

IBEX 132MHC-EIGER

495/500

IBEX HIGH EFFICIENCY MONOCRYSTALLINE SOLAR MODULES WITH HALF CELL TECHNOLOGY

0+5

Positive power tolerance (0+5W) guaranteed



High performance under low light.
Works at cloudy, rainy days



The monolithic perc cell structure technology (low resistance characteristics) is adopted (the maximum conversion efficiency of modules is up to 21.06%)



EXTREME WEATHER RATING. High-tech aluminium alloy frame, certified for high snow (5400 Pa) and wind loads (3800 Pa)



Reduced resistance between cells Less micro cracks, higher output power



SUPER STRONG FRAME. The overflow tank is waterproof with double layers. Aluminum frame enhances the mechanical load strength by 10%

IBEX 132MHC-EiGER 495-500

MONOCRYSTALLINE SOLAR MODULE

ELECTRICAL DATA AT STC

Rated power P _{mpp} [Wp]	495	500
P _{mpp} range to	0/+5W	0/+5W
Rated current I _{mp} [A]	12.24A	12.31A
Rated voltage V _{mp} [V]	40.44V	40.62V
Short-circuit current I _{sc} [A]	13.13A	13.20A
Open-circuit voltage U _{oc} [V]	48.67V	48.83V
Efficiency at STC up to	20.85%	21.06%
Application Class	Class A	Class A

Specification as per STC (Standard test conditions): irradiance 1000 W/m² | module temperature 25°C | Air Mass = 1.5

ELECTRICAL DATA AT NOCT

Power at P _{mpp} [Wp]	373.00	377.00
Rated current I _{mp} [A]	10.01	10.05
Rated voltage V _{mp} [V]	37.26	37.51
Short-circuit I _{sc} [A]	10.63	10.67
Open-circuit voltage U _{oc} [V]	45.44	45.69

NOCT (nominal operating cell temperature): irradiance 800 W/m² | Wind speed 1 m/sec | Ambient temperature | 20°C cell operating temperature 45 +/-2°C | Air Mass = 1.5

LIMITING VALUES

Max. system voltage [V]	1500V DC (IEC)
Max. return current [I]	20A
Operating Temperature	- 40 to +85°C
Max. tested pressure load [Pa] ²	5400
Max. tested tensile load [Pa] ²	3800

TEMPERATURE COEFFICIENT

I _{sc}	V _{oc}	P _{max}
0.05% /°C	-0.28% /°C	-0.36% /°C

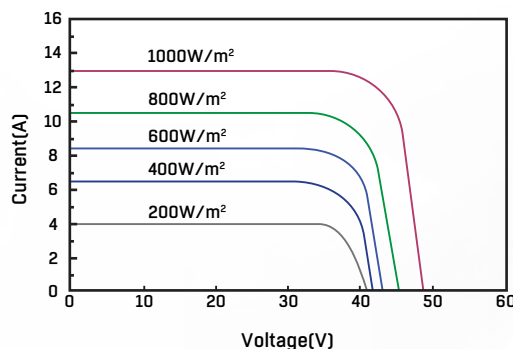
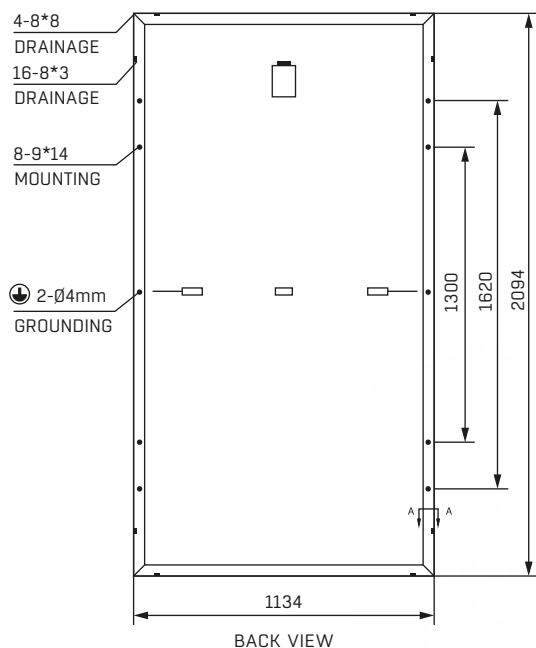
SPECIFICATIONS

Number of cells	132 (6 x 22) 182x182 mm
Dimensions	2094x1134x35 mm
Weight	26.0 kg
Front-side glass	3.2 mm tempered Low Iron Glass
Frame	Stable, anodised aluminium frame, black
Junction box	Split Junction Box (IP68)
Cable	4 mm ² , +900mm,-900mm Cust.Length
Diodes	3 Diodes
Plug-in connection	MC4 Compatible
Hail test (max. hailstrom)	Ø45mm 23 m/s 83 km/h

PACKING CONFIGURATION

Container	40 HQ	Pieces Per Pallet	30
Pallets Per container	22	Pieces per Container	660

The specifications and average values can vary slightly. Relevant is the corresponding data of the individual measurement. Specifications are subject to change without notice. Measurement tolerance depending on equipment: rated power +/- 3%, other values +/- 10%. All information given in this data sheet corresponds to DIN EN 50380. A potential light-induced degradation of the power after commissioning is not considered here. Further information in the installation manuals. 1 The specific warranty conditions are given under www.swissenergy-solar.ch | 2 Horizontal mounted | 3 Tolerance L/W = +/- 3 mm, H +/-2mm, the dimensions given in the order confirmation will be decisive | 4 Location and dimensions of holes on request



WARRANTY

20 YEARS
PRODUCT WARRANTY

30 YEARS
POWER WARRANTY

CE KONFORMITÄTSERKLÄRUNG/ CE DECLARATION OF CONFORMITY:

HERSTELLER NAME NAME OF MANUFACTURER	SWISS SOLAR AG
ADRESSE DES HERSTELLERS MANUFACTURER ADDRESS	Bahnhofstrasse 21, CH-6300 Zug, Schweiz Switzerland
PRODUKT PRODUCT	Photovoltaikmodul Photovoltaic Module
DATUM DER CE KENNZEICHNUNG CE DATE OF MARKING	01.06.2020
MARKE BRAND	swiss solar

MODEL TYPEN / MODEL TYPES:

Wir erklären auf eigene Verantwortung, dass das oben genannte Produkt in Konformität mit den folgenden Standards ist:
We declare under sole responsibility, that the above-referenced product is in conformity with the standards of:

MONOKRISTALLINE MODULE | MONOCRYSTALLINE MODULES

- IBEX 72-XXXM-PERC
- IBEX 60-XXXM-PERC
- IBEX 144MHC-XXX-DUO BLACK
- IBEX 120MHC-XXX-DUO BLACK
- IBEX 144MHC-XXX-AEON
- IBEX 120MHC-XXX-AEON
- IBEX 72-XXXM-AEON
- IBEX 60-XXXM-AEON
- IBEX 144MHC-XXX-COSMOS BLACK
- IBEX 120MHC-XXX-COSMOS BLACK
- IBEX 144MHC-XXX-DUO
- IBEX 120MHC-XXX-DUO
- IBEX 144MHC-XXX-COSMOS
- IBEX 120MHC-XXX-COSMOS
- IBEX 144MHC-XXX-AEON-BIFACIAL
- IBEX 120MHC-XXX-AEON-BIFACIAL
- IBEX 108MHC-XXX-EIGER
- IBEX 108MHC-XXX-EIGER BLACK
- IBEX 108BF-MHC-XXX-EIGER
- IBEX 108MHC-EIGER BIFACIAL
- IBEX 120MHC-XXX-EIGER
- IBEX 120MHC-XXX-EIGER BLACK
- IBEX 120BF-MHC-XXX-EIGER
- IBEX 120MHC-EIGER BIFACIAL
- IBEX 132MHC-XXX-EIGER
- IBEX 132MHC-XXX-EIGER BLACK
- IBEX 132BF-MHC-XXX-EIGER
- IBEX 132MHC-EIGER BIFACIAL
- IBEX 144MHC-XXX-EIGER
- IBEX 144MHC-XXX-EIGER BLACK
- IBEX 144MHC-EIGER BIFACIAL
- IBEX 144BF-MHC-XXX-EIGER
- IBEX 156MHC-XXX-EIGER
- IBEX 156MHC-XXX-EIGER BLACK
- IBEX 156MHC-EIGER BIFACIAL
- IBEX 156BF-MHC-XXX-EIGER
- IBEX 50M-EIGER
- IBEX 50M-EIGER BLACK
- IBEX 54M-XXX-EIGER
- IBEX 54M-XXX-EIGER BLACK
- IBEX 60M-XXX-EIGER
- IBEX 60M-XXX-EIGER BLACK
- IBEX 66M-XXX-EIGER
- IBEX 66M-XXX-EIGER BLACK

POLYKRISTALLINE MODULE | POLYCRYSTALLINE MODULES

- IBEX 144PHC-XXX-PLUTO
- IBEX 120PHC-XXX-PLUTO
- IBEX 72P-PLUTO
- IBEX 60P-PLUTO
- IBEX 144PHC-XXX-AEON
- IBEX 120PHC-XXX-AEON
- IBEX 72P-XXX-AEON
- IBEX 60P-XXX-AEON

Directive 2014/30/EU
Directive 2014/35/EU

(Electro Magnetic Compability Directive)
(Low Voltage Directive)

VORSCHRIFTEN DIE PHOTOVOLTAIKMODULE BETREFFEND | STANDARDS USED FOR PHOTOVOLTAIC MODULES:

Directive 2014/30/EU (EMC Directive)

EN 61000-6-1:2007
EN 61000-6-3:2007 + A1:2011

EN 61000-3-2:2014
EN 61000-3-3:2013

Directive 2014/35/EU (Low Voltage Directive)

EN 61730-1:2007 A1:2012 + A2:2013
EN 61730-2:2007 A1:2012

Zug, 01.06.2020



Peter Szakolczai

CEO
Swiss Solar AG





Management Service

CERTIFICATE

The Certification Body
of TÜV SÜD Management Service GmbH

certifies that

swiss solar QUALITY
TECHNOLOGY

SWISS SOLAR AG

Bahnhofstrasse 21
6300 Zug
Switzerland

has established and applies
a Quality Management System for

**Sales of solar modules,
solar inverters and mounting system.**

An audit was performed, Order No. **707127772**.

Proof has been furnished that the requirements
according to

ISO 9001:2015

are fulfilled.

The certificate is valid in conjunction
with the main certificate from **2021-06-01** until **2024-05-31**.

Certificate Registration No.: **12 100 62049/02 TMS**.

Head of Certification Body
Munich, 2021-06-02



CERTIFICAT



CERTIFICADO



СЕРТИФИКАТ



認證證書



CERTIFICATE



ZERTIFIKAT



Management Service

CERTIFICATE

The Certification Body
of TÜV SÜD Management Service GmbH

certifies that

swiss solar QUALITY
TECHNOLOGY

SWISS SOLAR AG

Bahnhofstrasse 21

6300 Zug

Switzerland

has established and applies
an Occupational Health and Safety Management System for

**Sales of solar modules,
solar inverters and mounting system.**

An audit was performed, Order No. **707127772**.

Proof has been furnished that the requirements
according to

ISO 45001:2018

are fulfilled.

The certificate is valid in conjunction
with the main certificate from **2021-06-17** until **2024-06-16**.

Certificate Registration No.: **12 117 62049/02 TMS**.

Head of Certification Body
Munich, 2021-06-21



CERTIFICAT



CERTIFICADO



СЕРТИФИКАТ



認證證書



CERTIFICATE



ZERTIFIKAT



Product Service

CERTIFICATE

No. Z2 110727 0001 Rev. 00

Holder of Certificate: **SWISS SOLAR AG**

Bahnhofstrasse 21
6300 ZUG
SWITZERLAND

Certification Mark:



Product:

Crystalline Silicon Terrestrial Photovoltaic (PV) Modules
Mono-Crystalline Silicon Photovoltaic Module

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition, the certification holder must not transfer the certificate to third parties. This certificate is valid until the listed date, unless it is cancelled earlier. All applicable requirements of the testing and certification regulations of TÜV SÜD Group have to be complied. For details see: www.tuvsud.com/ps-cert

Test report no.: 701262009501-00

Valid until: 2025-07-20

Date, 2020-11-25

(Zhulin Zhang)



Product Service

CERTIFICATE

No. Z2 110727 0001 Rev. 00

Model(s):

1000 V DC system voltage Single Glass modules:
IBEX 72-xxxM-PERC, xxx= 330 to 390 in step of 5;
IBEX 60-xxxM-PERC, xxx= 275 to 325 in step of 5;

1500 V DC system voltage Single Glass modules:
IBEX 72-xxxM-PERC HV, xxx= 330 to 390 in step of 5;
IBEX 60-xxxM-PERC HV, xxx= 275 to 325 in step of 5;

Half cell 1000 V DC system voltage Single Glass modules:
IBEX 144MHC-xxx-DUO, xxx= 370 to 415 in step of 5;
IBEX 120MHC-xxx-DUO, xxx= 305 to 345 in step of 5;
IBEX 144MHC-xxx-COSMOS, xxx= 420 to 460 in step of 5;
IBEX 120MHC-xxx-COSMOS, xxx= 350 to 380 in step of 5;

Half cell 1500 V DC system voltage Single Glass modules:
IBEX 144MHC-xxx-DUO HV, xxx= 370 to 415 in step of 5;
IBEX 120MHC-xxx-DUO HV, xxx= 305 to 345 in step of 5;
IBEX 144MHC-xxx-COSMOS HV, xxx= 420 to 460 in step of 5;
IBEX 120MHC-xxx-COSMOS HV, xxx= 350 to 380 in step of 5;

xxx is standing for rated output power at STC.

Parameters:

Construction:	Framed, with Junction box, Cable and connectors.
Test Laboratory:	Yangzhou Opto-Electrical Products Testing Institute No.10 West Kaifa Road, Yangzhou 225009 Jiangsu, P.R.China.
Safety Class:	Class II
Max. system voltage:	1000 V DC or 1500 V DC
Fire Safety Class:	Class C according to UL790

Tested according to:

IEC 61215-1:2016
IEC 61215-1-1:2016
IEC 61215-2:2016
IEC 61730-1:2016
IEC 61730-2:2016

Production Facility(ies):

083334



Product Service

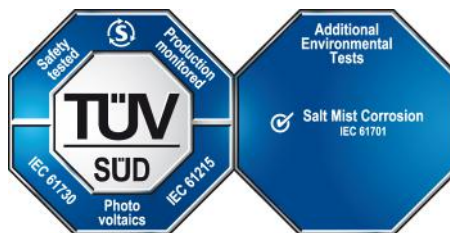
CERTIFICATE

No. Z2 110727 0002 Rev. 00

Holder of Certificate: **SWISS SOLAR AG**

Bahnhofstrasse 21
6300 ZUG
SWITZERLAND

Certification Mark:



Product:

Crystalline Silicon Terrestrial Photovoltaic (PV) Modules
Mono-Crystalline Silicon Photovoltaic Module

The product was tested on a voluntary basis and complies with the essential requirements. The certification mark shown above can be affixed on the product. It is not permitted to alter the certification mark in any way. In addition, the certification holder must not transfer the certificate to third parties. This certificate is valid until the listed date, unless it is cancelled earlier. All applicable requirements of the testing and certification regulations of TÜV SÜD Group have to be complied. For details see: www.tuvsud.com/ps-cert

Test report no.: 701262106201-00

Valid until: 2025-12-17

Date, 2021-05-07

(Zhulin Zhang)



CERTIFICATE

No. Z2 110727 0002 Rev. 00

Model(s):

1000 V DC system voltage Single Glass modules:
IBEX 72-xxxM-PERC, xxx= 330 to 390 in step of 5;
IBEX 60-xxxM-PERC, xxx= 275 to 325 in step of 5;

1500 V DC system voltage Single Glass modules:
IBEX 72-xxxM-PERC HV, xxx= 330 to 390 in step of 5;
IBEX 60-xxxM-PERC HV, xxx= 275 to 325 in step of 5;

Half cell 1000 V DC system voltage Single Glass modules:
IBEX 144MHC-xxx-DUO, xxx= 370 to 415 in step of 5;
IBEX 120MHC-xxx-DUO, xxx= 305 to 345 in step of 5;
IBEX 144MHC-xxx-COSMOS, xxx= 430 to 460 in step of 5;
IBEX 120MHC-xxx-COSMOS, xxx= 360 to 380 in step of 5;

Half cell 1500 V DC system voltage Single Glass modules:
IBEX 144MHC-xxx-DUO HV, xxx= 370 to 415 in step of 5;
IBEX 120MHC-xxx-DUO HV, xxx= 305 to 345 in step of 5;
IBEX 144MHC-xxx-COSMOS HV, xxx= 430 to 460 in step of 5;
IBEX 120MHC-xxx-COSMOS HV, xxx= 360 to 380 in step of 5;
xxx is standing for rated output power at STC

Parameters:

Construction:	Framed, with Junction box, Cable and Connectors.
Safety Class:	Class II
Maximum System Voltage:	1500 V DC or 1000 V DC
Fire Safety Class:	Class C
Severity of Salt mist test:	Severity 5

Tested according to:

IEC 61215-1:2016
IEC 61215-1-1:2016
IEC 61215-2:2016
IEC 61730-1:2016
IEC 61730-2:2016
IEC 61701:2011

CERTIFICATE

TÜV NORD CERT GmbH
herewith declares that

SWISS SOLAR AG
Bahnhofstrasse 21, CH-6300 Zug, Switzerland

is authorized to provide the product mentioned below with the mark as illustrated:

Description of product (details see Annex 2):

PV Modules with 7" Half Cut Mono-crystalline Silicon Solar Cells



Valid from: 2021-04-15

Valid until: 2023-05-09

Tested according to: IEC / EN 61215-1:2016;
IEC / EN 61215-1-1:2016;
IEC 61215-2:2016 / EN 61215-2:2017 + AC:2017 + AC:2018;
IEC 61730-1:2016 / EN IEC 61730-1:2018 + AC:2018;
IEC 61730-2:2016 / EN IEC 61730-2:2018 + AC:2018.

Registered No.: 44 780 21 406749 - 050

Manufacturer: see Annex 1

Test Report No.: 492011649.001

File No.: PVP04001/21P



TÜV NORD CERT GmbH
Certification Body
Consumer Products



Essen, 2021-04-15

Please also pay attention to the information stated overleaf.

Anlage 1 zum Zertifikat Nr.: / Annex 1 to Certificate No.: 44 780 21 406749 - 050

Seite / Page 1 von / of 1

Aktenzeichen: / File reference: PVP04001/21P

2021-04-15

Manufacturer:

Manufacturer: Coded by debtor no. 55403167

Factory inspection report no.: 862010379.003

Remark:

Factory inspection is mandatory to be performed annually. Please refer to factory inspection report for detailed information.

A handwritten signature in blue ink, appearing to read "Rogers K1".

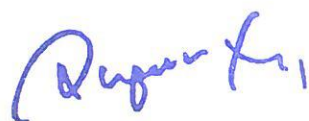
TÜV NORD CERT GmbH
Certification Body
Consumer Products

Description of product(s):

Module types:	PV Modules with 7" Half Cut Mono-crystalline Silicon Solar Cells: 156 cells: IBEX-156MHC-EiGER-***W (***=560-605, in increment of 5) 144 cells: IBEX-144MHC-EiGER-***W (***=515-555, in increment of 5) 132 cells: IBEX-132MHC-EiGER-***W (***=475-510, in increment of 5) 120 cells: IBEX-120MHC-EiGER-***W (***=430-465, in increment of 5) 108 cells: IBEX-108MHC-EiGER-***W (***=390-415, in increment of 5)
Maximum system voltage:	1500V
Fuse rating:	25A
Electrical protection class:	Class II
Pollution degree:	1
Material group:	I or II
Design load (positive / negative):	3600Pa (positive) / 1600Pa (negative)
Safety factors:	1.5
Fire safety class:	Class C according to ANSI/UL 1703-2018 (per ANSI/UL 790-2018)

Remark:

For detailed product information, please refer to CDF (Constructional Data Form) in Annex 1 of test report.



TÜV NORD CERT GmbH
Certification Body
Consumer Products

**Certificate
of conformity with the following
European Directives**

Registered No.:
44 799 21 406749 - 031

Low-Voltage Directive 2014/35/EU

Date of application	File reference	Test report No.	Date of issue	Place of issue
2021-04-01	PVP04001/21P	492011649.001	2021-04-15	Essen

This is to certify that the following products comply to the essential requirements of the above mentioned European Directive and the following standards, taking into account the German national deviations:

Product: Crystalline Silicon Terrestrial Photovoltaic (PV) Modules

Type designation: See Annex 1

Applicant: **SWISS SOLAR AG**
Bahnhofstrasse 21, CH-6300 Zug, Switzerland

Standard(s): EN IEC 61730-1:2018; EN IEC 61730-1:2018/AC:2018-06
EN IEC 61730-2:2018; EN IEC 61730-2:2018/AC:2018-06

This Certificate of conformity is based on the evaluation of samples of the product. It does not imply an assessment of the production and it does not permit the use of a mark of conformity or of a safety mark of the TÜV NORD CERT GmbH. The holder of this certificate may use this Certificate together with his EC-Declaration of Conformity.



Certification Body
Specialist Manager Consumer Products

TÜV NORD CERT GmbH
Langemarckstrasse 20
D-45141 Essen
P.O.Box 10 32 61
D-45032 Essen
Fon: +49 (0)201 825-5120
Fax: +49 (0)201 825-3209
Email: prodcert@tuev-nord.de

Description of product(s):

Module types:

PV Modules with 7" Half Cut Mono-crystalline Silicon Solar Cells:

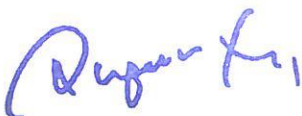
156 cells: IBEX-156MHC-EiGER-***W (***=560-605, in increment of 5)

144 cells: IBEX-144MHC-EiGER-***W (***=515-555, in increment of 5)

132 cells: IBEX-132MHC-EiGER-***W (***=475-510, in increment of 5)

120 cells: IBEX-120MHC-EiGER-***W (***=430-465, in increment of 5)

108 cells: IBEX-108MHC-EiGER-***W (***=390-415, in increment of 5)



TÜV NORD CERT GmbH
Certification Body
Consumer Products