MARLEY SOLARTILE® ROOF SYSTEM

Marley

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.

- Integrated with full Marley roof system and all tile types
- New, larger M10 panel with higher power rating now available
- Renewable energy to reduce household bills
- Very low profile and unobtrusive
- Lightweight, compact, simple and fast to install
- Market-leading fire performance*
- Exceptional industry leading wind resistance performance
- 15 year guarantee

15 YEAR

MARLEY ROOF SYSTEM WARRANTY

The illustration to the right shows 335 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

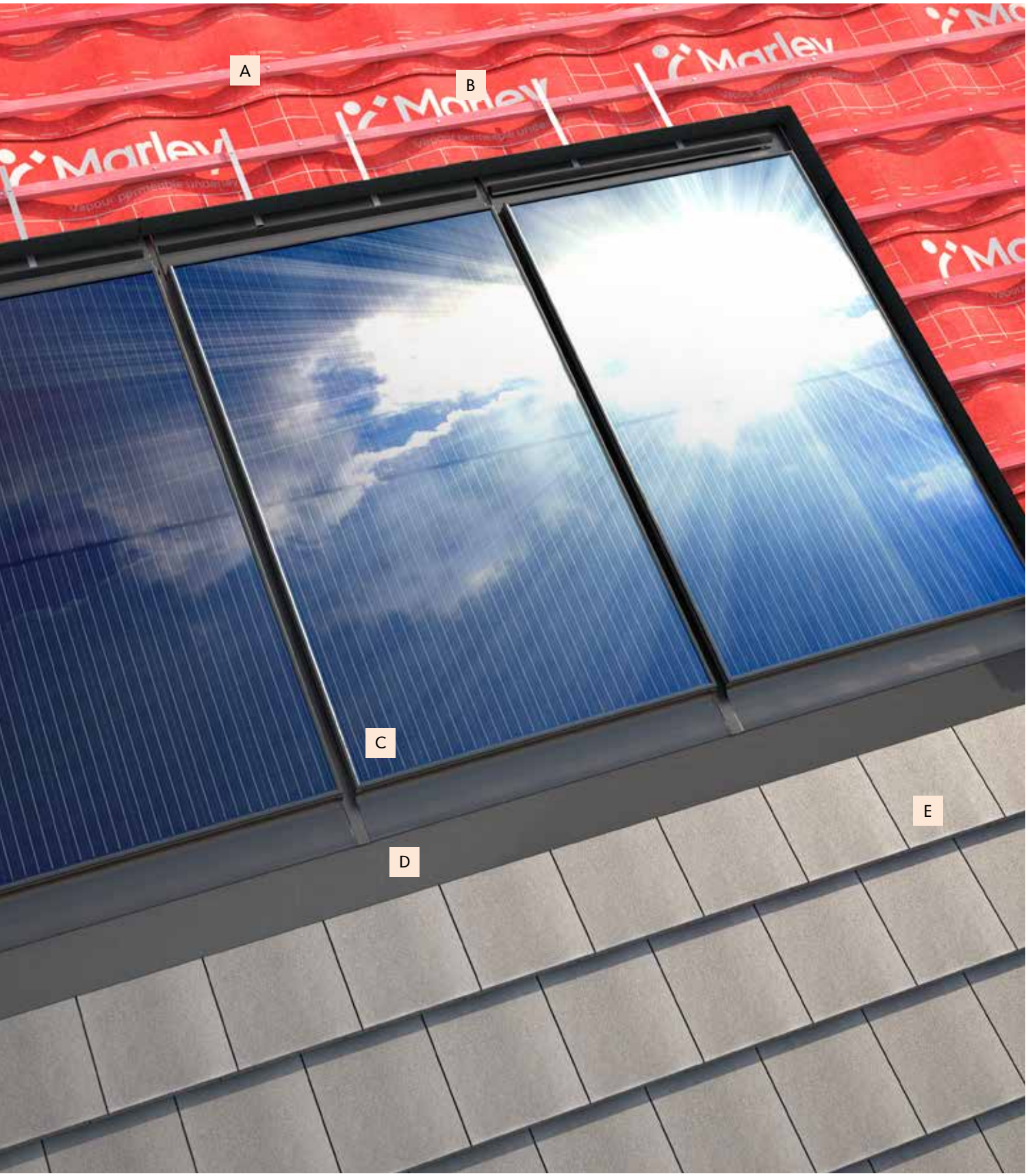
B Vapour permeable underlay system with superb wind-uplift resistance

C Flush-fitting (level with roof covering), Marley SolarTile® 335 or M10 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)

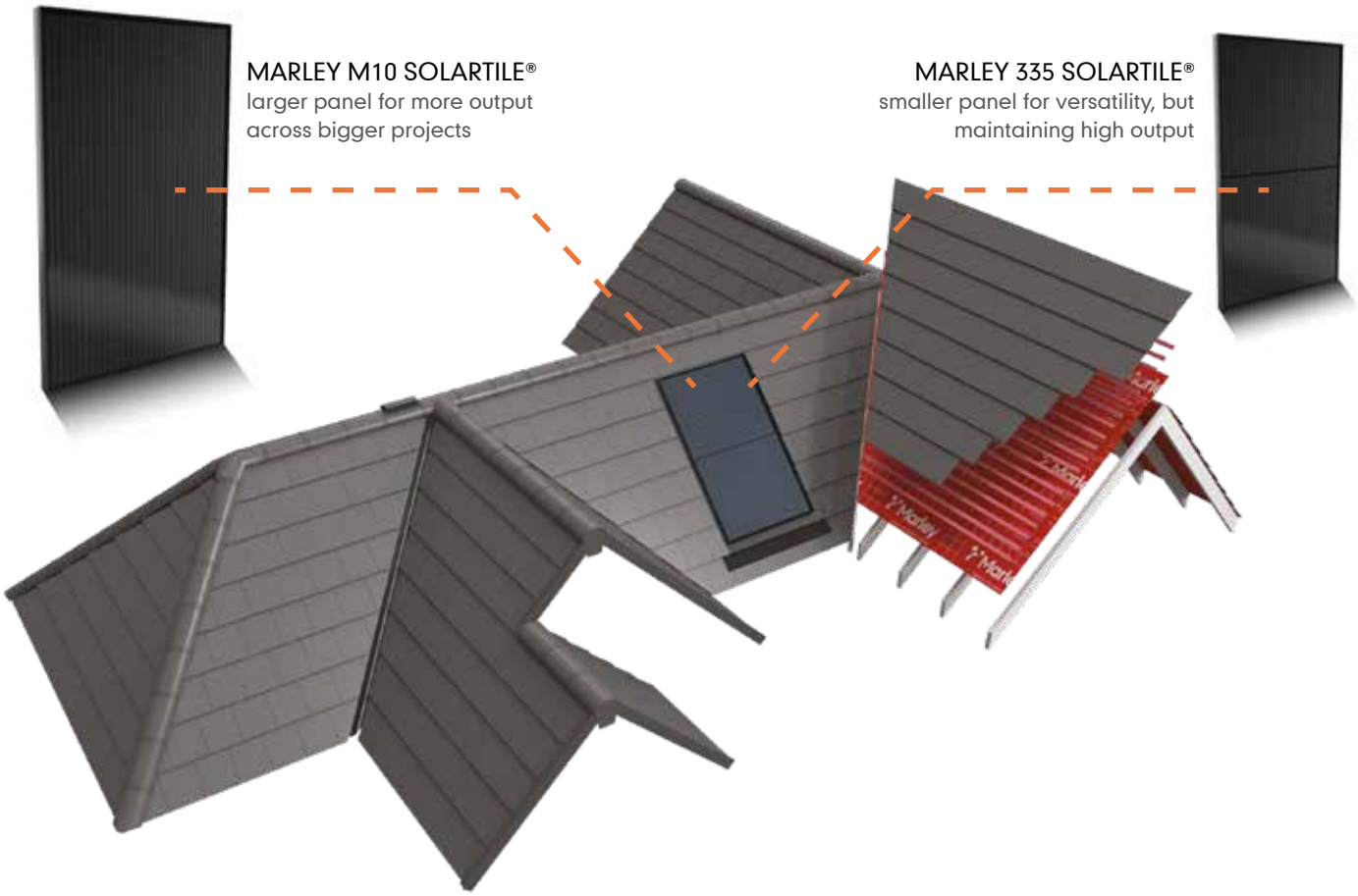
* Marley SolarTile® is Clearline Fusion a Viridian Solar product and the only roof-integrated solar system accredited with the highest resistance to spread of flame and fire penetration in all European fire tests.


A
B
C
D
E

MARLEY SOLAR ROOF SYSTEM

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

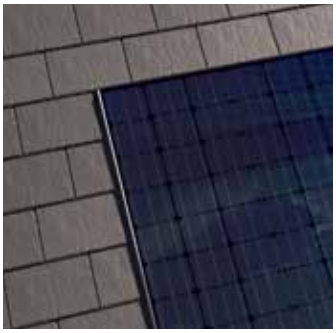
This brings with it all the benefits of broad design scope, simple, fast installation with long life, high-performance outcomes and a 15 year guarantee.



Our SolarTile® systems are low profile and fully integrated with the roof covering, from deep profiled tiles, to plain tiles, to natural or fibre cement slates, making them the ideal performance and aesthetic solution for all Marley and other manufacturers' products.

SolarTile® is a fully integrated low profile solution for all tile and slate profiles.

Profiled tiles


Fibre cement or natural slates

Plain tiles

Shingles or shakes

Arcbox
making solar even safer

The ArcBox enclosure simply snaps around a DC connector to ensure that, if an arc ever occurs, it is safely contained and doesn't spread to combustible materials in or around the solar installation. The effectiveness of the product has been independently verified by the KIWA fire test laboratory and Loughborough University.

Visit marley.co.uk/arcbox

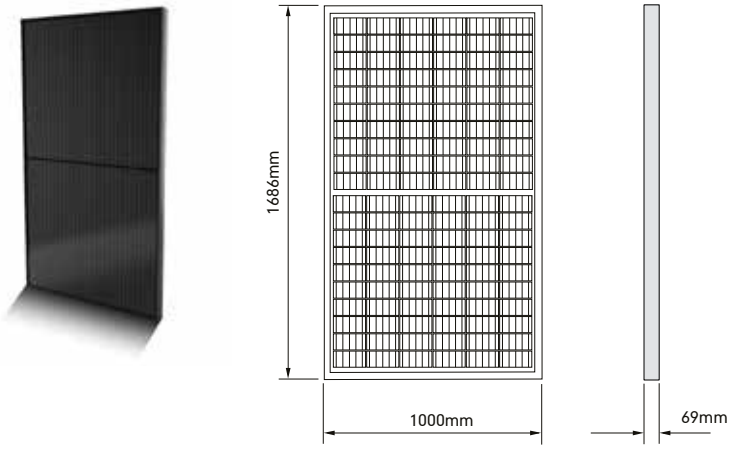
PRODUCT DATA – 335 PANEL

ELECTRICAL DATA

Model	PV16-335
Peak power*	335Wp
Efficiency**	20.7%
No. of cells	60x2
Max. power voltage (V_{mpp})	34.7V
Max. power current (I_{mpp})	9.7A
Open circuit voltage (V_{OC})	42V
Short circuit current 9 (I_{SC})	10.3A
NOCT†	44°C
Cell type	Monocrystalline Silicon
Power temperature co-efficient	-0.38%/°C
Current temperature co-efficient	0.05%/°C
Voltage temperature co-efficient	-0.30%/°C
Max. system voltage	1000 V_{DC}
Max. fuse rating (A)	20
Safety classification	Class II
Electrical connectors	Genuine Stäubli MC4 PV-KST4, PV-KBT4

* Subject to a manufacturing tolerance of +/- 3%.
** 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.

DIMENSIONS

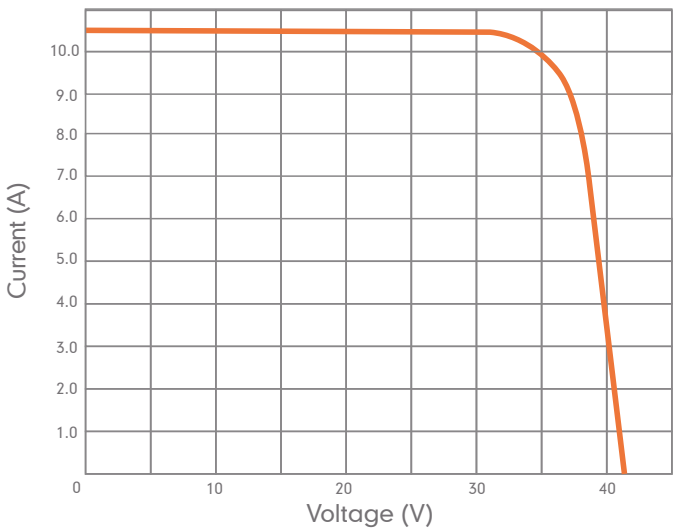


TECHNICAL DATA

Size of 335 panel	1000mm wide x 1686mm high
Aperture area	1.622m²
Minimum pitch	20°
Maximum pitch	60°
Body thickness (nominal)	69mm
Weight	21.7kg
Static roof loading	12.9kg/m² (distributed)
Characteristic wind resistance	5.32kPa
Ultimate design load***	5.32kPa
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

IV CURVE



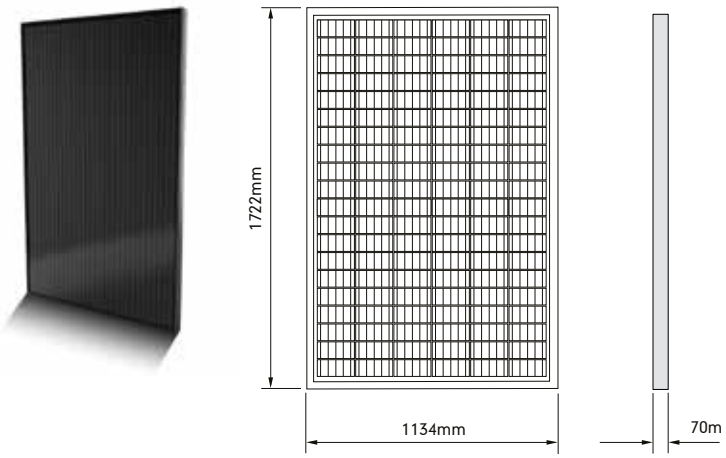
PRODUCT DATA – M10 PANEL

ELECTRICAL DATA

Model	MAPV16-405-M10
Peak power	405Wp
Efficiency*	21.5%
No. of cells	54x2
Max. power voltage (V_{mpp})	31.02V
Max. power current (I_{mpp})	13.06V
Open circuit voltage (V_{OC})	37.05V
Short circuit current (I_{SC})	13.62A
NOCT†	44°C
Cell type	Monocrystalline Silicon
Power temperature co-efficient	-0.35%/°C
Current temperature co-efficient	0.05%/°C
Voltage temperature co-efficient	-0.28%/°C
Max. system voltage	1000 V_{DC}
Max. fuse rating (A)	25
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.

DIMENSIONS

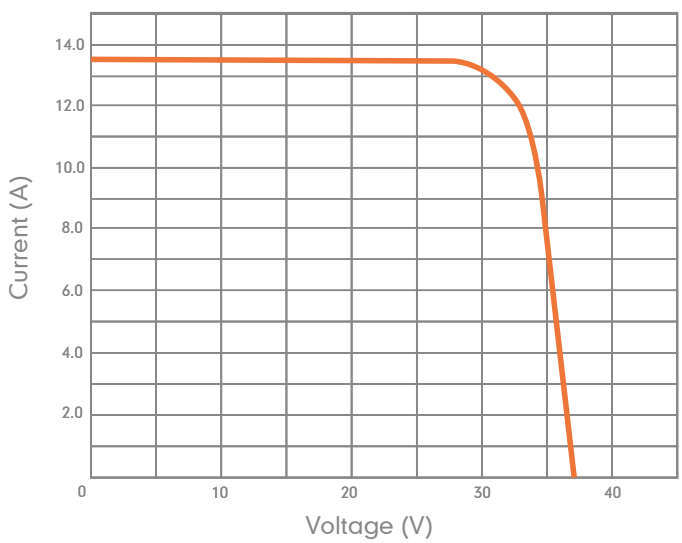


TECHNICAL DATA

Size of M10 panel	1134mm wide x 1722mm high
Aperture area	1.885m²
Minimum pitch	20°
Maximum pitch	60°
Body thickness (nominal)	70mm
Weight	25.0kg
Static roof loading	12.8kg/m² (distributed)
Characteristic wind resistance	4.24kPa
Ultimate design load***	4.24kPa
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

IV CURVE



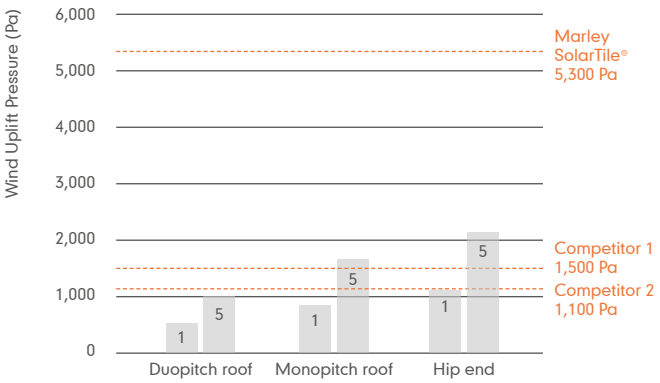
PRODUCT DATA

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_{Roof} T1, T2, T3 and T4.

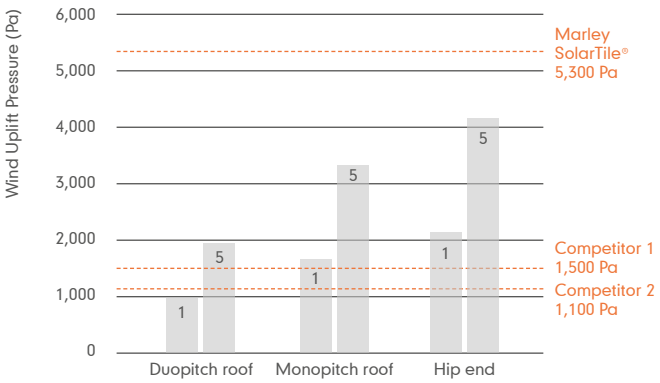
TOWN CENTRE, INLAND, SEA LEVEL

Wind Zones 1 and 5 shown.



EDGE OF TOWN, COASTAL, 200M ALTITUDE

Wind Zones 1 and 5 shown.



Specification toolkit

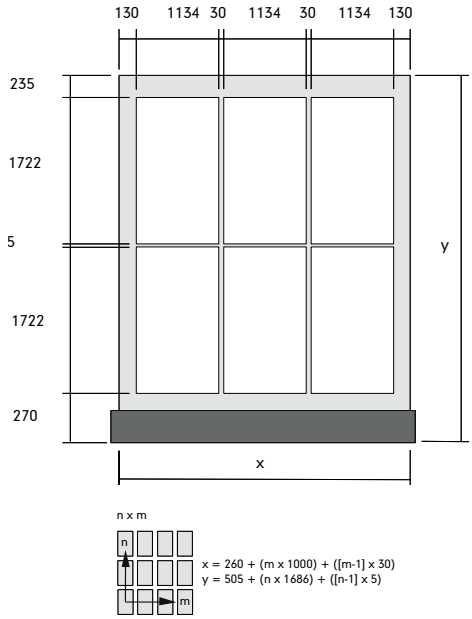
Marley provides a comprehensive technical service and a range of online tools to ensure design performance and compliance to the latest Building Regulations and NHBC Technical Standards.

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

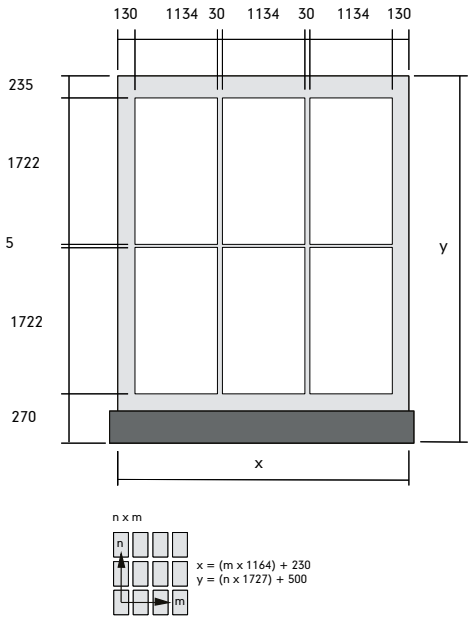
Visit marley.co.uk/specifying

DESIGN DETAILS

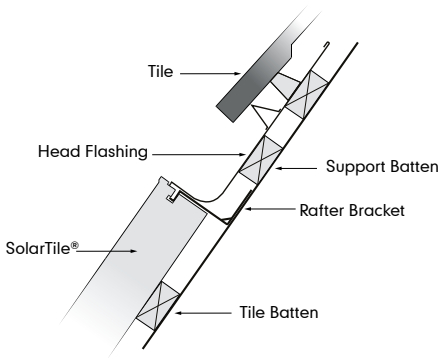
TYPICAL 335 CONFIGURATION



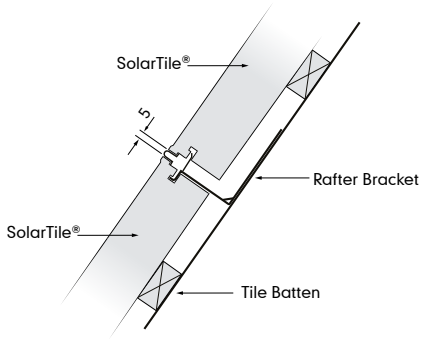
TYPICAL M10 CONFIGURATION



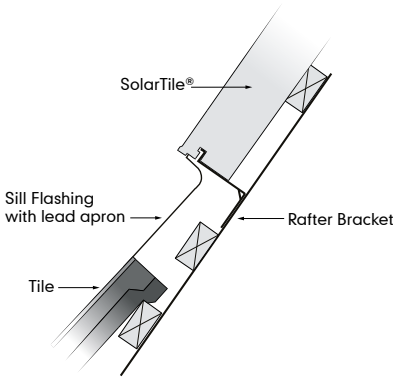
HEAD DETAIL



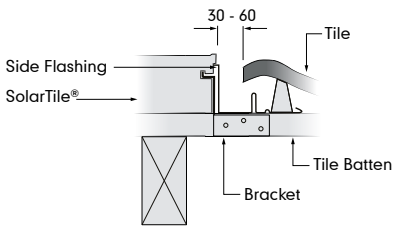
JOIN DETAIL



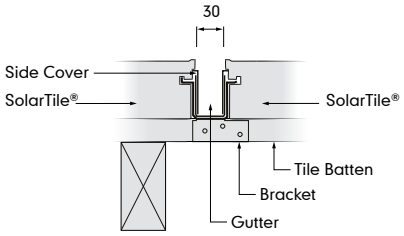
SILL DETAIL



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.

marley.co.uk/training

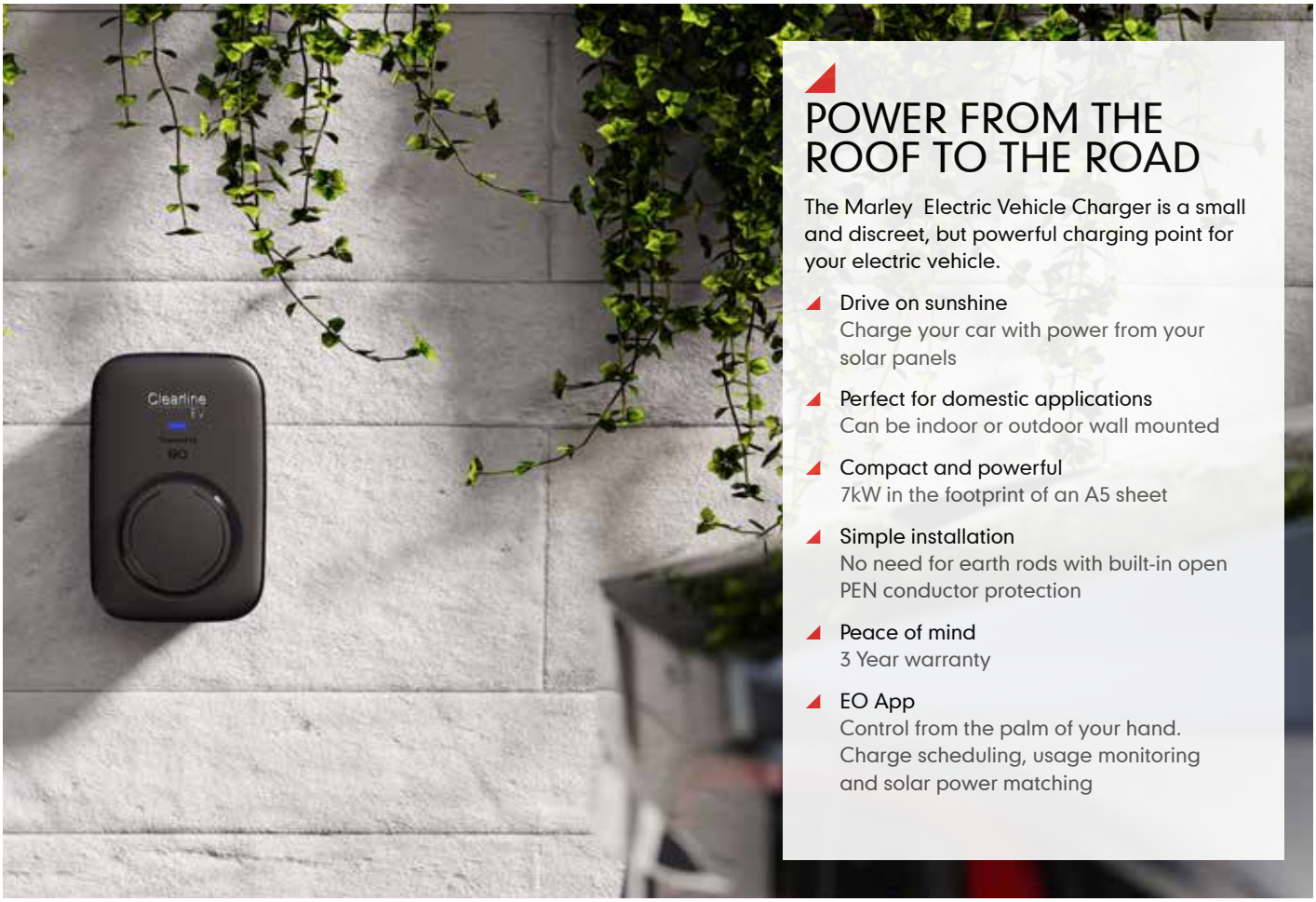
WHY SOLAR?

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



POWER FROM THE ROOF TO THE ROAD

The Marley Electric Vehicle Charger is a small and discreet, but powerful charging point for your electric vehicle.

- Drive on sunshine
  Charge your car with power from your solar panels
- Perfect for domestic applications
  Can be indoor or outdoor wall mounted
- Compact and powerful
  7kW in the footprint of an A5 sheet
- Simple installation
  No need for earth rods with built-in open PEN conductor protection
- Peace of mind
  3 Year warranty
- EO App
  Control from the palm of your hand. Charge scheduling, usage monitoring and solar power matching

REBUILDING NATURAL FORESTS

For every solar panel sold as part of the Marley group, we plant a tree through charitable organisations across the world.

EDEN REFORESTATION PROJECTS

Eden Reforestation Projects operates in Nepal, Mozambique, Haiti, Madagascar and Indonesia. The charity employs local people to help reduce poverty and ensure that trees survive to maturity.

- Supporting people living in impoverished communities
- Restores healthy forests
- Employs local people to manage the forests for the long-term

TREES FOR LIFE

Trees for Life is on a mission to revitalise wild forests in the Highlands of Scotland, by creating a network of woodlands and forests, working with local landowners and communities.

- Enabling the restoration of the Caledonian Forest
- Creating rich habitat
- Supporting wildlife including red squirrels, black grouse and golden eagles

Tell me more

Call 01283 722588
Email info@marley.co.uk
Or visit marley.co.uk/solar

Marley, Lichfield Road, Branston, Burton upon Trent, DE14 3HD

Marley