

# Datasheet

**C21e**  
solarelectricrooftile

## Solar electricity for tile roofs

Solarcentury's C21e Tile delivers an excellent performance per m<sup>2</sup> and is compatible with a wide range of roof tiles, providing a perfect complement to a traditional pitched roof.

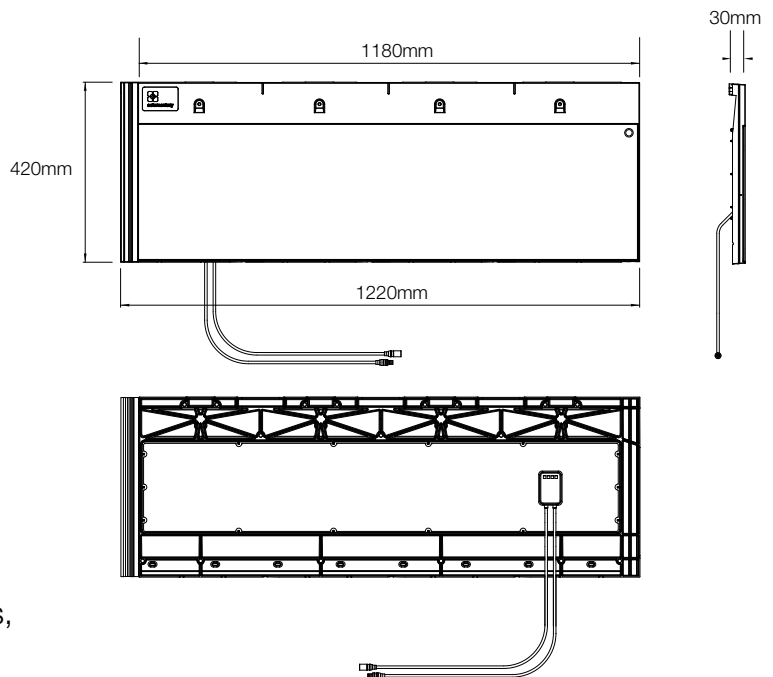


**No extra planning:** C21e tiles sit flush with standard roof tiles, to provide a traditional finish. Protecting your property from the elements and producing power for your home.

**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 <sup>2</sup>
Covering capacity at maximum gauge	2.5	C21e/m <sup>2</sup>
Individual unit weight	8	kg
Weight as laid at maximum gauge	19.7	kg/m <sup>2</sup>
Batten size (Minimum. For rafters not exceeding 600mm centres, nailed to BS5534)	50 x 25	mm
Screws and fixings (supplied) <sup>†</sup>	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<sup>(1)</sup>

Photovoltaic cell technology	Monocrystalline	
Cell Dimensions	125 x 125 mm	
Power <sup>(2)</sup>	52 Wp	
Wp/m <sup>2</sup> (at 90mm headlap)	134	
Wp/m <sup>2</sup> (at 100mm headlap)	138	
Wp/m <sup>2</sup> (at 120mm headlap)	147	
Laminate size (active area)	1174 x 318 mm	
Number of cells	18	
Cell efficiency	20 %	
Module efficiency	14.9 %	
Maximum power voltage <sup>(1)</sup>	9.80 V	
Maximum power current <sup>(1)</sup>	5.30 A	
Open circuit voltage <sup>(1)</sup>	12.0 V	
Short circuit current <sup>(1)</sup>	5.55 A	
Maximum system voltage	600 V DC	
Temperature coefficient of the open-circuit voltage	-0.0342 V/°C	-0.286 %/°C
Temperature coefficient of the short-circuit current	2.27 mA/°C	0.028 %/°C
Temperature coefficient of the power	-0.38 %/°C	
Cables	Class II double insulated 4mm cable	
Connectors	Standard MC3 IP65 push fit connectors	

(1) Values of current, voltage and power +/- 10%

(2) Measured under Standard Test Conditions of 1000W/m<sup>2</sup> irradiance, AM 1.5 spectrum, 25°C cell temperature.

## Certifications

- IEC 61215 (TUV) & IEC 61730 (TUV)
- BRE Approved Building Product: BPS 7001
- 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



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



ABP 004

## Installation

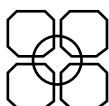
Please refer to Solarcentury's Design and Installation Guide before starting installation

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



solarcentury

91-94 Lower Marsh  
 Waterloo  
 London SE1 7AB  
 T+44 (0)20 7803 0100  
 F+44 (0)20 7803 0101  
 www.solarcentury.com



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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.