

Solar electricity for roofs with interlocking tiles

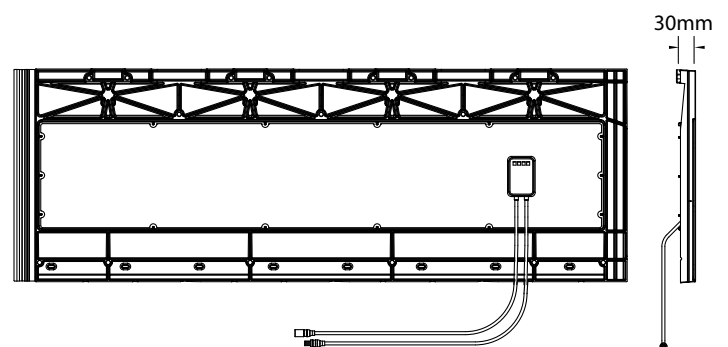
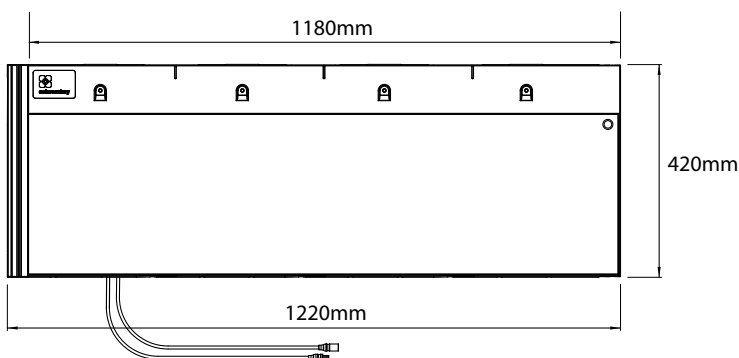
Solarcentury's C21e interlocking tile system delivers an excellent performance per m² and is compatible with a wide range of roof tiles, providing a perfect complement to a traditional pitched roof.

No extra planning: C21e solar tiles sit flush with standard roof tiles, to provide a traditional finish. They protect your home from the elements whilst producing electricity.

Ease of installation: Fitted to standard wooden battens using traditional roofing practice, one C21e covers the width of four conventional tiles.

No specialist skills: Designed to be installed by roofers, as part of the roof build, the C21e solar tile system fits 'straight out of the box' without the need for bespoke flashings or fillers.

Fast to fit: As fast to fit as traditional tiles, and complete with simple click-to-fit connectors, allowing all of the electrical work to be carried out within the building.



Dimensions

| | |
|--|---|
| Gross width | 1220 mm |
| Gross length | 420 mm |
| Profile depth | 30 mm |
| Exposed length at 90mm headlap | 330 mm |
| Covering width | 1180 mm |
| Hanging length | 395 mm |
| Roof pitch (minimum) at 90mm headlap* | 22.5° |
| Roof pitch (minimum) at 100mm headlap* | 17.5° |
| Roof pitch (maximum) | 90° |
| Headlap (maximum) | 120 mm |
| Headlap (minimum) | 75 mm |
| Batten spacing at minimum gauge | 300 mm |
| Batten spacing at maximum gauge | 345 mm |
| Covering capacity at minimum gauge | 2.8 C21e/m ² |
| Covering capacity at maximum gauge | 2.5 C21e/m ² |
| Individual unit weight | 8 kg |
| Weight as laid at maximum gauge | 19.7 kg/m ² |
| Batten size (minimum) for rafters not exceeding 600mm centres, nailed to BS5534 | 50 x 25 mm |
| Screws and fixings (supplied) [†] | 4.5 mm x 45 mm self tapping stainless steel screws. With EPDM washers. Four per unit. |

*Subject to fixing specification.

[†]Refer to fixing specification for the tiles to be installed alongside C21e. Edge clips may also be required in some locations.

Electrical specification

| | | |
|--|---|-------------|
| Photovoltaic cell technology | Monocrystalline | |
| Cell dimensions (quantity) / diodes | 125 x 125 mm (18) / 1 | |
| Peak power ⁽¹⁾ | 50 Wp | |
| Wp/m ² (at 90mm headlap) | 128 | |
| Wp/m ² (at 100mm headlap) | 132 | |
| Wp/m ² (at 120mm headlap) | 141 | |
| Laminate size (active area) | 1174 x 318 mm | |
| Cell efficiency | 18.9 % | |
| Module efficiency | 13.9 % | |
| Maximum power voltage (Vmp) ⁽²⁾ | 9.2 V | |
| Maximum power current (Imp) ⁽²⁾ | 5.45 A | |
| Open circuit voltage (Voc) ⁽²⁾ | 11.4 V | |
| Short circuit current (Isc) ⁽²⁾ | 5.70 A | |
| Maximum system voltage (Vdc) | 1000 V DC | |
| Series fuse rating | 9 A | |
| NOCT | 48.0 °C | |
| Temperature coefficient of the open-circuit voltage | -0.027 V/°C | -0.241 %/°C |
| Temperature coefficient of the short-circuit current | 1.88 mA/°C | 0.033 %/°C |
| Temperature coefficient of the power | -0.37 %/°C | |
| Connectors | MC4 type IP65 push fit connectors | |
| Cables | Class II double insulated 4mm ² cable, rated -40° +85° | |

(1) Measured under Standard Test Conditions of 1000W/m² irradiance, AM 1.5 spectrum, 25°C cell temperature.

(2) Values of current, voltage and power +/- 5%

Compatibility

C21e interlocking tile is compatible with a range of tile types and manufacturers:

- Lagan - Flat Tile
- Marley (Eternit) - Modern, Duo Modern
- Northstone - Slemish Mk 2, Donard
- Quinn - Western Slate
- Redland (Monier) - Mini Stonewold
- Russell Roof Tile - Grampian, Highland
- Sandtoft - Calderdale, Calderdale Dual,
- Cassius/Rivius (with Sandtoft's adaptor that must be ordered separately from Solarcentury)

Certifications & warranty

Weather-tightness tested by BRE to PIT Agreed Roofing Industry standards prEN15601.

External fire exposure test to BS 476-3: 2004, AA rating.

Designed & manufactured to BS EN 490: 2004 where appropriate.



Power output guaranteed for 25 years from date of commissioning (80% performance). 10 year product warranty.

Installation

Please refer to the C21e Installation Guide before starting installation. Solarcentury solar interlocking tiles must be laid and fixed to comply with BS 5534: the British Standard Code of practice for slating and tiling, and BS 8000: Part 6: the British Standard Code of practice for workmanship on building sites.



For information on purchasing a C21e solar system, please contact the Solarcentury C21e team on 020 7549 1186

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For installations outside of the Specification please contact Solarcentury.
Solarcentury reserves the right to change specifications when necessary without prior notice.