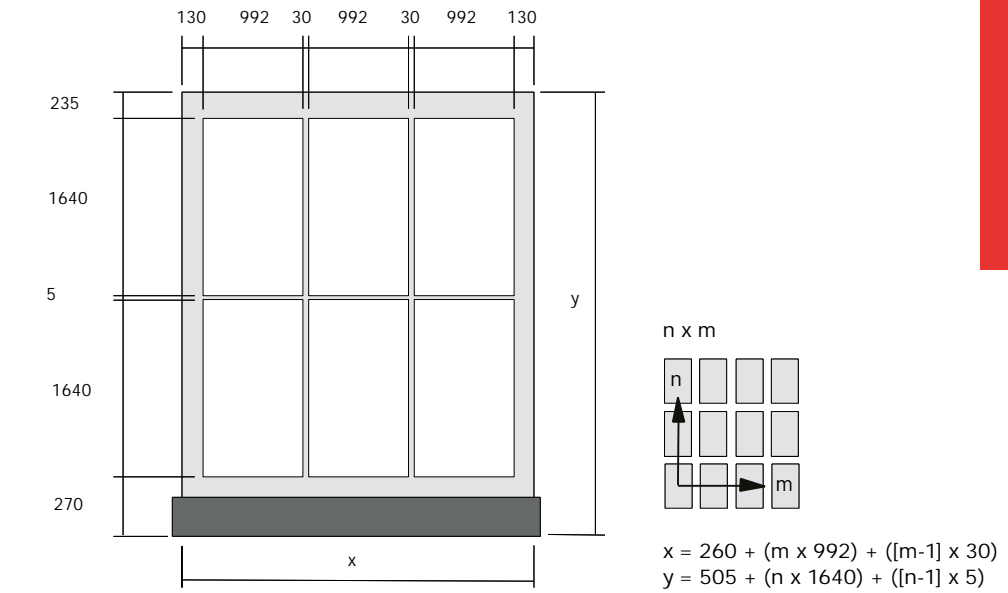


EDGE OF TOWN, COASTAL, 200M ALTITUDE  
Wind Zones 1 and 5 shown.



## DESIGN DETAILS

### TYPICAL CONFIGURATION



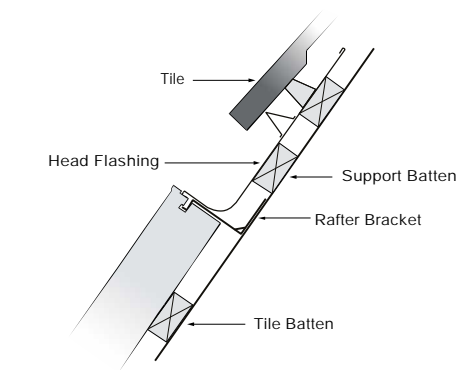
**Specification toolkit**

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.

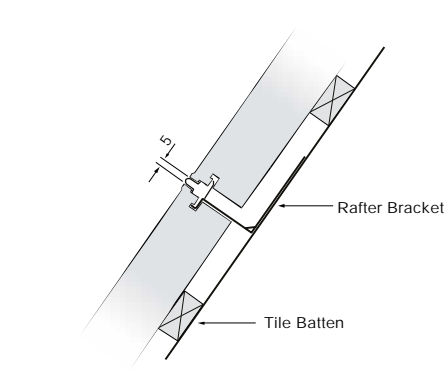
- Fixing specifications
- NBS clauses
- CAD details
- BIM models

Visit [marley.co.uk/specifying](http://marley.co.uk/specifying)

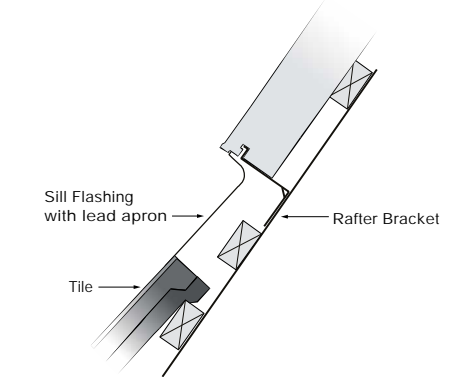
### HEAD DETAIL



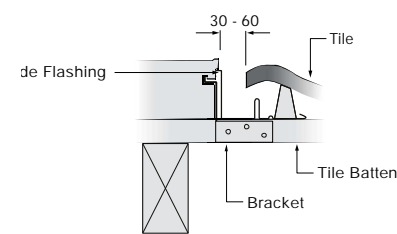
### JOIN DETAIL



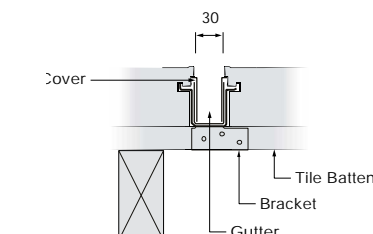
### SILL DETAIL



### SIDE DETAIL



### GUTTER DETAIL



## INSTALLATION

For new roofs or extensions to existing buildings, regulations require that all tiles are fixed with nails or clips. Roof integrated solar panels, like Marley SolarTile®, can be installed easily in a new roof application. The solar panels and flashings can be fitted to the roof first and then the roof covering can be fixed around them.

Integrated solar panels are also easy to install as a retrofit option. Simply remove a patch of tiles and install the solar panels, which leaves spare, perfectly matched tiles available for any future roof repairs. As well as being easy and simple to fit, the installation time for Marley SolarTile is really quick. The patented connection of simply pushing the panels together to create a weather-tight and secure fixing means installation can be less than one hour per kilowatt-peak.

For installation advice, contact our technical team 01283 722588



## TRAINING

Successful solar roof systems aren't just about products and guarantees; they're about knowledge and communication too—that's why we're here to give practical, engaging and informative training that's completely free of charge.

With a balance of theoretical and practical learning, our courses are designed to make you more knowledgeable about Marley SolarTile® and other products, giving you the confidence to sell and install them.

[www.marley.co.uk/training](http://www.marley.co.uk/training)



## WHY SOLAR?

Solar panel systems, which are often referred to as photovoltaics (PV), work by capturing energy from the sun using photovoltaic cells. What makes the cells so effective is that even on a cloudy day they generate electricity, because the cells don't need direct sunlight to work.

The cells operate by converting sunlight into electricity which can be used by the home or building they are on. The key benefit of adding solar panels to the roof is reduced energy bills. As sunlight is a free energy source, it means energy bills will come down as soon as the panels are installed, and in new build applications it means that bills for home buyers and tenants will start at a reduced rate.

Solar electricity is also a renewable energy and it doesn't release carbon dioxide, so it can significantly cut a building's carbon footprint. A typical home could save between 1.3 and 1.6 tonnes of carbon per year and make a saving of up to £260 on the annual electricity bill (when using the energy generated) simply by installing solar panels\*.

\*This data is from the Energy Saving Trust



## WHY CHOOSE MARLEY SOLARTILE®?

Marley SolarTile® is a roof integrated solar panel product, which means it replaces the tiles on the roof so that the panel sits lower in the roofline, looks more like a part of the building design and delivers a more attractive aesthetic.

Product performance is always key when selecting building products and Marley SolarTile® doesn't disappoint, achieving exceptional fire performance, wind resistance and weather tightness without the need for extra roof battens, adhesive flashing rolls or fire proofing materials.

High winds are always a consideration for roofing applications. Marley SolarTile® has a certified wind resistance more than four times greater than other products on the market, without any modification to the roof structure below and can even be used in exposed locations, giving you peace of mind that the product you choose is of the highest specification.

For more information on Marley SolarTile®, contact one of our specialists - [www.marley.co.uk/specialist-locator](http://www.marley.co.uk/specialist-locator)





# Tell me more

Call 01283 722588

Email [info@marley.co.uk](mailto:info@marley.co.uk)

Or visit [marley.co.uk/solar](http://marley.co.uk/solar)

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