Dansk Solenergi ApS
Danish Solar Energy Ltd.

Dansk Solenergi ApS **Danish Solar Energy Ltd.**
Flensbjerg 8 Phone :+45 3536 7777
DK-4960 Holeby
info@dansksolenergi.dk Watt id. DK30503376
Homepage: www.dansksolenergi.dk

Dansk Solenergi ApS - Danish Solar Energy Ltd. HEM photovoltaic Panels
We have been producing photovoltaic modules since 1993 and our company is considered as one of the world's pioneers. Our high-tech full-automated factory in Denmark is capable of producing top quality panels for highly competitive prices.

CUSTOM DESIGN SOLAR TILE MODULE, CFR 24M5 55-70

Choose COLOR and reflection value ULTRA LOW RHEM 600

- The unique and fully automated production process at our factory in Denmark ensures a high level of precision and consistently high production quality.
- Our high-tech finishing machine produces a highly homogeneous design.
- The cells lie behind a special hardened-glass embedded in a transparent EVA (Dse, ethylene-vinyl-acetate). The backside of the module is sealed with a thermic high quality back-sheet film. The module stability is the result of special raw material, the lamination process and the glass structure, developed to resist the hazard environment these modules are put to.
- The unique, mounting system is fitted to the individual slates, to give the best esthetic look, beside it provide a strong and a water tight roof.
- The flat and compact connecting socket is mounted on the back of the module. The connecting socket has no hollow cavities. It is watertight, resistant to UV radiation and microbes, and very temperature resistant. This flat and compact top-quality product is an ideal solution for every application.

25 years Linear Performance Warranty:
90% output power within first 10 years
80% within 25 years

All modules are produced according to International certifications IEC 61215,
Safety class II and

Dansk Solenergi ApS
Danish Solar Energy Ltd.

Dansk Solenergi ApS **Danish Solar Energy Ltd.**
Flensbjerg 8 Phone :+45 3536 7777
DK-4960 Holeby
info@dansksolenergi.dk Watt id. DK30503376
Homepage: www.dansksolenergi.dk

RED COLOR

Datasheet for CFR 24M5C (55-70Wp)

Rated power and maximum tolerance: 0 - + 5%

Connecting socket: IP 65
Plug: type 4

Maximum system voltage 1000V

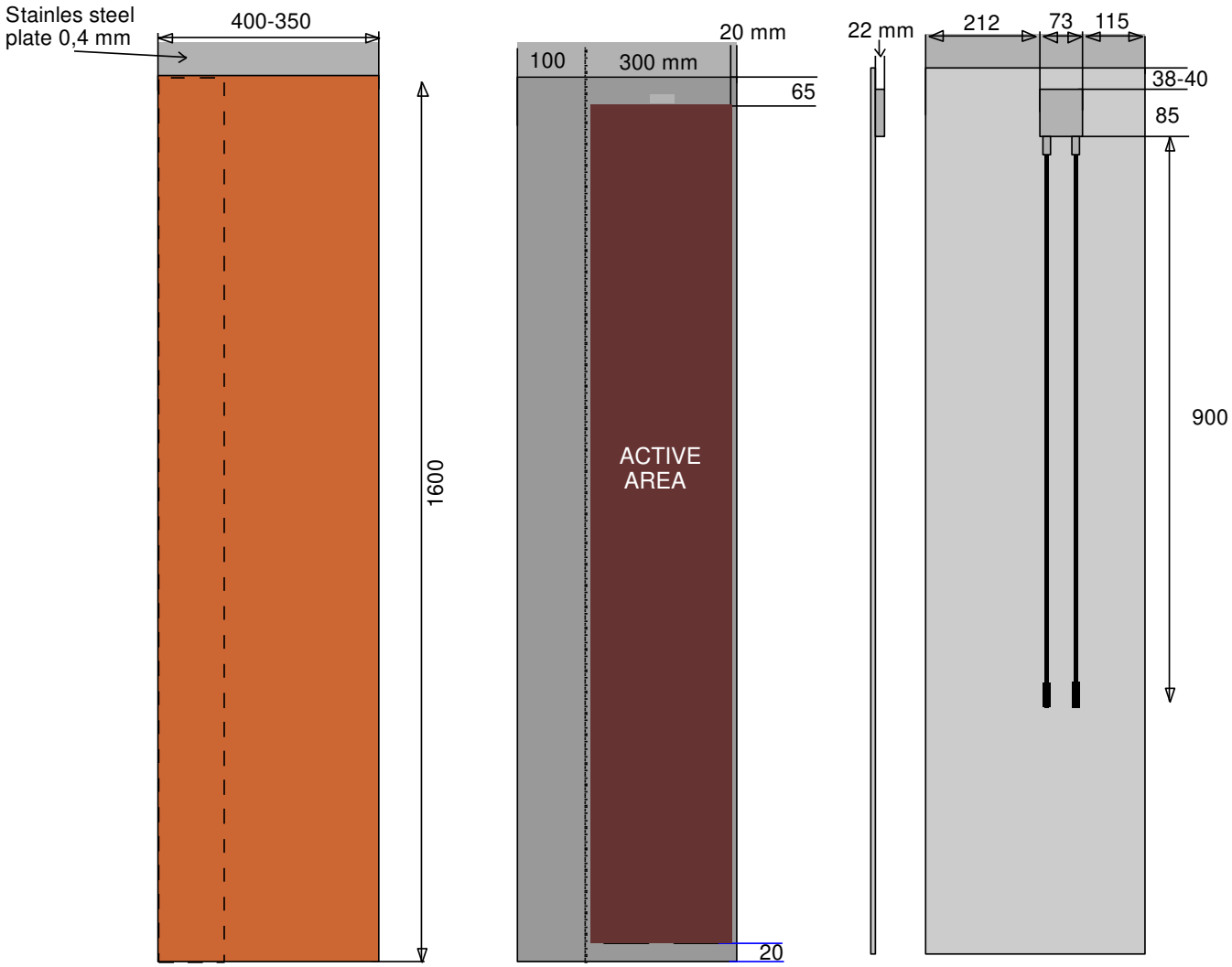
25 years production 80% Warranty

12 years product Warranty.

Physical Specifications

Weight: 6,5 kg
Glass: DS-structure (EN 12150) / Tempered glass
Module size: 1600 x 400 x 5,5 mm (box 22 mm)
Junction box with cables and waterproof connectors, model MC4. Cables length is 90cm. With bypass diode.

Power specification - Performance under standard test conditions (STC)



Dansk Solenergi ApS
Danish Solar Energy Ltd.

Dansk Solenergi ApS **Danish Solar Energy Ltd.**
Flensbjerg 8 Phone :+45 3536 7777
DK-4960 Holeby
info@dansksolenergi.dk Watt id. DK30503376
Homepage: www.dansksolenergi.dk

GREY COLOR

Datasheet for CFR G24M5 (65Wp)

Rated power and maximum tolerance: +- 5%

Connecting socket:
IP 65

Maximum system voltage 1000V

25 years energy production 80% Warranty

Product Warranty.
5 years

Physical Specifications

Weight: 6,5 kg
Glass: DS-structure (EN 12150) / Tempered glass
Module size: 1600 x 400 x 5,5 mm (box 22 mm)
Junction box with With bypass diodes, cables and waterproof with connectors, model MC4. Cables length is 90cm. With bypass diode.

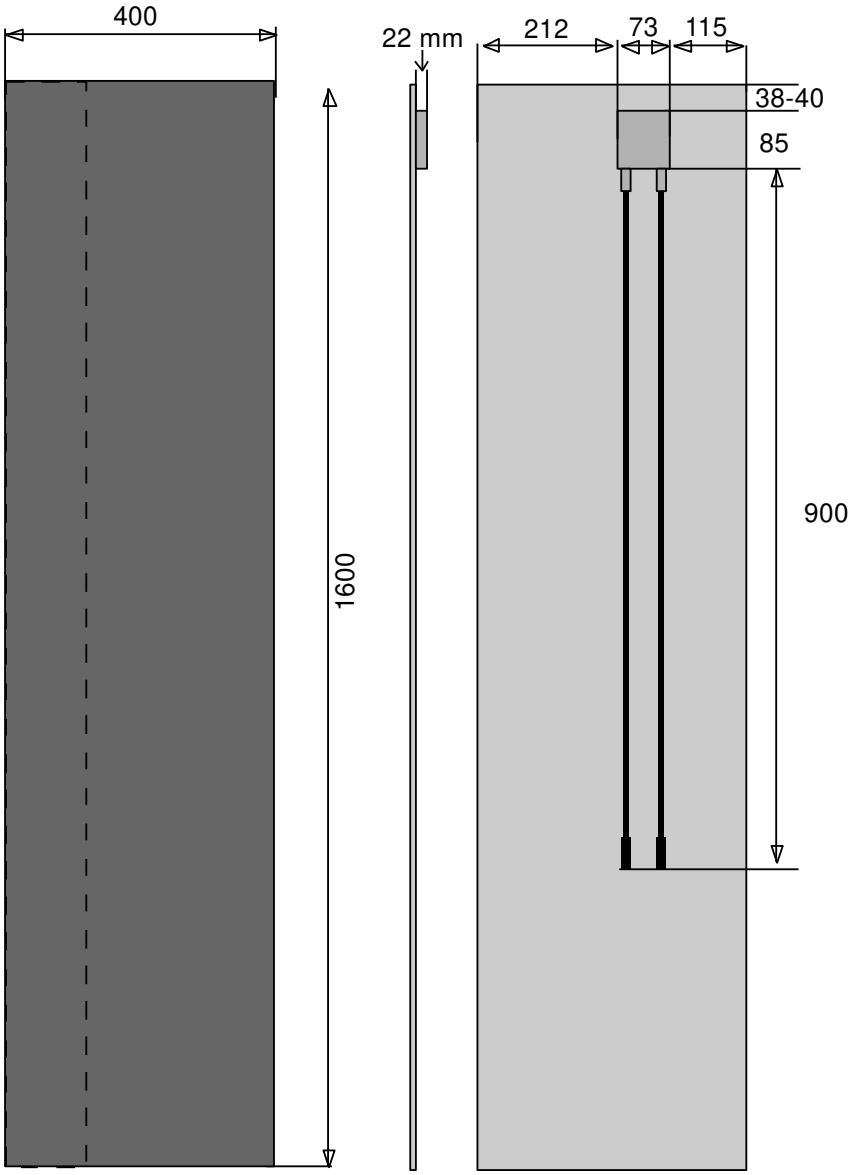
Characteristics for thermal behaviour

NOCT: 46ºC * TK Isc 0,04 %/K * TK Voc: -0,30 %/K* TC Pmpp -0.45% K

Power specification - Performance under standard test conditions (STC)

Pmpp [W]	65	(+/- 5%)
U oc [V]	15,25	
I sc [A]	5,25	
Umpp [V]	12,93	
I mpp [I]	4,99	

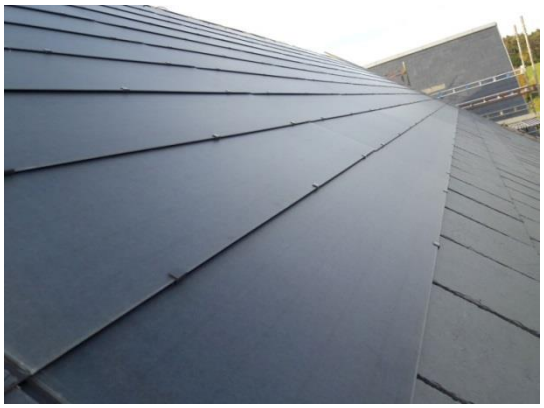
All modules are produced according to International certifications IEC 61215,
Safety class II and



Dansk Solenergi ApS **Danish Solar Energy Ltd.**
Flensbjerg 8 Phone :+45 3536 7777
DK-4960 Holeby
info@dansksolenergi.dk Watt id. DK30503376
Homepage: www.dansksolenergi.dk

©Danish Solar energy CFR colored modules and the mounting system (SK-series)

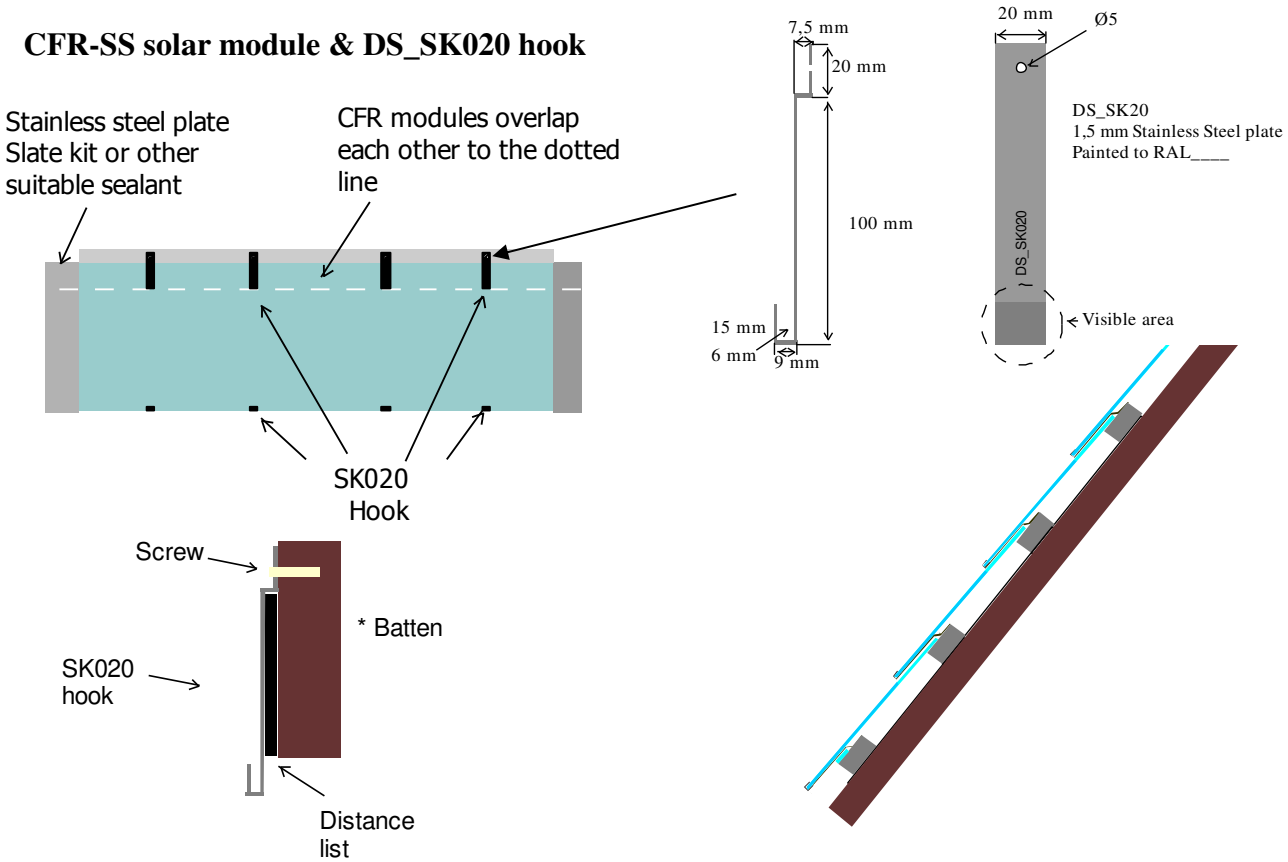
Dansk Solenergi ApS **Danish Solar Energy Ltd.**
Flensbjerg 8 Phone :+45 3536 7777
DK-4960 Holeby
info@dansksolenergi.dk Watt id. DK30503376
Homepage: www.dansksolenergi.dk



Is a unique new patented building integrated (BIPV) mounting system, which also makes it possible to integrate Danish Solar Energy CFR modules into roof surfaces such as slate roofs, where you do not have to do a whole new interior construction to preserve roof aesthetics. The low height of this solution allows you to settle for only the areas on which the CFR modules are intended to be mounted. Mounting can be supplied so that it does not fill more than 6 mm in height.

The system consists only of 2 parts:

CFR-SS solar module & DS_SK020 hook



DS_SK020. Screwed in the laths as shown in the drawing, these hold the CFR modules clamped to the laths at the top and bottom. 4 brackets are installed per unit, but more can be fitted if required. DS_SK020 can be painted to the desired color and milled into the laths to reduce the height.

Dansk Solenergi ApS **Danish Solar Energy Ltd.**
Flensbjerg 8 Phone :+45 3536 7777
DK-4960 Holeby
info@dansksolenergi.dk Watt id. DK30503376
Homepage: www.dansksolenergi.dk

The CFR SK module.

With a 0.4 mm stainless steel plate integrated, the plate is laminated into the CFR module as a unit.

This unique and patented solution ensures that water penetration into the module side is not possible, thus reducing the installation time and providing greater sealing degree compared to solutions that impose sealing requirements on both sides of the modules. The steel plate protrudes 100 mm from glass edge and is provided with a 30 mm gray foil edge that covers the visible part of the stainless steel plate between CFR modules or slate.

Height/ thickness of module incl. mounting, is approx. 6,5 mm, if the 1.5 mm hooks are not milled into the laths else you should add 1,5 mm.

Modules overlap the bottom, just like e.g. slate so they cover naturally for water penetration from above. To ensure against water penetration under strong wind conditions, a thin rubber strip is applied between the overlap of the modules.

The CFR Modules are fixed in a frame, formed by 6 or 8 pcs. SK020 at mounted at the bottom and top.

For sealing the sides, the stainless steel plate provides a natural seal, as they are 100 mm below the next CRF module, to ensure against water penetration under strong wind conditions, plate is applied thin rubber strip or other suitable sealant. The glued stainless plate, further attaches the CRF modules to the sides, all of which provides a robust construction that can withstand wind and weather conditions.