

## MONO CRYSTALLINE HALF-CUT BIFACIAL MODULE

640 / 645 / 650 / 655 Watts

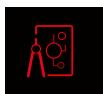
# Panther



## Overview

Ground breaking technology: higher power output, improved system performance - the ideal solution for end users who want a fast turnaround on their investments. A fully certified premium quality and high efficiency module made with A Grade materials.

## Key Benefits



Certified by Independent Engineering Bodies



Higher Light Conversion



Ultra High Power Output



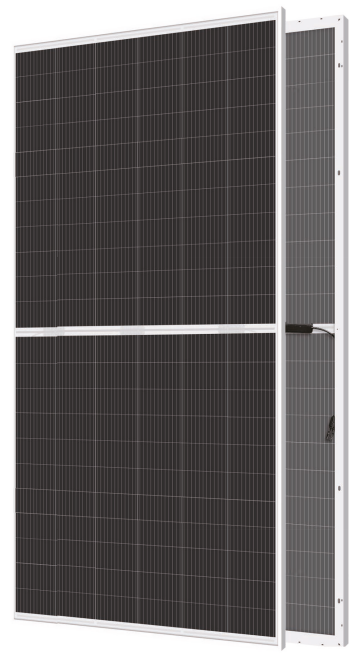
15 Years Limited Product Warranty



Low Resistive Losses



Low LCOE



Guaranteed mechanical resistance to severe weather conditions



Positive Tolerance

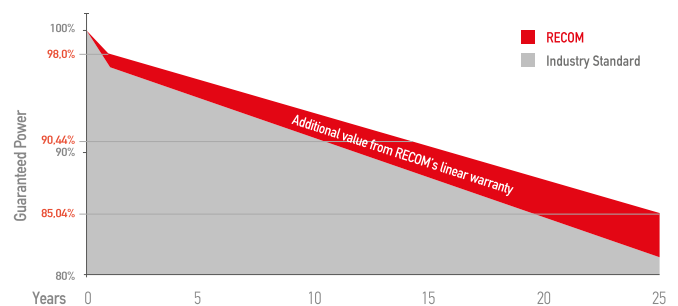


100 % electro-luminescence tested

## Tests, Certifications and Warranties

Standard Tests	IEC 61215, IEC 61730
Factory Quality Tests	ISO 9001: 2015, ISO 14001: 2015
Certifications	Conformity to CE, PV CYCLE Fire safety Class C according to UL790
Insurance	Third party liability insurance provided by Liberty Mutual
Wind and Snow Loads Testing	Module certified to withstand extreme wind (2400 Pascal) and snow loads (5400 Pascal)
Power Tolerance	Guaranteed +0%/+5% (STC condition)
Warranties	<ul style="list-style-type: none"> <li>15-year limited product warranty</li> <li>15-year manufacturer warranty on 90.44% of the nominal performance</li> <li>25-year transferable linear power output warranty</li> </ul>

## Linear Performance Warranty



First Year Output **≥ 98%**      2-25 Year Decline **≤ 0.54%**      25 Year Output **≥ 85.04%**

## MONO CRYSTALLINE HALF-CUT BIFACIAL MODULE

RCM-xxx-8MM (xxx=640-655)

### Electrical Characteristics

POWER CLASS <sup>(1)</sup>			640		645		650		655	
Testing Condition			STC	NMOT	STC	NMOT	STC	NMOT	STC	NMOT
Maximum Power	Pmax	[Wp]	640	484	645	488	650	491	655	495
Maximum Power Voltage	Vmp	[V]	37,21	34,49	37,41	34,68	37,61	34,86	37,81	35,05
Maximum Power Current	Imp	[A]	17,20	14,03	17,24	14,06	17,28	14,09	17,32	14,13
Open Circuit Voltage	Voc	[V]	45,18	41,93	45,38	42,11	45,58	42,30	45,78	42,48
Short Circuit Current	Isc	[A]	18,06	14,81	18,11	14,85	18,16	14,89	18,21	14,93
Module Efficiency	Eff	[%]	20,60		20,76		20,92		21,09	
Maximum Series Fuse	IR	[A]	30							
Maximum System Voltage	VSYS	[V]	1500 V DC							

(1) Measurement Tolerances: P<sub>max</sub> (± 3%), I<sub>sc</sub> & V<sub>oc</sub> (± 3%) - Power Classification 0/+5W

(2) STC (Standard Testing Condition): Irradiance 1000W/m<sup>2</sup>, Cell Temperature 25°C, AM 1.5

(3) NMOT (Nominal Operating Module Temperature): Irradiance 800W/m<sup>2</sup>, NMOT, Ambient Temperature 20°C, AM 1.5, Wind Speed 1m/s

#### Bi Facial Output (4)

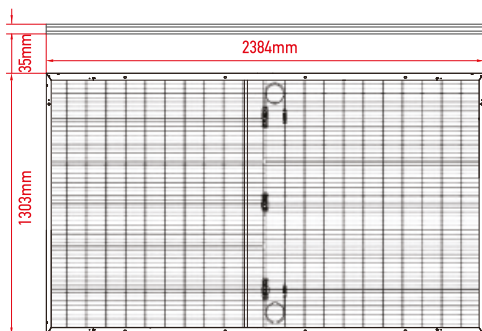
POWER CLASS			640		645		650		655	
Power with Backside Gain			P <sub>max</sub> [Wp]	Eff [%]	P <sub>max</sub> [Wp]	Eff [%]	P <sub>max</sub> [Wp]	Eff [%]	P <sub>max</sub> [Wp]	Eff [%]
	+5	[%]	672,0	27,4%	677,3	27,6%	682,5	27,8%	687,8	28,0%
	+10	[%]	704,0	28,7%	709,5	28,9%	715,0	29,1%	720,5	29,3%
	+15	[%]	736,0	30,0%	741,8	30,2%	747,5	30,4%	753,3	30,7%
	+20	[%]	768,0	31,3%	774,0	31,5%	780,0	31,8%	786,0	32,0%
	+25	[%]	800,0	32,6%	806,3	32,8%	812,5	33,1%	818,8	33,3%
	+30	[%]	832,0	33,9%	838,5	34,1%	845,0	34,4%	851,5	34,7%

(4) Bifaciality Factor > 70% - Back-side power gain depends upon the specific project albedo - Efficiency is according to the surface of the module

### Mechanical Data

Dimensions	2384mm x 1303mm x 35mm
Weight	34 Kg
Cell Type	Mono Perc - 210mm x 105mm (2 x 66 Pcs) - G12
Front Glass	3.2mm Tempered and low iron glass + ARC
Rear Side	Anti-aging film (Clear)
Frame	Anodized Aluminium Alloy
Junction Box	IP68 - 3 Bypass diodes
Connector	MC4 compatible
Output cable	4mm <sup>2</sup> - Length = Landscape 1500mm / Portrait: 280mm

### Dimensions

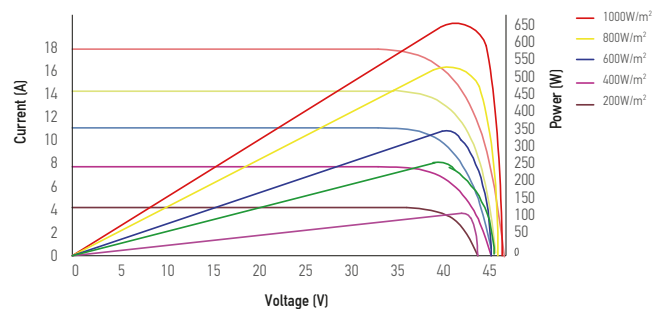


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### I-V Curve

The module relative power loss at low light irradiance of 200W/m<sup>2</sup> is less than 3%.



### Temperature Characteristics

P <sub>max</sub> Temperature Coefficient	-0.36% / °C
V <sub>oc</sub> Temperature Coefficient	-0.28% / °C
I <sub>sc</sub> Temperature Coefficient	+0.05% / °C
Operating Temperature	-40~+85 °C
Nominal Operating Module Temperature (NMOT)	41 ± 3°C

### Packing Configuration

Container	40'HC
Pieces per Pallet	31
Pallets per Container	18
Pieces per Container	(31+31)x9=558 pcs

The specification and key features described in this datasheet may deviate slightly and are not guaranteed. Due to on-going innovation, research and product enhancement, RECOM Technologies reserves the right to make any adjustment to the information described herein at any time without notice. Please always obtain the most recent version of the datasheet which shall be duly incorporated into the binding contract made by the parties governing all transactions related to the purchase and sale of the products described herein. Please read the safety and installation instructions before using the modules.

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# CERTIFICATE OF COMPLIANCE

**Certificate Number** E513941  
**Report Reference** E513941-20200227  
**Issue Date** 2020-MARCH-02

**Issued to:** Recom Sillia S A S  
4 Avenue Pierre Marzin  
22300 Lannion, France

**This certificate confirms that  
representative samples of**

Photovoltaic Modules and Panels with System Voltage  
Ratings Over 600 Volts  
See addendum page for models

Have been investigated by UL in accordance with the  
Standard(s) indicated on this Certificate.

**Standard(s) for Safety:**

Safety for Photovoltaic (PV) Module Safety Qualification -  
Part 1: Requirements for Construction, UL 61730-1  
Safety for Photovoltaic (PV) Module Safety Qualification -  
Part 2: Requirements for Testing, UL 61730-2

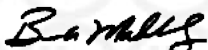
**Additional Information:**

See the UL Online Certifications Directory at  
<https://iq.ulprospector.com> for additional information.

This *Certificate of Compliance* does not provide authorization to apply the UL Mark. Only the UL Follow-Up Services Procedure provides authorization to apply the UL Mark.

Only those products bearing the UL Mark should be considered as being UL Certified and covered under UL's Follow-Up Services.

Look for the UL Certification Mark on the product.



Bruce Mahrenholz, Director North American Certification Program  
UL LLC

Any information and documentation involving UL Mark services are provided on behalf of UL LLC (UL) or any authorized licensee of UL. For questions, please contact a local UL Customer Service Representative at <http://ul.com/aboutul/locations/>



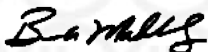
# CERTIFICATE OF COMPLIANCE

**Certificate Number** E513941  
**Report Reference** E513941-20200227  
**Issue Date** 2020-MARCH-02

This is to certify that representative samples of the product as specified on this certificate were tested according to the current UL requirements.

**Photovoltaic module, Models:**

RCM-350-6MA, RCM-355-6MA, RCM-360-6MA, RCM-365-6MA, RCM-370-6MA, RCM-375-6MA  
RCM-380-6MA, RCM-385-6MA, RCM-295-6MB, RCM-300-6MB, RCM-305-6MB, RCM-310-6MB  
RCM-315-6MB, RCM-320-6MB, RCM-320-6PA, RCM-325-6PA, RCM-330-6PA, RCM-335-6PA  
RCM-340-6PA, RCM-345-6PA, RCM-350-6PA, RCM-270-6PB, RCM-275-6PB, RCM-280-6PB  
RCM-285-6PB, RCM-290-6PB, RCM-240-6PC, RCM-245-6PC, RCM-250-6PC, RCM-255-6PC,  
RCM-260-6PC, RCM-160-6PD, RCM-165-6PD, RCM-170-6PD, RCM-175-6PD



Bruce Mahrenholz, Director North American Certification Program  
UL LLC

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# Limited Warranty for RECOM Photovoltaic Modules

## **RECOM-SILLIA SAS**

4 Avenue Pierre Marzin, Lannion, 22300, France

**T:** +33 255030861, **F:** +33 255030862

**[www.recom-tech.com](http://www.recom-tech.com)**



## LIMITED PRODUCT WARRANTY

RECOM warrants that all types of RECOM PV Modules, including factory assembled DC connectors and cables, are macro defect-free regarding materials and workmanship with the exception of improper installation, application, utilisation and maintenance.

Any appearance or cosmetic change(s) of the PV Modules, including but not limited to any discolouration, scratching, and mechanical wear-out, or any other change(s) attributable to or caused by the normal wear and tear over time that may occur after the Warranty Start Date (i.e. date of delivery), shall be exempt from the 15-Year Limited Product Warranty.

Claims shall be in effect under the 15-Year Limited Product Warranty only if the Customer has provided evidence sufficient enough to prove that the non-conformity or malfunctioning of the PV Modules results exclusively from the defect(s) and is covered by the 15-Year Limited Product Warranty. RECOM may, at its discretion, (a) repair the defective product, (b) supply a replacement product, or (c) pay the end-user the current market value of the product. The 15-Year Limited Product Warranty does not refer to a specific power output.

### Limited Product Warranty extension:

- **RECOM Puma series:** The products are covered by 25-Year Limited Product Warranty.

- **RECOM Lion series (Glass/Glass):** The products are covered by 30-Year Limited Product Warranty.

## LINEAR POWER OUTPUT WARRANTY

RECOM warrants that for a period of 25 years, beginning from the Warranty Start Date, any loss of power output against the minimum "Peak Power at STC", as specified on the label of the modules (hereinafter "Nominal Power") when measured at Standard Test Conditions (STC) for the Product(s), shall not exceed:

- 1. Poly modules (Glass/Backsheet):** 2% within the first year, and thereafter 0.60% per year, so that RECOM PV Modules will produce no less than 83.6% of their nominal power in the 25th year after the Warranty Start Date.
- 2. Mono modules (Glass/Backsheet):** 3% within the first year, and thereafter 0.65% per year, so that RECOM PV Modules will produce no less than 81.4% of their nominal power in the 25th year after the Warranty Start Date.
- 3. Mono Bifacial modules (Glass/Backsheet):** 3% within the first year, and thereafter 0.55% per year, so that the RECOM PV Modules will produce no less than 83.8% of their nominal power in the 25th year after the Warranty Start Date.  
**Extension: RCM-xxx-7BME, RCM-xxx-7BMM, RCM-xxx-7BMF (Glass/Backsheet):** 2% within the first year, and thereafter 0.45% per year, so that RECOM PV Modules will produce no less than 84.95% of their nominal power in the 30th year after the Warranty Start Date.
- 4. Mono Bifacial modules (Glass/Glass):** 3% within the first year, and thereafter 0.5% per year, so that the RECOM PV Modules will produce no less than 82.5% of their nominal power in the 30th year after the Warranty Start Date.
- 5. Mono Halfcut modules (Glass/Backsheet):** 2% within the first year, and thereafter 0.54% per year, so that RECOM PV Modules will produce no less

than 85.04% of their nominal power in the 25th year after the Warranty Start Date.

- 6. Mono Halfcut modules (Glass/Glass):** 2% within the first year, and thereafter 0.44% per year, so that the RECOM PV Modules will produce no less than 85.24% of their nominal power in the 30th year after the Warranty Start Date.
- 7. N-Type modules (Glass/Backsheet):** 1% within the first year, and thereafter 0.45% per year, so that the RECOM PV Modules will produce no less than 88.2% of their nominal power in the 25th year after the Warranty Start Date.
- 8. N-Type modules (Glass/Glass):** 1% within the first year, and thereafter 0.4% per year, so that the RECOM PV Modules will produce no less than 87.4% of their nominal power in the 30th year after the Warranty Start Date.
- 9. Mono Tri Cut Modules "Jaguar Series" (Glass/Backsheet):** 2.5% within the first year, and thereafter 0.55% per year, so that RECOM PV Modules will produce no less than 84.3% of their nominal power in the 25th year after the warranty Start Date.
- 10. Mono Shingled modules "Puma Series" (Glass/Backsheet):** 2% within the first year, and thereafter 0.55% per year, so that RECOM PV Modules will produce no less than 84.8% of the nominal power in the 25th year after the Warranty Start Date.
- 11. Mono Bifacial Shingled modules "Puma Series" (Glass/Glass):** 2% within the first year, and thereafter 0.45% per year, so that RECOM PV Modules will produce no less than 84.95% of the nominal power in the 30th year after the Warranty Start Date.
- 12. HJT Bifacial modules "Lion Series" (Glass / Glass):** 1.5% within the first year, and thereafter 0.25% per year, so that RECOM PV Modules will produce no less than 91.25% of the nominal power in 30th year after the Warranty Start Date.

The expected power output loss shall be compared with the nominal power output as specified in the relevant Data Sheets and measured at STC.

In the case of any excess power output loss, that RECOM deems caused due to material or workmanship defects, RECOM will, at its absolute discretion, (a) repair the defective product, (b) supply a replacement product, (c) supply additional products, or (d) pay the end-user the current market value of the product.

## EXCLUSIONS AND LIMITATIONS

The Limited Product Warranty and the Linear Power Output Warranty do not apply to any RECOM PV Modules subjected to:

- Misuse, improper installation and/or application not in accordance with the applicable local codes, failure to comply with RECOM's Installation Manual;
- Defects caused by improper storage, transportation, handling, assembly, operation or maintenance not in accordance with RECOM's Installation Manual;
- Repair and/or modification by a non approved technician;
- Extreme environmental conditions, lightning, flood, fire, hurricanes, whirlwinds, sandstorms, actions of third parties or other events outside the control of RECOM i.e. force majeure;
- Damages due to environmental conditions, including but not limited to improper voltage, power surges, acid rain, marine environment, pollution factors, and external corrosion.

The Limited Product Warranty and the Linear Power Output Warranty do not cover any costs associated with installation, removal and/or re-installation of the RECOM PV Modules, customs clearance or any other costs relevant to the return of RECOM PV Modules. Removal of the products must be performed in accordance with applicable local codes and RECOM's Installation Manual. No return of RECOM PV Module(s) shall be accepted, without written authorisation issued by RECOM.

## CLAIM PROCEDURE

Upon discovery of any justified claim(s) covered by the Limited Product Warranty and the Linear Power Output Warranty, the Customer shall notify RECOM via registered letter or e-mail (customer@recom-solar.com), providing detailed evidence (Invoice, Proof of Delivery of the RECOM PV Modules, Serial Numbers, Photos and Technical evaluation) that will initiate the Claim Procedure. Any claim(s) under this Limited Product Warranty must be brought to RECOM's attention within three months upon identification.

## TECHNICAL DISPUTES

In the event of technical disputes relevant to RECOM Warranty claims, the Customer shall consult a first-class test institute such as TÜV Rheinland, VDE, RETC, or other, to issue a technical report including test results that will be utilised in order to determine the technical aspects of the claim(s). RECOM reserves all rights to handle each and every dispute at its own discretion.

## WARRANTY LIMITATIONS

Any repair and/or replacement of RECOM PV Modules, or any supply of additional RECOM PV Modules, will neither renew the Warranty Start Date, nor extend the original terms of the Limited Product Warranty and the Linear Power Output Warranty. Any claimed and replaced RECOM PV Modules shall become the property of RECOM. RECOM shall, at its own discretion, deliver another type of RECOM PV Module(s) (different in size, colour, and/or power) in the case that RECOM has discontinued producing the PV module(s) in question at the time of the claim.

## FORCE MAJEURE

RECOM shall not be whatsoever liable to the Customer, or to any third-parties arising, nor responsible of any non-performance or performance delays caused from natural disasters such as fire, flood, blizzard, hurricane, thunder, acts of God, changes of public policies, terrorism, war, riots, strikes, unavailability of suitable and sufficient labour or materials, and any other event deemed to be out of the control of RECOM.

## REMARK:

"Peak Power" is the power in watt peak (Wp) generated when PV Modules reach their maximum power point under STC conditions. STC conditions are as follows:

- a) Light spectrum of AM 1.5;
- b) Irradiance at 1,000W/m<sup>2</sup>;
- c) Cell temperature at 25 degrees Celsius at right angle irradiation.

Measurements are carried out in accordance with IEC 61215 standards and conform to values of the calibrated PV Module used at the time of the RECOM PV Modules manufacture. RECOM calibrated PV Modules are certified by International Institutions and are in full compliance with IEC 60904.

N° 2017/76911.3

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AFNOR Certification certifie que le système de management mis en place par :  
*AFNOR Certification certifies that the management system implemented by:*

## RECOM SILLIA

**pour les activités suivantes :**  
*for the following activities:*

**CONCEPTION, FABRICATION ET COMMERCIALISATION DE PRODUITS PHOTOVOLTAIQUES.**

**DESIGN, MANUFACTURING, MARKETING AND SALE OF PHOTOVOLTAIC PRODUCTS.**

**a été évalué et jugé conforme aux exigences requises par :**  
*has been assessed and found to meet the requirements of:*

## ISO 9001 : 2015

**et est déployé sur les sites suivants :**  
*and is developed on the following locations:*

**4 AVENUE PIERRE MARZIN FR-22300 LANNION**

Ce certificat est valable à compter du (année/mois/jour)  
*This certificate is valid from (year/month/day)*

**2020-10-14**

Jusqu'au  
*Until*

**2023-10-11**

SignatureFournisseur



**Julien NIZRI**  
**Directeur Général d'AFNOR Certification**  
*Managing Director of AFNOR Certification*

Flashez ce QR  
Code pour vérifier la  
validité du certificat

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COFRAC accreditation n° 4-0001, Management Systems Certification, Scope available on [www.cofrac.fr](http://www.cofrac.fr).  
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N° 2017/76171.3

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*has been assessed and found to meet the requirements of:*

**ISO 14001 : 2015**

**et est déployé sur les sites suivants :**  
*and is developed on the following locations:*

**4 AVENUE PIERRE MARZIN FR-22300 LANNION**

Ce certificat est valable à compter du (année/mois/jour)  
*This certificate is valid from (year/month/day)*

**2020-10-14**

Jusqu'au  
*Until*

**2023-10-11**

SignatureFournisseur



**Julien NIZRI**  
**Directeur Général d'AFNOR Certification**  
*Managing Director of AFNOR Certification*

Seul le certificat électronique, consultable sur [www.afnor.org](http://www.afnor.org), fait foi en temps réel de la certification de l'organisme. The electronic certificate only, available at [www.afnor.org](http://www.afnor.org), attests in real-time that the company is certified. Accréditation COFRAC n° 4-0001, Certification de Systèmes de Management. Portée disponible sur [www.cofrac.fr](http://www.cofrac.fr).  
COFRAC accreditation n° 4-0001, Management Systems Certification, Scope available on [www.cofrac.fr](http://www.cofrac.fr).  
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Flashez ce QR  
Code pour vérifier la  
validité du certificat



# CERTIFICATE

**TÜV NORD CERT GmbH**

herewith declares that

**RECOM SILLIA s a s**

4, Avenue Pierre Marzin, 22300 LANNION, FRANCE

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

**Description of product (details see Annex 2):**

**PV Modules with 6" Mono-crystalline Silicon Solar Cells**

**PV Modules with 6" Half Cut Mono-crystalline Silicon Solar Cells**



Valid from: 2020-09-18

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 20 406749 - 180

Manufacturer: see Annex 1

Test Report No.: 492011517.001

File No.: PVP09007/20P



**TÜV NORD CERT GmbH**  
**Certification Body**  
**Consumer Products**



Essen, 2020-09-18

Please also pay attention to the information stated overleaf.

**Anlage 1 zum Zertifikat Nr.:** / *Annex 1 to Certificate No.:* **44 780 20 406749 - 180**

**Seite / Page** 1 **von / of** 1

**Aktenzeichen:** / *File reference:* **PVP09007/20P**

**2020-09-18**

**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.



**TÜV NORD CERT GmbH**  
**Certification Body**  
**Consumer Products**

**Description of product(s):**

Module types: **PV Modules with 6" Mono-crystalline Silicon Solar Cells:**  
72 cells: RCM-xxx-6MA (xxx = 380-395, in increment of 5)  
60 cells: RCM-xxx-6MB (xxx = 320-330, in increment of 5)

Maximum system voltage: 1500V

Fuse rating: 15A

Electrical protection class: Class II

Pollution degree: 1

Material group: I

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)

Module types: **PV Modules with 6" Half Cut Mono-crystalline Silicon Solar Cells:**  
144 cells: RCM-xxx-6MF "G1" (xxx = 390-410, in increment of 5)  
132 cells: RCM-xxx-6MM "G1" (xxx = 360-375, in increment of 5)  
120 cells: RCM-xxx-6ME "G1" (xxx = 325-340, in increment of 5)

Maximum system voltage: 1500V

Fuse rating: 15A or 20A

Electrical protection class: Class II

Pollution degree: 1

Material group: I

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)



**TÜV NORD CERT GmbH**  
**Certification Body**  
**Consumer Products**

Module types:	<b>PV Modules with 6" Half Cut Mono-crystalline Silicon Solar Cells:</b> 144 cells: RCM-xxx-6MF (xxx = 420-455, in increment of 5) 132 cells: RCM-xxx-6MM (xxx = 385-415, in increment of 5) 120 cells: RCM-xxx-6ME (xxx = 350-380, in increment of 5)
Maximum system voltage:	1500V
Fuse rating:	20A
Electrical protection class:	Class II
Pollution degree:	1
Material group:	I
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

**TÜV NORD CERT GmbH**  
herewith declares that

**RECOM SILLIA s a s**  
4, Avenue Pierre Marzin  
22300 LANNION, FRANCE

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

**Description of product (details see Annex 2):**

**PV Modules with Segmented 6" PERC Mono-crystalline Silicon Solar Cells**



Valid from: 2020-09-15

Valid until: 2022-10-19

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 20 406749 - 176  
Manufacturer: see Annex 1  
Test Report No.: 492011511.001  
File No.: PVP09008/20P

A handwritten signature in blue ink.

**TÜV NORD CERT GmbH**  
**Certification Body**  
**Consumer Products**



Essen, 2020-09-15

Please also pay attention to the information stated overleaf.



**Anlage 1 zum Zertifikat Nr.: / Annex 1 to Certificate No.: 44 780 20 406749 - 176**

**Seite / Page 1 von / of 1**

**Aktenzeichen: / File reference: PVP09008/20P**

**2020-09-15**

**Manufacturer:**

Manufacturer: Coded by debtor no. 55390908

Factory inspection report no.: 862010358.004

**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 "R. Fischer".

**TÜV NORD CERT GmbH**  
**Certification Body**  
**Consumer Products**

**Description of product(s):**

Module types:	<b>PV Modules with Segmented 6" PERC Mono-crystalline Silicon Solar Cells</b> 432 cells: RCM-xxx-SML (xxx = 445-480, in increment of 5) 432 cells: RCM-xxx-SBML (xxx = 445-480, in increment of 5) 408 cells: RCM-xxx-SMA (xxx = 395-455, in increment of 5) 408 cells: RCM-xxx-SBMA (xxx = 395-455, in increment of 5) 408 cells: RCM-xxx-SMA "M6" (xxx = 460-500, in increment of 5) 408 cells: RCM-xxx-SBMA "M6" (xxx = 460-500, in increment of 5) 360 cells: RCM-xxx-SMK (xxx = 370-400, in increment of 5) 360 cells: RCM-xxx-SBMK (xxx = 370-400, in increment of 5) 340 cells: RCM-xxx-SMB (xxx = 325-380, in increment of 5) 340 cells: RCM-xxx-SBMB (xxx = 325-380, in increment of 5) 340 cells: RCM-xxx-SMB "M6" (xxx = 385-415, in increment of 5) 340 cells: RCM-xxx-SBMB "M6" (xxx = 385-415, in increment of 5)
Maximum system voltage:	1500V
Fuse rating:	20A
Electrical protection class:	Class II
Pollution degree:	1
Material group:	III or II or I, refer to test report for details
Design load (positive / negative):	2400Pa / 2400Pa or 3600Pa / 1600Pa, refer to test report for detail
Safety factors:	1.5
Fire safety class:	Class C according to ANSI/UL 1703-2018 (as 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



Product Service

# CERTIFICATE

No. Z2 104798 0001 Rev. 02

**Holder of Certificate:** **RECOM SILLIA SAS**

4 Avenue Pierre Marzin  
22300 Lannion  
FRANCE

**Certification Mark:**



**Product:**

**Crystalline Silicon Terrestrial Photovoltaic (PV) Modules**  
**Mono-crystalline Silicon Photovoltaic (PV) Modules**

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](http://www.tuvsud.com/ps-cert)

**Test report no.:** 882161907803

**Valid until:** 2025-12-08

**Date,** 2021-03-30

( Xinlian LUO )

# CERTIFICATE

No. Z2 104798 0001 Rev. 02

## Model(s):

### 1000V DC modules:

RCM-xxx-6MA (xxx=330-385, in steps of 5)

RCM-xxx-6MB (xxx=275-320, in steps of 5)

RCM-xxx-6MC (xxx=250-285, in steps of 5)

### 1000V DC half-cell modules:

RCM-xxx-6MF "G1" (xxx= 390-425, in steps of 5)

RCM-xxx-6ME "G1" (xxx=325-350, in steps of 5)

RCM-xxx-6MF (xxx=415-455, in steps of 5)

RCM-xxx-6ME (xxx=345-380, in steps of 5)

RCM-xxx-7MF (xxx=520-555, in steps of 5)

RCM-xxx-7MM (xxx=480-505, in steps of 5)

RCM-xxx-7ME (xxx=435-460, in steps of 5)

### 1000V DC 1/3 cut cell modules:

RCM-xxx-6MJ (xxx=380-420, in steps of 5)

RCM-xxx-6MI (xxx=315-345, in steps of 5)

RCM-xxx-6MJ "G1" (xxx=410-445, in steps of 5)

RCM-xxx-6MI "G1" (xxx=340-365, in steps of 5)

### 1500V DC modules:

RCM-xxx-6MA (1500) (xxx=340-385, in steps of 5)

RCM-xxx-6MB (1500) (xxx=285-320, in steps of 5)

RCM-xxx-6MC (1500) (xxx=255-285, in steps of 5)

### 1500V DC half-cell modules:

RCM-xxx-6MF "G1" (1500) (xxx=390-425, in steps of 5)

RCM-xxx-6ME "G1" (1500) (xxx=325-350, in steps of 5)

RCM-xxx-6MF (1500) (xxx=415-455, in steps of 5)

RCM-xxx-6ME (1500) (xxx=345-380, in steps of 5)

RCM-xxx-7MF (1500) (xxx=520-555, in steps of 5)

RCM-xxx-7MM (1500) (xxx=480-505, in steps of 5)

RCM-xxx-7ME (1500) (xxx=435-460, in steps of 5)

### 1500V DC 1/3 cut cell modules:

RCM-xxx-6MJ (1500) (xxx=380-420, in steps of 5)

RCM-xxx-6MI (1500) (xxx=315-345, in steps of 5)

RCM-xxx-6MJ "G1" (1500) (xxx=410-445, in steps of 5)

RCM-xxx-6MI "G1" (1500) (xxx=340-365, in steps of 5)

xxx is standing for rated output power at STC

## Parameters:

Safety Class: Class II

Max. System Voltage: 1000V DC or 1500 V DC

Fire Safety Class: Class C according to UL790.

Test Laboratory: Yangzhou Opto-electrical product testing institute.

Construction: Framed, with Junction box, cable and connector.

# CERTIFICATE

No. Z2 104798 0001 Rev. 02

**Tested  
according to:**

IEC 61215-1(ed.1)  
IEC 61215-1-1(ed.1)  
IEC 61215-2(ed.1)  
IEC 61730-1(ed.2)  
IEC 61730-2(ed.2)  
EN 61215-1:2016  
EN 61215-1-1:2016  
EN 61215-2:2017  
EN IEC 61730-1:2018  
EN IEC 61730-2:2018  
EN IEC 61730-1:2018/AC:2018-06  
EN IEC 61730-2:2018/AC:2018-06