

KIOTO
SOLAR

A brand of **SONNENKRAFT**



Nr. 1 with Sonnenkraft

Products & prices 2020

Photovoltaics >>Made in Austria<<



More than one million satisfied customers all over Europe.

Energy systems for heat, water, power

We are happy to offer you a wide range of system solutions in addition to the KIOTO SOLAR portfolio. With the brand of SONNENKRAFT we offer solar systems for every application as well as PV integration (BIPV) into the outer walls of the building. If you have any questions about our new PV system solutions from SONNENKRAFT, contact us!

Alfred Mölzer

Günther Kohlmaier

Peter Prasser





A brand of

SONNENKRAFT

KIOTO SOLAR, a brand
of **SONNENKRAFT**,
Europe's leading system
provider of solar energy.

Benefit from the following advantages:

- // Photovoltaic modules with quality „Made in Austria“**
- // New, innovative design solutions for building integration**
- // Sales network all over Europe**
- // Cost-optimized project modules especially for large-scale applications**
- // Know-How and quality from Austria**
- // More than 1 GW installed photovoltaic power**
- // More than 28 years of production and system experience**



Power-Module SILVER



Power-Module BLACK



Power-Module MAXIM



Power-Module ALPIN



PROJECT-Module



GLASS-GLASS-Module

Solutions for every application

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Power-Module SILVER

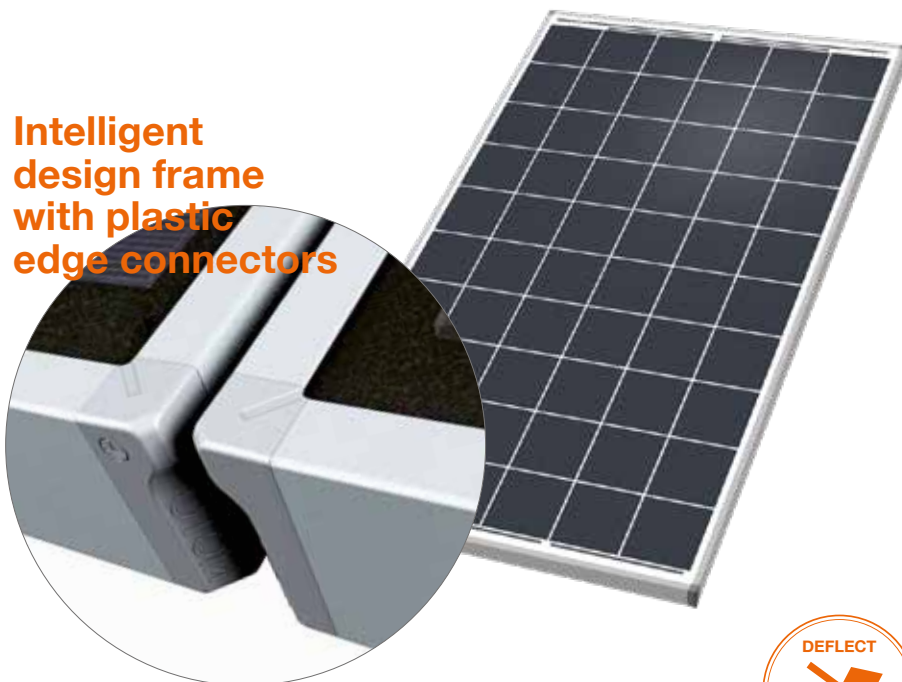
The high-efficient universal genius

- // High efficient glass-foil PV module with 60 cells and an output of up to 330 Wp
- // Use of high quality components „Made in Europe“
- // Intelligent frame concept with plastic edge connectors (no sharp corners)
- // Extremely solid, nevertheless very light module construction

Unique frame construction with edge protection

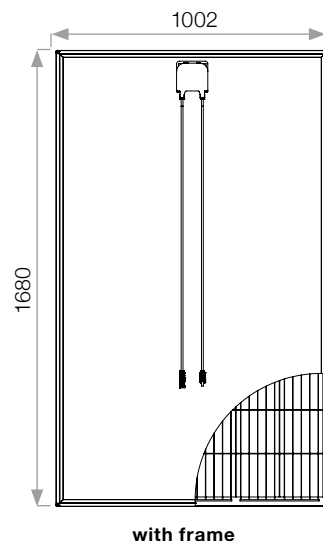
KIOTO SOLAR uses a frame with a tough construction and 40mm dimensions for its Power modules. The plastic edge connectors of the frame have a homogenous design. Furthermore, they also bring considerable technical advantages. The frame is designed without a drainage hole, so there is no risk of icing due to stagnant water. The glass fiber reinforced plastic corner connectors with UV blocker ensures this thanks to the integrated water drainage. Another benefit: thanks to the corner construction, there is no risk of injury to the operator and roof skin due to sharp-edged corners. For our Power modules, we only use the highest quality European components including a junction box, which is particularly easy to maintain.

Intelligent design frame with plastic edge connectors



Glass-foil-module Power SILVER with silver frame

Efficiency	325/330 Wp Mono
Frontside	3,2mm high-strength solar glass Interfloat Deflect
Backside	3-layer foil material
Dimensions / Weight	1680×1002×40mm / 19,5kg
Frame	40mm in Silver
Power tolerance	(+ 5 W / - 0 W) Measurement: STC (standard test conditions)
Certificate, tests	IEC 61215, Ed. 2 incl. mechanical load test up to 5400 Pa, IEC 61730; IP 65, extended hail test, salt mist corrosion test, ammonia resistance test
Efficiency guarantee / product guarantee	min. 97% in the first year, afterwards max. 0,70 % reduction p.a. up to 25 years / 12 years





Power-Module BLACK

Less light reflection besides airports, highways,...

- // Beautiful design with black frame, black backsheet and black soldering connections (optional)
- // Use of a special low-reflection Deflect solar glass with a very high solar transmittance, with factor 5 reduced glare effect compared to standard solar glass
- // Perfect application next to airports, highways or multi family homes
- // Technical documentation (test certificates and installation reports) for projects available
- // Compliance with the toughest anti-glare requirements

Unique Deflect technology combined with elegant module design

From now on, KIOTO SOLAR photovoltaic modules can also be optimally used in a glare-critical environment. The Power module BLACK with Deflect glass is perfectly suitable for places where less light reflection is needed, e.g. next to airports, streets or in residential areas.

Thanks to the special Deflect glass, the light reflection from the front is less than 20,000 cd / sqm.

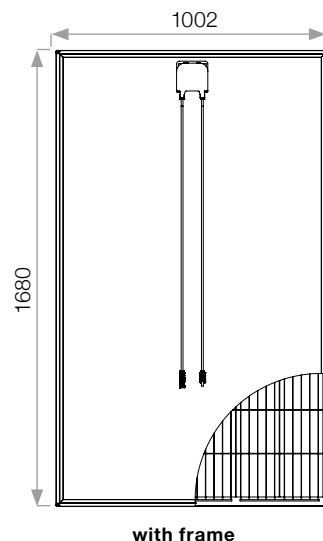
Another advantage is the nice design thanks to the black frame, black back sheet and black soldering connections (optional).

for applications where less light reflection is needed



Glass-foil-module Power BLACK with black frame

Efficiency	320/325 Wp Mono
Frontside	3,2mm high-strength solar glass Interfloat Deflect
Backside	3-layer foil material
Dimensions / Weight	1680×1002×40mm / 19,5kg
Frame	40mm in Black
Power tolerance	(+ 5 W / - 0 W) Measurement: STC (standard test conditions)
Certificate, tests	IEC 61215, Ed. 2 incl. mechanical load test up to 5400 Pa, IEC 61730; IP 65, extended hail test, salt mist corrosion test, ammonia resistance test
Efficiency guarantee / product guarantee	min. 97% in the first year, afterwards max. 0,70 % reduction p.a. up to 25 years / 12 years





Power-Module MAXIM

Full power, no matter what happens

- // Full power, even with shading, dirt or non-ideal orientation
- // Up to 10% more efficiency due to the integrated intelligent MAXIM technology
- // Simple, pre-installed components (no additional wiring)
- // Can be installed with every orientation, suitable for all roofs
- // Use of proven, long-term tested components
- // Allows to install more modules if space is limited (no problem by shading of the front row) due to Maxim concept

Unique „Maxim Integrated“ technology with up to 10% more power

Conventional PV systems have one problem: their performance is determined by the weakest cell. Therefore, snow, sand or shading can lower the performance. No problem with the Power MAXIM Plus solar module: in direct comparison it achieves + 8-10% more output compared to standard modules.

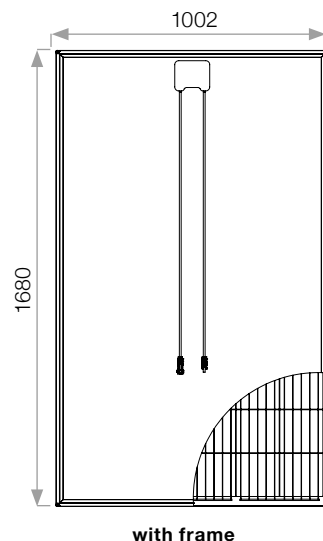
Three MAXIM optimizers per module replace the conventional bypass diodes. Single-string connections and the clever Maxim technology enable the control of every single cell row. By the way: The Maxim junction box is installed directly at KIOTO SOLAR. Elaborate installations of Retro-fit boxes and additional components are eliminated. Therefore no additional installations at the construction site are necessary.

up to 10% more yield due to intelligent Maxim junction box



Glass-foil-module Power MAXIM with frame

Efficiency	325/330 Wp Mono
Frontside	3,2mm high-strength solar glass Interfloat Deflect
Backside	3-layer foil material
Dimensions / Weight	1680×1002×40mm / 19,5kg
Frame	40mm in Silver, Black
Power tolerance	(+ 5 W / - 0 W) Measurement: STC (standard test conditions)
Certificate, tests	IEC 61215, Ed. 2 incl. mechanical load test up to 5400 Pa, IEC 61730; IP 65, extended hail test, salt mist corrosion test, ammonia resistance test
Efficiency guarantee / product guarantee	min. 97% in the first year, afterwards max. 0,70 % reduction p.a. up to 25 years / 12 years





Power-Module ALPIN

The solid module for toughest applications

- // High load capacity, up to 8,000 Pa depending on the installation method
- // Solid frame concept for technical security and flexibility
- // Use of stable 4mm front glass
- // Increased contact area between laminate and frame, improved geometry
- // Optionally available: backrails for installations in landscape format

Unique and solid aluminum frame with miter cut

Our ALPIN modules are characterized by their solid frame concept. The ALPIN modules are suitable for increased snow loads, due to the increased contact area between laminate and frame, the material thickness of the frame and its improved geometry.

The 4mm glass on the front ensures reduced deflection in case of heavy loads and thus increased protection of the solar cells.

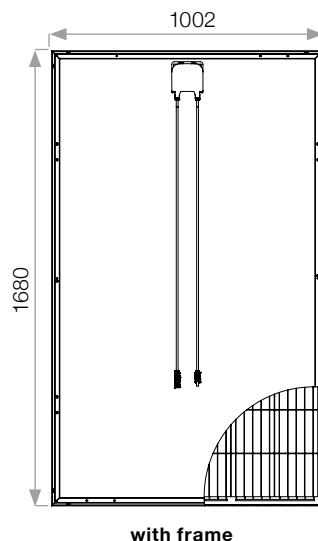
Optionally available: 2 back rails on the back of the module for stiffening the frame. Thanks to the back rails, the ALPIN module can also be installed on facades. It is also possible to mount only one module by using back rails and a floor stand (used for the SONNENKRAFTWERK technology).

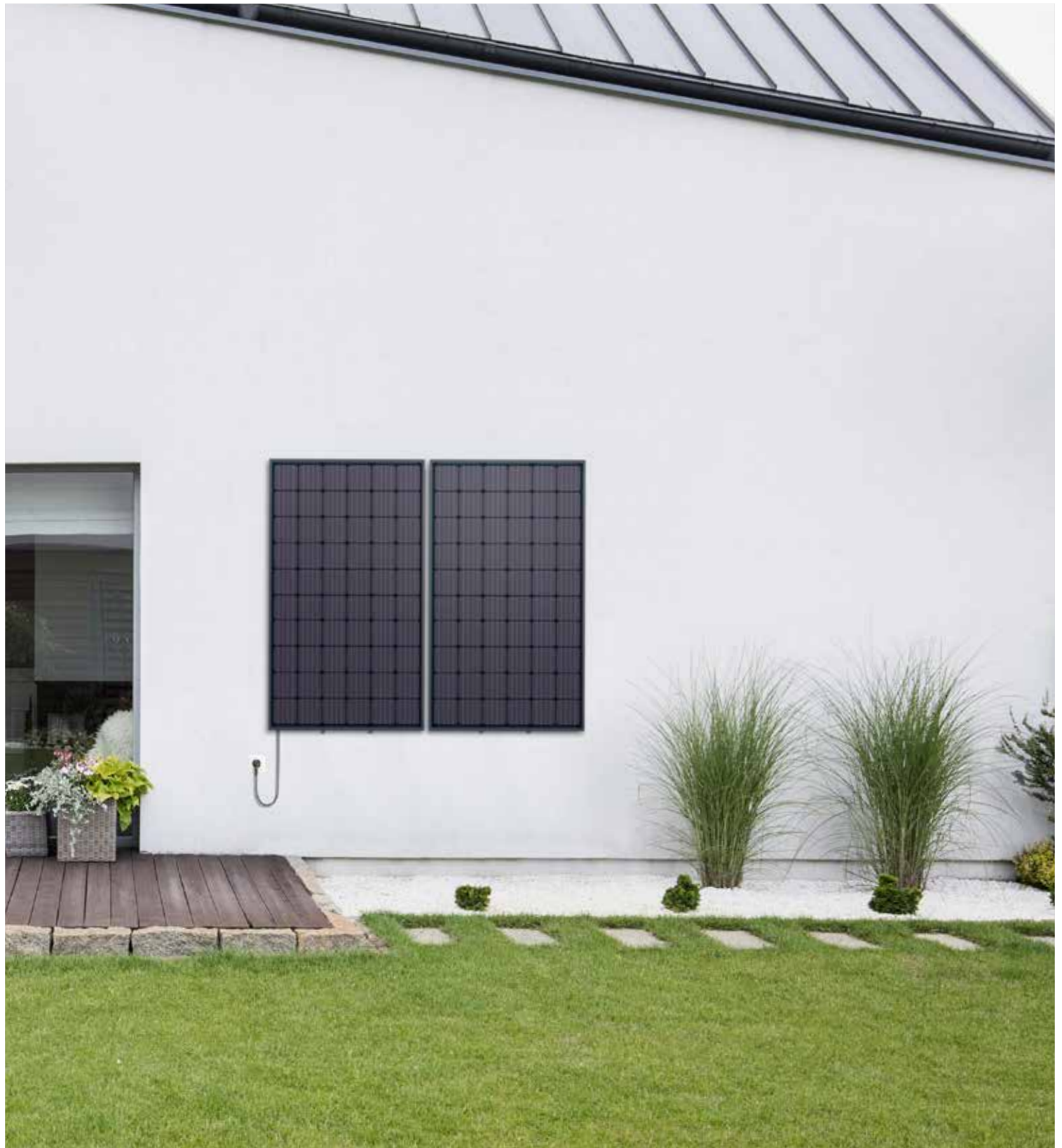
Stable aluminium frame / backrails optionally



Glass-foil-module Power ALPIN with frame

Efficiency	320/325 Wp Mono
Frontside	4,0mm high-strength solar glass
Backside	3-layer foil material
Dimensions / Weight	1680x1002x40mm / 21,5kg
Frame	40mm in ALPIN Silver, Black
Power tolerance	(+ 5 W / - 0 W) Measurement: STC (standard test conditions)
Certificate, tests	IEC 61215, Ed. 2 incl. mechanical load test up to 8.000 Pa depending on the installation method, IEC 61730; IP 65, extended hail test, salt mist corrosion test, ammonia resistance test
Efficiency guarantee / product guarantee	min. 97% in the first year, afterwards max. 0,70 % reduction p.a. up to 25 years / 12 years





SONNENKRAFTWERK-Module

The Plug & Play Module for floor, roof and facade mounting

// Plug & Play up to 2 modules, simple wiring into the switchboard up to 14 modules

// Simple and flexible installation on the floor, roof or facade

// No wiring effort due to the integrated inverter

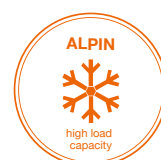
// Additional yield thanks to the shutdown of each individual module

Unique plug & play module with integrated micro inverter

It couldn't be easier: the powerful PV module SONNENKRAFTWERK has many advantages. Each module has a micro inverter and thus already supplies alternating current. This eliminates the need for complex cabling and wiring. Thanks to the integrated inverter, each module also works independently: if one module fails or is shaded, they are switched off individually. This grants better efficiency of the whole system.

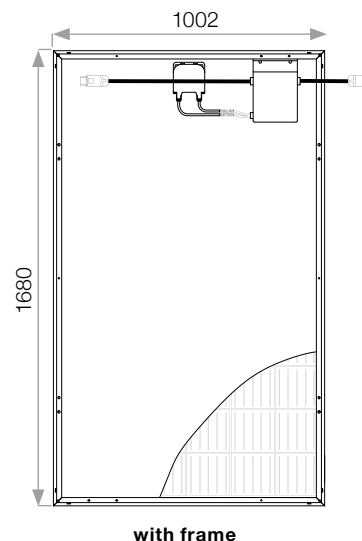
Fastening accessories enable flexible mounting on the floor, the terrace or on a flat roof. The standard photovoltaic fastening can be used for mounting the module on pitched roofs. Optional back rails enhance the installation of the SONNENKRAFTWERK module on the facade too.

Plug & Play
with integrated
inverter



SONNENKRAFTWERK-Module with frame

Efficiency	325 Wp Mono
Frontside	4,0mm high-strength solar glass
Backside	3-layer foil material
Dimensions / Weight	1680x1002x40mm / 25kg
Frame	40mm in Black
Output micro inverter	AC nominal output 285 W / Nominal current 1,24 A MPP efficiency 99,8%
Certificate, tests	DIN V VDE V 01261-1, DIN V VDE V 0126-1-1/A1, VDE-ARN4105: 2012-08, DIN VDEV 0124-100, EN G2109-1:2010, EN62109-2: 2011, EN 6100-6, EN 50438:2013
Product guarantee	5 years





PROJECT-Module

Especially for project applications

- // Designed for large scale applications > 1 MWp
- // New mono halfcut technology enables an efficiency up to 335 Wp
- // Decentralized junction boxes with 2x1m cable
- // Optimized packaging for projects with 26 modules per pallet
- // Stable frame concept for technical security

Unbeatable price

The KIOTO SOLAR project photovoltaic module series is unbeatable in terms of price and has been specially developed for large-scale applications. We use only high quality materials according to the strict standards of ISO and IEC. All tolerances are verified using the same test procedures as the standard module series.

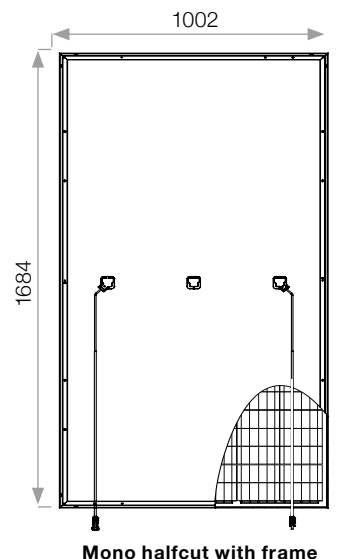
The project module is available with an efficiency up to 335 Wp and is supplied with a 40mm aluminum frame with a miter cut.

Perfect value
for money



Glass-foil-module PROJECT with frame

Efficiency	280 Wp Poly, 335 Wp Mono Halfcut
Frontside	Solar glass ESG 3,2 mm with high light transmission
Backside	multilayer material
Dimensions / Weight	Poly: 1640x992x40mm / 18,5kg Mono Halfcut: 1684x1002x40mm / 19,5kg
Frame	40mm in Silver
Power tolerance	(+ 5 W / - 0 W) Measurement: STC (standard test conditions)
Certificate, tests	IEC 61215, Ed. 2, IEC 61730; IP 65, extended hail test, salt mist corrosion test
Efficiency guarantee / product guarantee	min. 97% in the first year, afterwards max. 0,70 % reduction p.a. up to 25 years / 10 years





GLASS-GLASS-Module with frame

For the toughest applications

- // **Extremely solid:** improved cell protection against dynamic load due to glass on the backside
- // **Extremely resistant:** also against extreme environmental influences
- // **Extremely durable:** special glass compound system
- // **Extreme fire-resistance:** because of double glazing
- // **Extremely efficient:** up to 360 Wp efficiency due to bifacial cell technology
(catches the sun light on the front and on the back side of the module through reflections)
- // **Decentralized junction boxes (3 pcs.)** with 2x1m cable

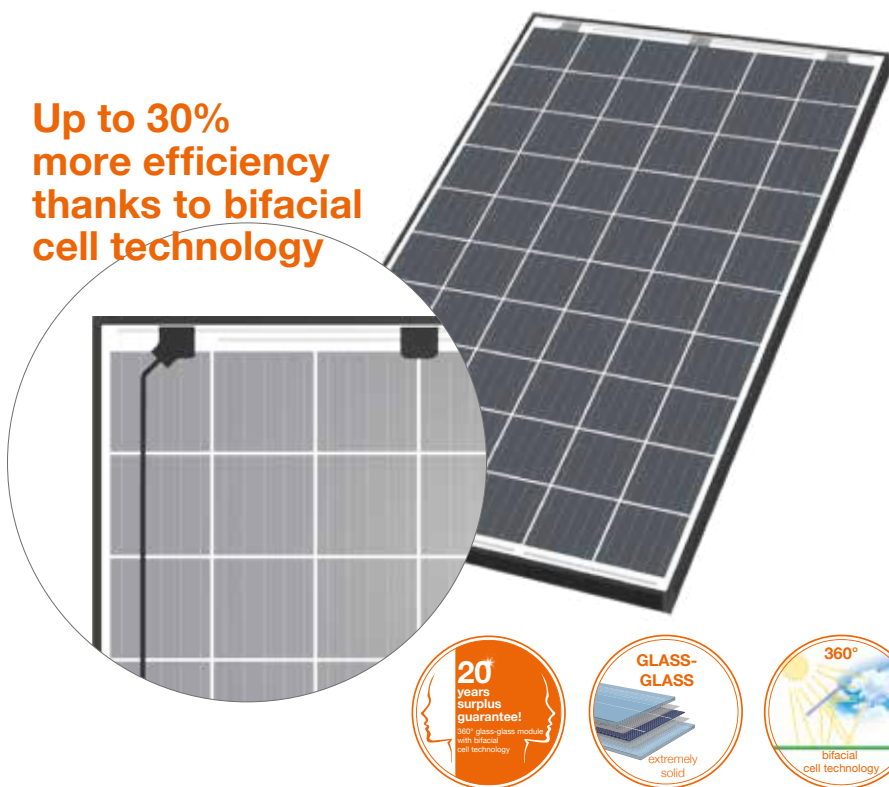
Unique bifacial cell technology for our double glass modules

Our 360° glass module catches the sun light on the front and on the back side of the module. The higher light efficiency increases the yield significantly. Thanks to the active module back side the bifacial glass module can reach up to 360 Wp overall performance (310 Wp only front / 330-360 Wp in total thanks to 360° light irradiation).

Depending on the installation surface you benefit from the following additional yields:

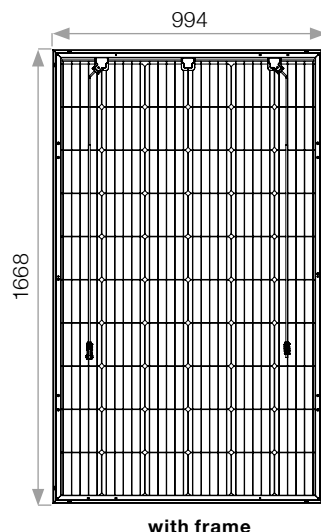
- + **10-20% additional yield:** reflecting surfaces (e.g. tiled roof, glass), mounting distance max. 40 cm
- + **20-30% additional yield:** with better reflecting surfaces (e.g. flat roof with grey foil, sand), mounting distance 40 cm – 1,5 m
- + **30-35% additional yield:** with high reflecting surfaces (e.g. snow), mounting distance min. 1,5 m

Up to 30%
more efficiency
thanks to bifacial
cell technology



GLASS-GLASS-module with frame

Efficiency	310 Wp Mono bifacial (efficiency up to 360 Wp)
Frontside	Solar glass ESG 2mm with high-strength antireflective coating
Backside	2mm high-strength glass
Dimensions / Weight	1668x994x40mm / 21kg
Frame	40mm in Black
Power tolerance	(+ 5 W / - 0 W) Measurement: STC (standard test conditions)
Certificate, tests	IEC 61215, Ed. 2 incl. mechanical load test up to 5400 Pa, IEC 61730; IP 65
Efficiency guarantee / product guarantee	min. 97% in the first year, afterwards max. 0,70 % reduction p.a. up to 25 years / 20 years





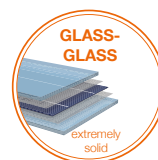
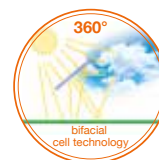
GLASS-GLASS-Module without frame

Energy & function with design

- // Suitable for various applications: terraces, e-carports, greenhouses, ...
- // Weather protection & energy supply all-in-one
- // Around 85% shading effect - no additional shading required
- // Up to 360 Wp power thanks to bifacial cell technology
- // No matter in which direction you mount the module thanks to the use of bifacial cell technology
- // Less pollution because there is no frame
- // Decentralized junction boxes (3 pieces) with 2x0.35m cable

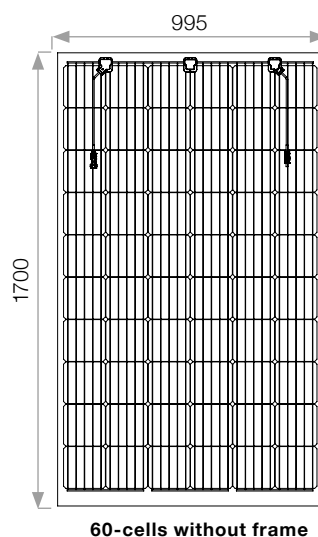
Perfect, when the roofing pays itself

KIOTO SOLAR's roofing systems have many advantages. They can be used for sun protection. At the same time they generate sustainable electricity. Whether as rain or sun protection - the PV roof is the perfect solution for your favorite place or the car. Another advantage: the roofing with photovoltaic modules pays back itself and saves CO₂ by using solar energy and thus protects the climate.



GLASS-GLASS-module without frame for roofing applications

Efficiency	60-cells: 310 Wp Mono bifacial (efficiency up to 360 Wp) 72-cells: 360 Wp Mono bifacial (efficiency up to 440 Wp)
Frontside	Solar glass ESG 3/6mm with high-strength antireflective coating
Backside	3/6mm high-strength glass
Dimensions / Weight	60-cells: 1700x995x7mm / 27,5kg 72-cells: 2020x1015x13 mm / 60kg
Frame	without frame
Power tolerance	(+ 5 W / - 0 W) Measurement: STC (standard test conditions)
Certificate, tests	IEC 61215, IEC 61730; IP 65
Efficiency guarantee / product guarantee	min. 97% in the first year, afterwards max. 0,70 % reduction p.a. up to 25 years / 12 years





Power-module from page 6**Module Power SILVER with DEFLECT glass**

325 Wp Mono SILVER	154,-
330 Wp Mono SILVER	161,-

Module Power BLACK with DEFLECT glass

320 Wp Mono BLACK	160,-
325 Wp Mono BLACK	165,-

Black frame / black backsheet

Module Power MAXIM with DEFLECT glass

330 Wp Mono MAXIM SILVER	196,-
325 Wp Mono MAXIM BLACK	199,-

up to 10% more yield thanks to MAXIM junction box

Module Power ALPIN

325 Wp Mono ALPIN SILVER	165,-
320 Wp Mono ALPIN BLACK	170,-

Power SILVER
Power MAXIM
Power ALPIN**SONNENKRAFTWERK-module** page 14**SONNENKRAFTWERK-Module**

325 Wp Mono BLACK, SONNENKRAFTWERK, with integrated inverter	340,-
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Accessories SONNENKRAFTWERK-Module

3 m cable with Schuko-/Betteri IP68 connector for 1 or 2 modules	48,-
3 m cable with RST20-/Betteri IP68 connector for 1 or 2 modules	58,-
Connector (Betteri IP68), 1x per serial connection (max. 14 modules)	15,-
End piece, 1x per serial connection (max. 14 modules)	5,-
Reusable configuration tool for inverters (country set-up) when setting up the module outside Austria	170,-

Mounting systems SONNENKRAFTWERK per module

Wall mounting set including back rails	75,-
Floor mounting set for landscape mounting 25 ° incl. backrails	85,-
Roof mounting with all commercially available mounting systems possible	



SONNENKRAFTWERK-module

PROJECT-module page 16**Module PROJECT**

280 Wp Poly PROJECT	Price on request
335 Wp Mono halfcut PROJECT	Price on request



PROJECT-module

Glass-Glass-module from page 18**Module Glass-Glass 2x2mm with frame**

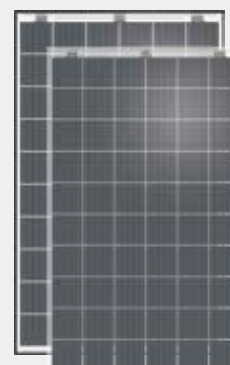
310 Wp Bifacial GLASS-GLASS (efficiency up to 360 Wp)	195,-
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Module Glass-Glass 2x3mm without frame

310 Wp Bifacial GLASS-GLASS (efficiency up to 360 Wp)	185,-
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Module Glass-Glass 2x6mm without frame for roofing systems

360 Wp Bifacial GLASS-GLASS (efficiency up to 440 Wp)	490,-
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GLASS-GLASS-module with/
without frame



A brand of **SONNENKRAFT**

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