Danish solar energy
Exclusive modules for building integration -

Made in Denmark

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www.danishsolarenergy.com

Dansk Soenergi ApS
Danish Solar Energy Ltd.

Solar energy gives architectural freedom

COLORED SOLAR CELL MODULES WITHOUT LIMITATIONS

Danish Solar Energy Ltd. offers a revolutionary breakthrough with their patent: CFR - Colored photovoltaic modules that exceed all previous restrictions.

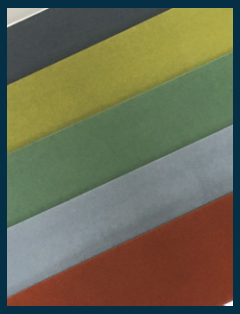
Due to the aesthetic and architectural possibilities represented by the colored solar roofs and facades, a whole new and very energy efficient architecture has been proposed, which knows no limits.

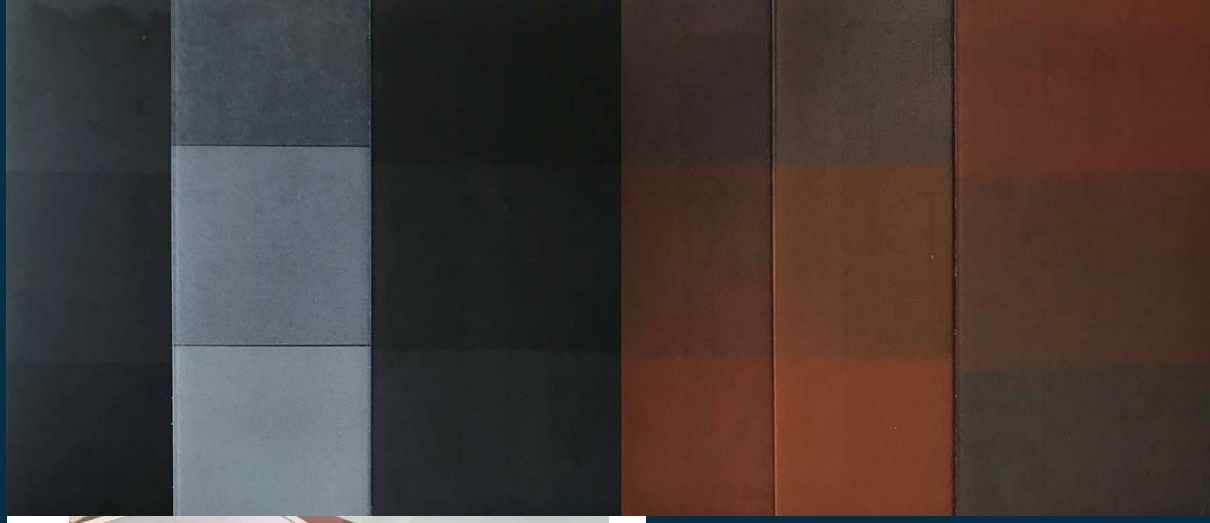
All types of facades and roofs can be an active element of the energy supply, while the architecture is completely free.

This innovation will change the paradigma to choose between green energy or beauty; there is a symbiosis between technique and aesthetics, provinding completely new and unimagined dimensions.

ADVANTAGES:

- Light transparency of up to 85-98% and thus a unique high efficiency.
- New aesthetic design options
- Economic production
- Completely expands the applications of the solar roof and facades.





HEM CFR-module

Unique design - Choose:

Shape & size

Module color/colors

Light reflection

Efficiency

Design your own exclusive sustainable building

Danish Solar Energy provides our partners the opportunity to design their own solar modules to roofs or facades etc., from the color/s, to shape, size, the degree of reflection of the modules. It is also possible to accord the module´s patterns to the surrounding environments.

When designing the photovoltaic module, it must be decided whether it should be integrated into the building, this minimizes the visibility or whether the design of the building, that should be based on a futuristic appearance, and the photovoltaic modules, should be the „face" of the building exterior.

The architect's name will be be settle in the industry, and into the building's green profile, implementing green energy in the construction.

We will jointly design the desired roof or facade etc., in the meantime we will be an active sparring partner, who can advise on technical and aesthetic possibilities, and make all the necessary calculations, so that the plant it will not only have a beautiful aspect, also It will still provide optimal energy production.

Building-integrated solar cells are an ideal solution in terms of reducing CO2 emissions from buildings and

be an active player in reducing climate problems we face, having a roof or facade with CO2-free energy production without being looking visible.

We can provide complete systems if desired. We contact installers, professionals and suppliers. We thus simplify our partners' communication path.

With over 25 years of experience in the industry, we have built up a ‚know-how' beyond the ordinary, we have faced challenges that for most people seem to be impossible. All photovoltaic modules are produced at our factory in Denmark, which is built so that CO2 emissions are minimal during production. Despite having Denmark's largest solar production facility, we are very flexible in terms of wishes and specifications.

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Solar energy gives architectural freedom

This new project in the heart of Frederiksberg/Copenhagen shows again that the green transition does not have to be ugly, today solar cells are available in colours and shapes that can be implemented architecturally naturally in the urban environment, without inappropriate colours and annoying reflections that characterize standard solar cells today, with the new solar cells from Danish Solar Energy, they can instead adorn the building.

- All types of roofs and facades can be an active element in the energy supply, while the architecture is completely free.

And the solar cells are made in Denmark.

Proj. Fuglebakkevej 88, 2000 Frederiksberg, Denmark
Module type: CFR TERABC
Degree of reflection: RHEM600

Dansk Solenergi ApS
DANISH SOLAR ENERGY LDT

Proj. Fuglebakkevej 88, 2000 Frederiksberg, Denmark

Module type: CFR TERABC

Degree of reflection: RHEM600

Dansk Solenergi ApS

DANISH SOLAR ENERGY LDT

Ideal for:

- Listed buildings
- Churches
- Architectural projects
- New constructions
- Residential projects
- Reducing CO2
- and much more...

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Reference project. Vejlesøvej 78A, Holte (Copenhagen)

Our customers can't believe it! It is a solarplant, they are almost invisible and flat recessed and flush completely with the vertical lines, and replaces fully the slate roof where they are installed.

With this solution, not only do roofs repay themselves over a short period of time, but also achieve a beautiful and sustainable building that does not detract from the aesthetics of the buildings and without compromising technological or environmental, makes the product leader in exclusive solar solutions

Technology "made in Denmark": proof that Europe is innovative and technologically leading.
The product can be customized to suit all colors.

Dansk Solar Energy Ltd.
Head office and production:
Flensbjerg 8
4960 Holeby

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Dansk Solenergi ApS
DANISH SOLAR ENERGY LDT

Solar energy gives architectural freedom

Solar cells in all colors - All types of roofs and facades, can be an active element in the future energy supply, while the architecture is completely free.

- The benefits of the new product are many. In addition to providing new exclusive aesthetic design options and the opportunity for more ways to integrate solar cells, they have outstanding:
High european efficiency and quality.

Contact us at:

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Exclusive CFR solar modules for red environments

An example of a project Danish Solar Energy has carried out, is an exclusive building in Svendborg Denmark, which has our CFR brick red solar roof modules installed.

The solar modules are selected in a slightly darker tone than the bricks, which in this case will darken over time and thus will get the same color as the solar modules. With the colored solar cells, a symbiosis between technology and aesthetics is thus envisaged, which we foresee will be widely used worldwide - and which is one of the solutions to the climate challenges we face.

The module could also be selected in other shades adapted to the surrounding environment that would almost make them invisible. We can produce modules up to Lx W 2.7x 1.7 m.
The modules come with a built-in mounting system for facades and roofs and with the same degree of sealing as traditional bricks and slate tiles.

With over 25 years of experience in the industry, Danish Solar Energy has built up a 'know-how' beyond the ordinary and has managed challenges that for most people seemed impossible.

All solar modules are produced at our own factory, which is Denmark's largest production facility for solar modules. The factory is also built so that there is minimal CO2 emissions during production.

Technical specifications:

Module type: CFR HEM-HHV80.3xR110GG6
Plant power: 6.4 kWp.
Degree of reflection: RHEM600
Mounting bracket: * Yes
Mounting solution: Yes

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DANISH SOLAR ENERGY LDT

Facade in Copenhagen

A clean energy Solution

CFR modules on the facade send a strong green signal that sustainability is thought into the building

UNLIMITED OPPORTUNITIES

The new modules offers architects many innovative options

HIGH PERFORMANCE

Our CFR modules always use highest performance solar technology to ensure as the best performance and as much climate friendly energy as possible for our customers

REFERENCER

We have provided many facade solutions. See more on our website.

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Together we can design the future - Made in Denmark

A beautiful facade solution with red high-efficiency CFR solar modules to one of Copenhagen's many red stone properties.
The first red solar facade solution in Copenhagen, and probably the first in the world. The facade can produce approx. 13.000 kWh pr. year, climate-friendly energy and at the same time insulate the façade by shielding the façade from wind cooling.

This project shows how Dansk Solenergi's CFR technology can be integrated into all surfaces, without damaging the building's architecture.

Our CFR modules offer many opportunities to implement climate friendly energy.

Project data:
CFR Module: HV802XR200
Area aprox. 100 m2
Power: 14,27 kWp
Colour::TERA Dark Red
Reflection: Ultra low, no beam

Adress. Muregade 3-9,
Copenhagen N.
Denmark

Dansk Solenergi ApS
Danish Solar Energy Ltd.




Ideal for:

- **Areas with strict restrictions**
- **Listed buildings**
- **Architectural projects**
- **New constructions**
- **Residential projects**
- **Reducing CO2**
- **and much more...**

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Veyrier du Lac France - Solar Roof (BIPV)

Veyrier-du-Lac is a pretty village which sits on the edge of Lake Annecy. It is in a splendid position hugging the mountains on one side of the village and commanding great views of Lake Annecy on the other. It is just five kilometres from Annecy and on the sunny side of the lake, the side known as the Rive Plein Soleil.

Bounded with strict restrictions for properties and thus not possible to install standard solar modules in blue or black colours, but Danish Solar Energy Ltd. building integrated solar modules (BIPV) have been approved for their roofs. The remark was, unbelievably, the solar cells are completely invisible and the roof appears with a beautiful homogenous brown/terracotta colour and with the familiar horizontal lines that characterize tiled roofs, the CFR modules fully replace the roof and the mounting system ensures a robust and watertight roof where they are installed.

With this solution, not only does the roof pay for itself in a short time, but you also achieve a beautiful and sustainable building that does not detract from the aesthetics of the buildings and without compromising on the technological or environmental, making the product a leader in exclusive solar BIPV solutions Technology “made in Denmark”: The product can be customised to match any colour

Dansk Solenergi ApS
DANISH SOLAR ENERGY LDT

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Nysted, south of Denmark

A new unconventional roof on the first row to the sea, In Denmark there are very strict restrictions for properties directly on the coast, and thus not possible to install standard solar modules in blue or black colors, but Dansk Solenergi CFR modules have been approved by the Coastal Directorate. Unbelievably, the solar cells are completely invisible and the roof appears with a beautiful homogenous dark green colour and with the familiar horizontal lines that characterise tiled and slate roofs, the CFR modules fully replace the roof and the mounting system ensures a robust and watertight roof where they are installed.

With this solution, not only does the roof pay for itself in a short time, but you also achieve a beautiful and sustainable building that does not detract from the aesthetics of the buildings and without compromising on the technological or environmental, making the product a leader in exclusive solar BIPV solutions

Technology “made in Denmark”:
Proof that Europe is innovative and technological leader.

The product can be customised to match any colour

Dansk Solenergi ApS
DANISH SOLAR ENERGY LDT

Customized solutions

The customer determines the slate color and tone of the "solar modules"

We develop and produce the solar module in the color and size an surface that fits your requirement to your project.

* KEEP AESTHETICS
Our photovoltaic modules integrate with the roof and preserve the appearance of the building.

* HIGH PERFORMANCE
We use the highest per fomance solar cells on the market to achieve the best quality

* REFERENCE
Rander

See them in our website. reference Rander.

www.dansksolenergi.dk.

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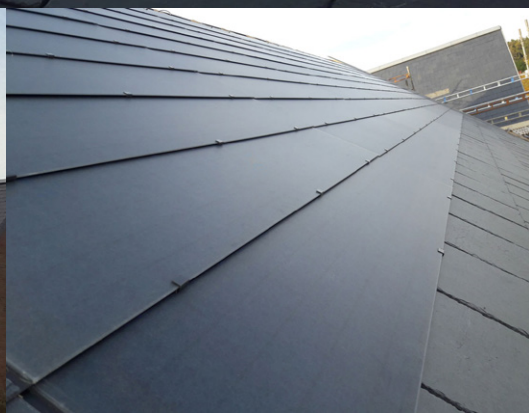

Exclusiv gray slate modules
Top quality, design and performance

Reference Project in Rander, Denmark, the integration of slate, and the solar cells are invisible!
Solar cells are 100% integrated at the roof an replace the roof slates.
You can change a part of the roof or exchange all of slates; it can be easily purchased for replacing your roof or new constructions.

It is significantly cost effective knowing that the roof will pay for itself over time.

Our solar cells modules integrate at the slate roof are the optimal solution, if you want to reduce your electricity consumption and CO2 emissions.

It can be customize to the slates or design your own architectural expression of the building.
They are easy to install with our built in mounting system ultra low glass, reflection.

Dansk Solenergi ApS
DANISH SOLAR ENERGY LDT

Exclusive PV roof, this newly developed solution, with Rockwool and Danish Solar Energy, gives you power from the sun and insulation

A solar roof - project in Hedehusene at Rockwool's headquarters in Denmark, combining solar PV and insulation.
Note that the integration of the solar cells is completely invisible, but blends naturally into the aesthetics of the building!
The solar cells replacing other roofing materials, and the substructure is built with high-quality Rockwold insulation, and the PV modules weigh is no more than 11 kg. m2

The PV modules form a waterproof roof with a built-in system and are very easy to install.

So what do you get with this roof!
A robust and weatherproof roof made of laminated tempered glass, free power from the sun, insulation and at the same time it is fireproof.

The construction of the PV Rock Roof is made in separate parts, so it is easy to replace parts of the roof, if it is necessary to replace a PV module.
This is significantly cost effective as it is known that the roof will pay for itself back many times, over its lifetime.
This is the optimal solution if you want to reduce your energy bill and lower your CO2 emissions.

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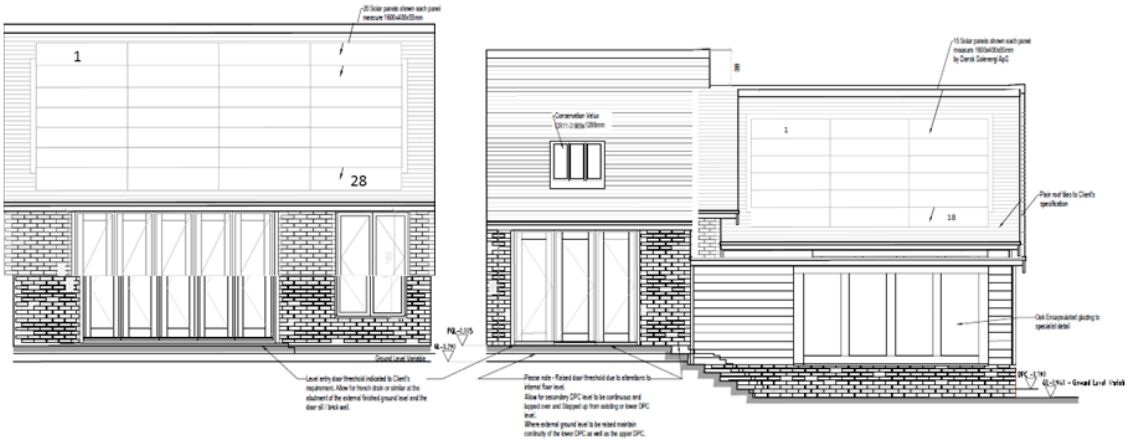
From Idea to realization, solar tile installation in Sussex, UK.



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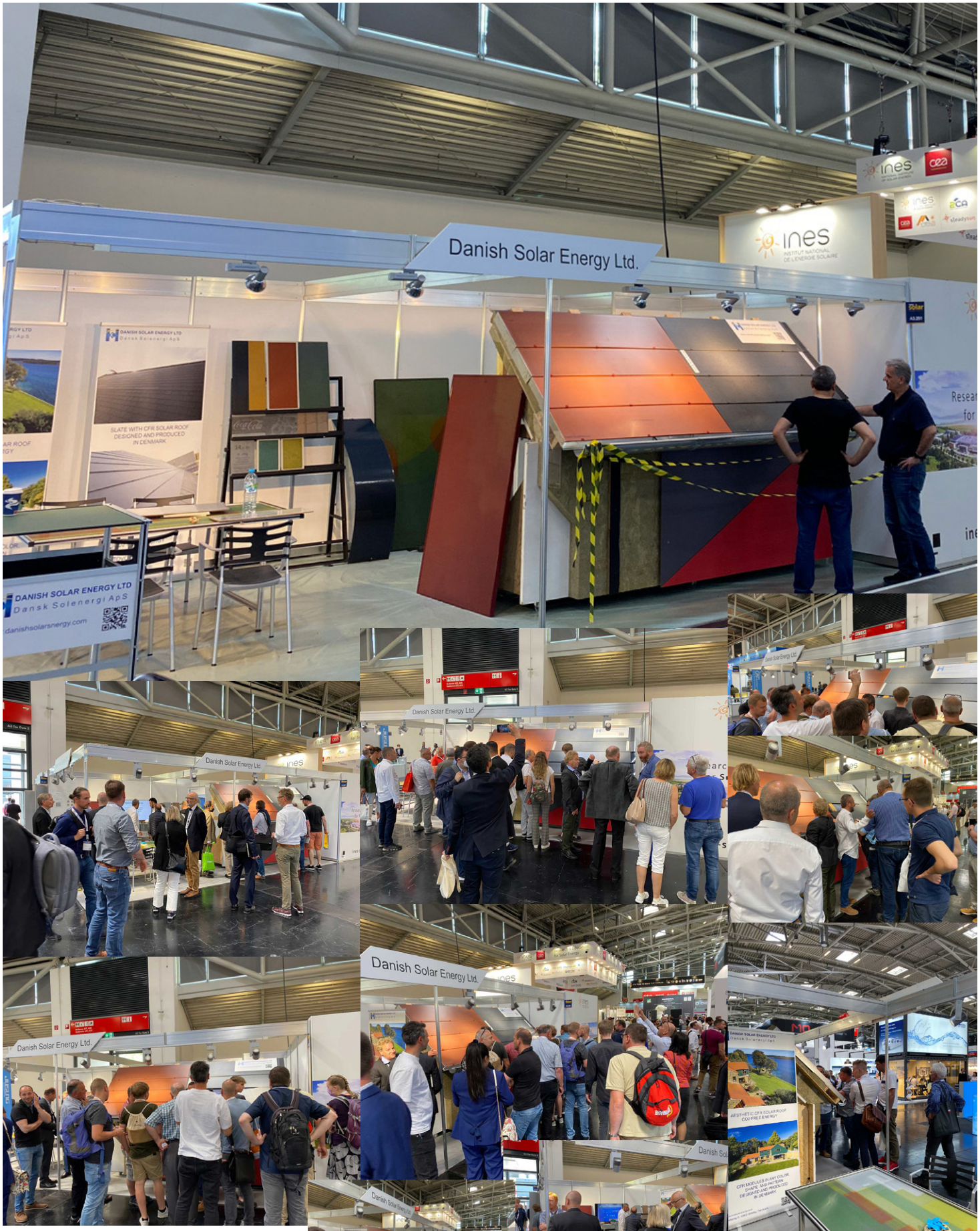
INTERSOLAR Munich



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https://danishsolarenergy.com

Dansk Solenergi ApS
Danish Solar Energy Ltd.

From idea to Realization

CUSTOM DESIGN

We can help you with

Aesthetics
- Color or colors
- Patterns
- Surfaces (Reflection degree)

Mechanics
- Dimensions (LxWxH)
- Frame
- Fastening
- Water seal

Electrical
- Configuration
- Junction box
- Cables and connectors

Performance
- Energy production
- Orientation and angles
- Shadows

Certifications
- IEC61215
- IEC EN730
- UL

We have been consulting small Design customer to some of the biggest companies in Denmark . as the UN buildings in Copenhagen.

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Profesional Consultancy with more than 30 years experience

Architects and builders want an individual color choice of solar modules, saturated colors, a homogeneous appearance from every possible point of view and at the same time a high module efficiency.

The demand is growing a lot for these products. Builders from all over the world are increasingly asking for the sustainability and self-sufficiency of their buildings.

When designing the solar module, it must be decided whether it should be integrated into the building so that it minimizes visibility and blends in with the surrounding materials. Or whether the design of the building should be based on a futuristic appearance, and the solar modules should be the building's "face" on the outside.

Implementing green energy in the construction in this way can rightly cement the architect's or suppliers name in the industry, and the building's green profile.

Our team jointly design the desired module, where we will be an active sparring partner who can advise on aesthetic possibilities, and make all the necessary calculations so that the plant is not only beautiful to look at, but also have optimal performance.

Building-integrated solar modules are an ideal solution in terms of reducing the carbon footprint and reducing its cost of electricity.

We don't just supply the solar modules and stop there. We can supply complete systems if desired. We contact installers, professionals and suppliers. We thus simplify the communication path of our partners.

If you are a manufacturer or a distributor of building materials or in the process of building a project and want, an exclusive beautiful solar power hat can reduce electricity costs and contribute to sustainable construction and make a difference in relation to CO_2 emissions.

Contact us:

Let our team of top professional engineers and designers help you create your own CFR solar power module.

www.DanishSolarEnergy.com

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