

Datasheet

47W Tile

Solar electricity for tile roofs

Solarcentury's C21e Tile 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.



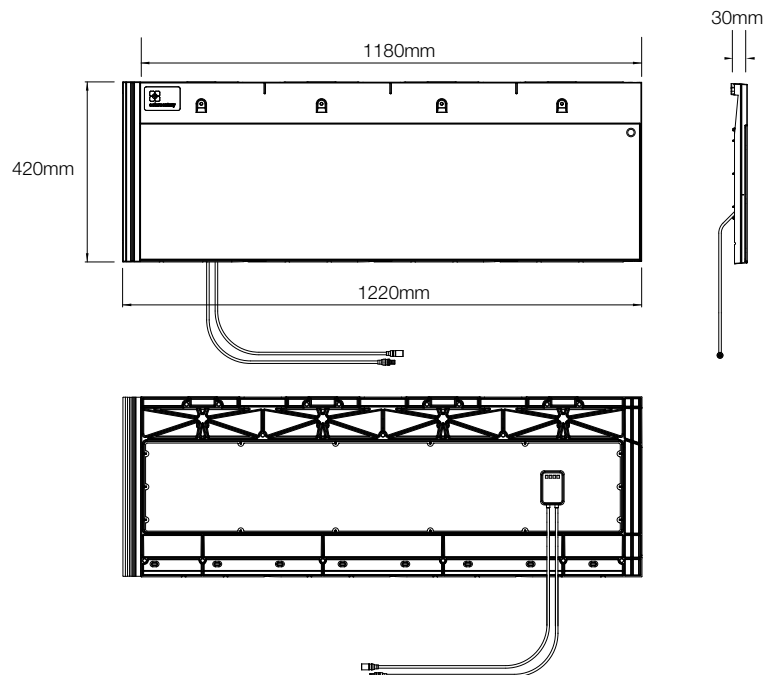
Photo C21e M52D

No extra planning: C21e tiles sit flush with standard roof tiles, to provide a traditional finish. Protecting your property from the elements and producing power for your home.

Ease of installation: Fitted to standard wooden battens using traditional roofing practice, with one solar tile covering the width of four conventional tiles.

No specialist skills: Designed to be installed by the roofing contractor, as part of the roof build.

Fast to fit: As fast to fit as traditional tiles, with all of the electrical work carried out within the building.



Compatibility

Cemex (Russell) - Grampian, Highland.
Lagan - Flat Tile
Marley (Eternit) - Modern, Duo Modern,

Northstone - Slemish Mk 2
Quinn - Western Slate
Redland (Monier) - Mini Stonewold

Sandtoft - Calderdale, Calderdale Dual,
 Cassius, Rivius (with Sandtoft's adaptor)

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
Minimum roof pitch at 90mm headlap*	22.5	degrees
Minimum roof pitch at 100mm headlap*	17.5	degrees
Maximum roof pitch*	90	degrees
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)†	4.5mm x 45mm self tapping stainless steel screws with EPDM washers. Four per unit.	

*Subject to fixing specification

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

Electrical Specification

Photovoltaic cell technology	Monocrystalline	
Cell dimensions (quantity) / Diodes	125 x 125 mm (18) / 1	
Peak power (W) ⁽¹⁾	47 Wp	
Wp/m ² (at 90mm headlap)	121	
Wp/m ² (at 100mm headlap)	124	
Wp/m ² (at 120mm headlap)	133	
Laminate size (active area)	1174 x 318 mm	
Cell efficiency	17.7 %	
Module efficiency	12.4 %	
Maximum power voltage (Vmp) ⁽²⁾	9.0 V	
Maximum power current (Imp) ⁽²⁾	5.23 A	
Open circuit voltage (Voc) ⁽²⁾	11.2 V	
Short circuit current (Isc) ⁽²⁾	5.52 A	
Maximum system voltage (Vdc)	1000 V DC	
Series fuse rating	9 A	
Temperature coefficient of the open-circuit voltage	-0.036 V/°C	-0.32 %/°C
Temperature coefficient of the short-circuit current	1.55 mA/°C	0.03 %/°C
Temperature coefficient of the power	-0.47 %/°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%

Certifications

IEC 61215
 IEC 61730, Safety Class A



- Qualified, IEC 61215
- Safety Tested, IEC 61730
- Periodic Inspection

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



Installation

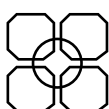
Please refer to Solarcentury's Design and Installation Guide before starting installation

Solarcentury C21e solar electric roof 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.

Warranty

Power output guaranteed for 25 years from date of commissioning (80% performance)

10 year product warranty



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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.