

# Datasheet

# 47W Slate

## Solar electricity for slate roofs

Solarcentury's C21e Slate delivers an excellent performance per m<sup>2</sup> and is compatible with a wide range of natural and artificial slates, providing a perfect complement to a traditional slate roof.



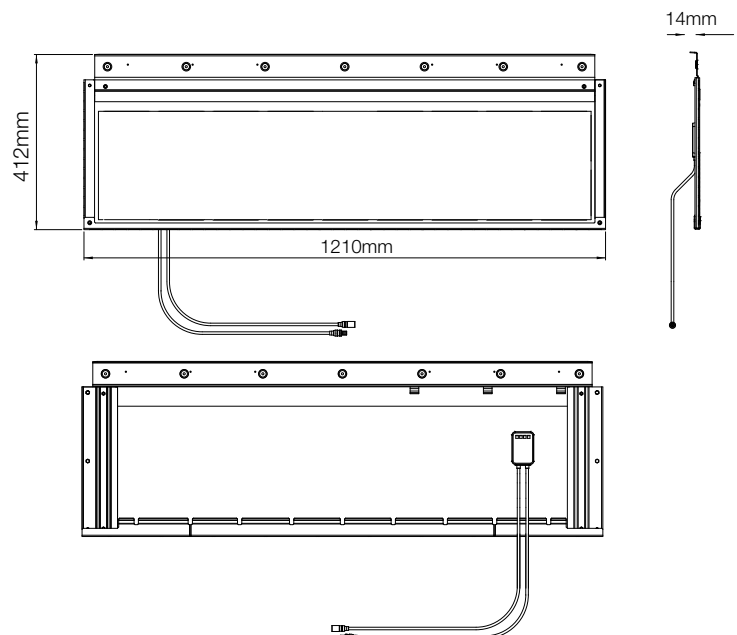
Photo C21e M52D

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

**Ease of installation:** Fitted to standard wooden battens using traditional roofing practice, with one solar slate covering the width of several conventional slates.

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

**Fast to fit:** Faster to fit than traditional slate, with all of the electrical work carried out within the building.



## Compatibility

Natural slate - 600 x 300, 500 x 300, 500 x 250, 320 x 220, 300 x 200  
 Marley Eternit fibre cement: Rivendale 600 x 300, Garsdale 600 x 300 & 500 x 300, Birkdale 600 x 300, Thrutone 600 x 300

## Dimensions

	For slate size	600 x 300	500 x 300 & 500 x 250	320 x 220	300 x 200	mm
Gross Width		1210	1210	1210	1210	mm
Gross Length		412	412	412	412	mm
Profile Depth		14	14	14	14	mm
Exposed Length		300	300	315	315	mm
Covering width		1210	1210	1210	1210	mm
Minimum roof pitch (subject to fixing specification)		30	30	35	35	degrees
Maximum roof pitch (subject to fixing specification)		70	70	70	70	degrees
C21e Slate gauge		300	300	315	315	mm
Slate gauge		250	200	105	105	mm
Slate headlap		100	100	110	90	mm
Covering capacity		2.8	2.8	2.6	2.6	C21e/m <sup>2</sup>
Individual unit weight		5.1	5.1	5.1	5.1	kg
Weight as laid		14.0	14.0	13.4	13.4	kg/m <sup>2</sup>
Batten size (Minimum. For rafters not exceeding 600mm centres, nailed to BS5534)		50 x 25	50 x 25	20 x 50	20 x 50	mm
Screws and fixings (supplied)		4 stainless steel screws with EPDM washers and 2 slate hooks (per unit). Soak trays.				

Refer to fixing specification for the slates to be installed alongside C21e

## Electrical Specification

Photovoltaic cell technology	Monocrystalline	
Cell Dimensions (Quantity) / Diodes	125 x 125 mm (18) / 1	
Power <sup>(1)</sup>	47 Wp	
Wp/m <sup>2</sup> (600x300)	129	
Wp/m <sup>2</sup> (500x250)	129	
Wp/m <sup>2</sup> (320x220)	123	
Laminate size (active area)	1174 x 318 mm	
Cell efficiency	17.7 %	
Module efficiency	13.1 %	
Maximum power voltage (Vmp) <sup>(2)</sup>	9.0 V	
Maximum power current (Imp) <sup>(2)</sup>	5.23 A	
Open circuit voltage (Voc) <sup>(2)</sup>	11.2 V	
Short circuit current (Isc) <sup>(2)</sup>	5.52 A	
Maximum system voltage (Vdc)	1000 V DC	
Series fuse rating	9 A	
NOCT	48.0 °C	
Temperature coefficient of the open-circuit voltage	-0.036 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 <sup>2</sup> cable, rated -40° +85°	

(1) Measured under Standard Test Conditions of 1000W/m<sup>2</sup> 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

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

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



## Installation

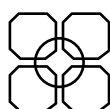
Please refer to Solarcentury's Design and  
 Installation Guide before starting installation.

Solarcentury solar electric roof slates 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.