

**Low
Carbon
Building
Products™**

solarcentury product code **PV-C21-M052D-2GRY**

Datasheet

solare**electric**rooftile

C21e

Building Integrated solar electric roof tile

High power output - 52Wp per tile, less than 8 square metres per kWp (kilowatt peak).

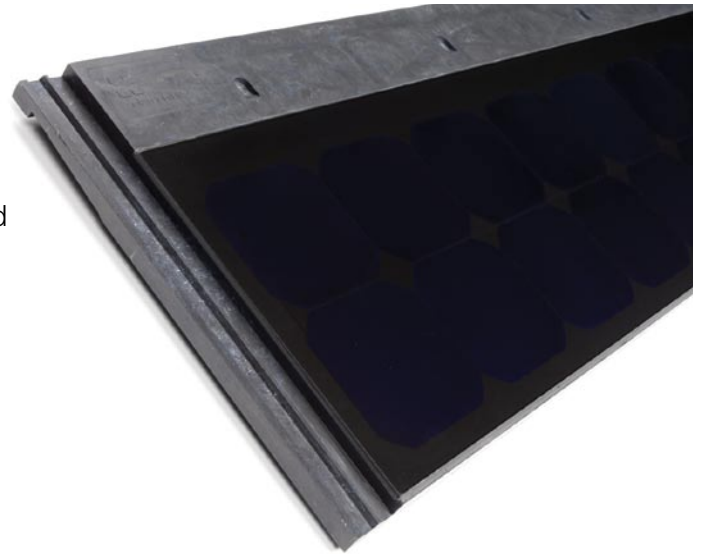
Discrete 'SunPower' PV laminate blends superbly with regular roof tiles offering an unrivalled aesthetic.

Back mounted contact strips increase active area and reduce surface glare, typical with standard solar cell technology.

Power output is guaranteed to 90% of generation performance for 10 years from date of commissioning.

Tiles arrive on site as complete units avoiding the need for on-roof assembly.

No complex electrical or mechanical work required on roof.

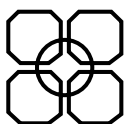


No extra planning - no need to alter roof lines, colour or pitch. C21 tiles sit flush with standard roof tiles.

Simplicity of installation - tiles fit with traditional roofing practice without the need to adjust battens. One solar tile takes the place of four standard tiles.

No specialist skills - all roofing work carried out by the roofing contractor, allowing electrical work to follow build programme.

Fast to fit - tiles are integrated in exactly the same way as interlocking concrete roof tiles.



solarcentury

solarcentury is the UK's leading solar solutions brand. We work with architects, housing developers and home owners to deliver renewable energy and carbon reduction solutions.

We are also the leading UK distributor for the world's best solar electric technologies and have helped more homes and businesses go solar than anyone else in Britain.

Specification

Photovoltaic technology	Monocrystalline 125mm square
Power*	52Wp
m² per kWp	7.8 (90mm headlap)
Laminate size (active area)	1174mm x 318mm
Cell efficiency	20%
Module efficiency	14.9%
Maximum power voltage*	9.8V
Maximum power current*	5.3A
Open circuit voltage*	12.0V
Short circuit current*	5.6A
Maximum system voltage	600V DC
Cables and connectors	Class II double insulated 4mm cable Standard MC IP65 push fit connectors

System sizing

No of Tiles	Tiled Area m ²	Output kWp*
20	7.8	1.04
30	11.7	1.56
40	15.6	2.08
60	23.4	3.12
80	31.2	4.16

Dimensions

Tile size	1220mm x 420mm overall 1180mm x 330mm exposed (recommended)
Minimum pitch	22.5° (90mm headlap)
Headlap	75mm (minimum) 90mm (maximum)
Gauge (batten spacing)	345mm (maximum) 330mm (minimum)
Covering width	1180mm
Covering capacity (net.)	3 PV tiles/m ² (90mm headlap)
Individual tile weight	8kg
Weight of tiling	24kg/m ² (90mm headlap)
Batten size	38mm x 25mm (minimum - for rafters not exceeding 450mm c/c nailed to BS 5534)
Battens required	3.1m/m ² (90mm headlap)
Screws and fixings	4 No. 4.5mm x 40mm self tapping stainless steel screws (supplied with tile) edge clips may also be required

Roof Tile Compatibility

Lagan Flat Tile
Marley (Eternit) Modern, Duo Modern
Redland (Lafarge) Mini Stonewold
Russell (Cemex) Grampian, Highland
Sandtoft Calderdale Slate
Scott (CRH) Slemish Mk 2
Quinn Western slate

Accreditations and Standards

NHBC case by case approval
 External fire exposure test to **BS 476-3: 1975, AA rating**
 Designed & manufactured to **BS EN 490: 1994 where appropriate**
 Weather-tightness tested by **BRE to PIT Agreed Roofing Industry standards**
 PV laminate manufactured to **IEC 61215 and Class II**

Awards

Best Exterior Product - Interbuild 2004
Building Magazine's award for Innovation in their 2005 sustainability awards.
Best Sustainable Product Award - Construct 2006, Northern Ireland's major construction show.
Best Overall Product, Interbuild New Product Awards 2006

Warranties

Power output guaranteed for 10 years from date of commissioning (90% performance)

SUNPOWERED

C21e features SunPower solar cells

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* Measured under Standard Test Conditions of 1000W/m² irradiance, AM1.5 spectrum, 25°C cell temperature. Values of current, voltage and power ± 10%.

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 For installations outside standard specification please contact solarcentury