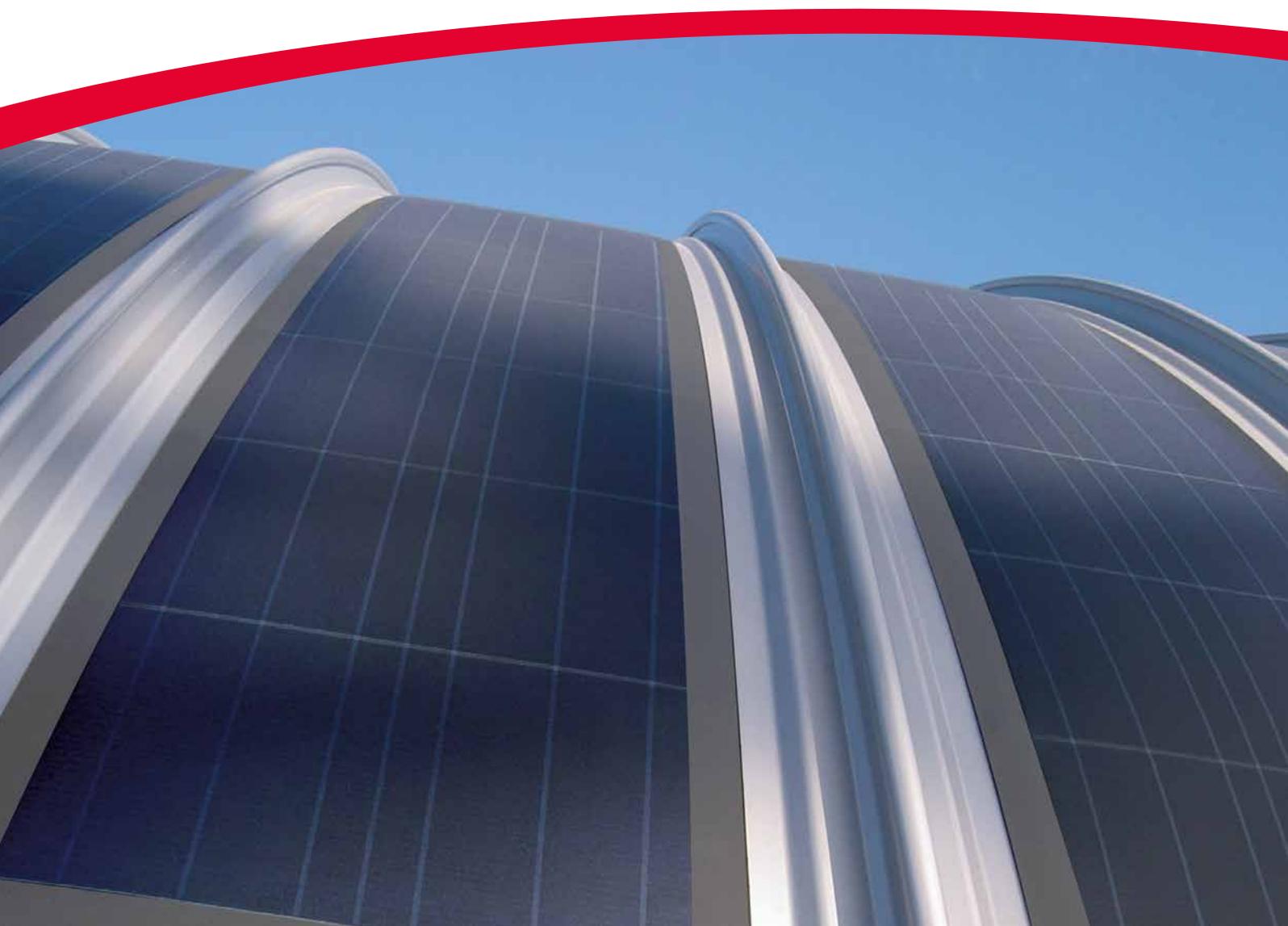




## **Kalzip® solar systems**

Integrated PV roofing solutions for creative solar architecture



When it comes to the production of renewable energy, photovoltaic systems are a key technology. The sophisticated combination of a Kalzip® system with solar technology offers a brand new generation of roof-integrated PV new and retrofit systems, using the first fully certified IEC glassless, semi-flexible, ultra-light module based on silicon solar cells.

## Kalzip® AluPlusSolar and SolarClad: Bring style and function to the roof

Revolutionary solar modules are providing Kalzip® AluPlusSolar and Kalzip® SolarClad standing seam systems with both new and retrofit options. These innovative roof-integrated solar solutions are equipped with a proprietary fibre-reinforced plastic core and an advanced EVA film on the front and reverse side of the panel delivering a solution that provides stability, robust design, flexibility, quality and durability all in one module.

Kalzip® AluPlusSolar is available on polyester coated aluminium sheets and is available to order in any RAL colour and as the sheets can be supplied in straight, convex and concave forms, a wide range of roof forms are possible allowing architects, planners and builders, to capture solar energy effectively and efficiently, without having to make any creative or aesthetic compromises.

Additionally, the internal connection system of the new Kalzip® AluPlusSolar solution is both simple and clever. The connectors and cables are fully concealed and protected - safe from rain, snow, ice, UV rays - a detail which ensures that the roof is completely clear of visible cables or ports.

Kalzip® SolarClad is offered as a retrofit solution for standing seam. Laminated directly onto polyester coated aluminum panels, this option follows the exact contours of the roof or elevation to provide a highly functional yet aesthetic appearance, and combined with the internationally approved Kalzip fixing clamps this retrofit solution is applied without any penetrations to the existing roof skin. Kalzip® SolarClad has the capability to transform existing roof structures into solar power plants.

### ELECTRICAL PROPERTIES

Designation	Power (Wp)	Isc (A)	Voc (V)	Imp (A)	Vmp (V)
12x2P	100	8.41	15.03	8.02	12.47

### TECHNICAL SPECIFICATIONS

Solar cells	24 polycrystalline silicon cells
Solar features	156mm x 156mm, 3 bus bars
Front	Polymer film with high transmittance
Upper embedded material	Proprietary fiber reinforced plastic
Cell embedding	EVA
Back	Weatherproof back
Junction box	TÜV certified (IP65) with 1 bypass diode (12A)
Output cable	Two 4-mm <sup>2</sup> cable
Connector	MC4 compatible connectors
Dimensions (L x W x H)	2052mm x 355mm x 2mm
Weight laminate	2.0 kg

### CERTIFICATION

IEC 61215	IEC 61730
Class II	2400 Pa according to EN IEC 61215

### TEMPERATURE PROPERTIES

Operating temperature range	-40 to 85 °C
Ambient temperature range	-45 to 45 °C
Temperature coefficient of Pmpp	-0.393% / °C
Temperature coefficient of Voc	-0.310% / °C
Temperature coefficient of Isc	0.051% / °C

### HIGH RELIABILITY

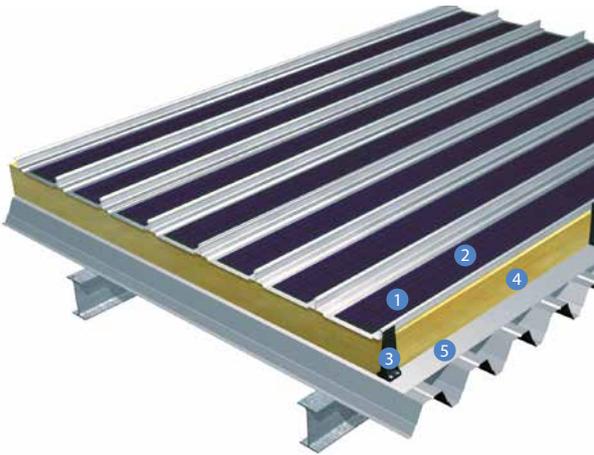
10 year performance guarantee according to our terms
5 year product guarantee
Maximum system voltage: 1000V
Maximum current: 20A
All data at STC / STC (1000 W / m <sup>2</sup> , 25 C)

# Power brought to the point:

## Numbers say more than a thousand words

Kalzip® AluPlusSolar - SYSTEM BENEFITS	
<b>Aesthetic solution</b>	An integrated PV roof module complete with internal outlets
<b>Solar system components</b>	With commercial DC connector to interconnect boxes and conventional invertors
<b>Colour</b>	All RAL colours in 25 micron polyester coated aluminium are available as standard
<b>Profile type</b>	Available in Kalzip AF 65/537
<b>Gauge</b>	1.0mm
<b>Radius</b>	Convex 13m
<b>Weight</b>	Profile panel including solar modules approximately 7kg / m <sup>2</sup>
<b>Roof constructions</b>	Exclusively Kalzip systems with soft, compressible thermal insulation in variable insulation thicknesses
<b>Roof shapes</b>	For almost all roof shapes and cold and warm roof constructions
<b>Maintenance</b>	Self-cleaning surface providing minimum maintenance
<b>Efficiency</b>	Ideal for use in European regions with high diffuse light fraction

Powered by



**Kalzip® AluPlusSolar**

- 1. PV laminate
- 2. Kalzip AF 65/537 aluminium profiled sheets
- 3. Kalzip composite E Clip
- 4. Insulation (compressible)
- 5. Kalzip vapour control layer

Kalzip® SolarClad - SYSTEM BENEFITS	
<b>Aesthetic solution</b>	On polyester coated aluminium panels laminated PV retrofit solution for all Kalzip overall widths
<b>Solar system components</b>	With commercial DC connection boxes to interconnect and and conventional invertors
<b>Colour</b>	25 micron polyester coated aluminium panels
<b>Perforated metal ceiling</b>	1.0mm
<b>Weight</b>	Including solar panels approximately 7 kg / m <sup>2</sup>
<b>Laying direction</b>	Roof parallel vertically, parallel to the roof or horizontally elevated on Kalzip aluminium profiled sheets
<b>Fixing / mounting</b>	On officially approved Kalzip mounting clips (see installation manual)
<b>Maintenance</b>	Self-cleaning surface providing minimum maintenance
<b>Efficiency</b>	Ideal for use in European regions with high diffuse light fraction

**Kalzip® SolarClad**

- 1. PV laminate
- 2. Kalzip polyester coated aluminium panels with back socket and plug connections
- 3. Kalzip fixing clamp type FA
- 4. Kalzip standing seam panel



