

### MONO CRYSTALLINE HALF-CUT BIFACIAL MODULE

400 / 405 / 410 Watts





# **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



Product Liability Insurance



Ultra High Power Output



25 Years Limited Product Warranty



Low Resistive Losses



Higher Light Conversion





Guaranteed mechanical resistance to severe weather conditions



Positive Tolerance

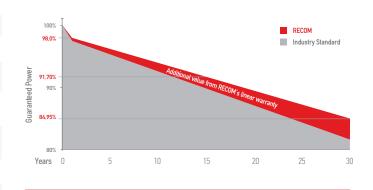


100 % electroluminescence tested

#### Tests, Certifications and Warranties

| Standard Tests                 | IEC 61215, IEC 61730 & UL 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<br>Testing | Module certified to withstand extreme wind (2400 Pascal) and snow loads (5400 Pascal)   |
| Power Tolerance                | Guaranteed +0/+5W (STC condition)   |
| Warranties                     | <ul> <li>25-year limited product warranty</li> <li>15-year manufacturer warranty on 91,70% of the<br/>nominal performance</li> <li>30-year transferable linear power output warranty</li> </ul> |

### Linear Performance Warranty



First Year Output

≥ **98**%

2-30 Year Decline

≤ 0.45%

30 Year Output

≥ 84.95%



# MONO CRYSTALLINE HALF-CUT BIFACIAL MODULE

RCM-xxx-7BMG (xxx=400-410)

#### **Electrical Characteristics**

| POWER CLASS (1)        |            |      | 400       |       | 405   |       | 410   |       |
|------------------------|------------|------|-----------|-------|-------|-------|-------|-------|
| Testing Condition      |            |      | STC       | NMOT  | STC   | NMOT  | STC   | NMOT  |
| Maximum Power          | Pmax       | [Wp] | 400       | 289,9 | 405   | 302,4 | 410   | 306   |
| Maximum Power Voltage  | Vmp        | [V]  | 31,00     | 28,90 | 31,27 | 29,14 | 31,52 | 29,38 |
| Maximum Power Current  | lmp        | [A]  | 12,92     | 10,34 | 12,96 | 10,38 | 13,01 | 10,42 |
| Open Circuit Voltage   | Voc        | [V]  | 37,15     | 34,74 | 37,34 | 34,92 | 37,55 | 35,12 |
| Short Circuit Current  | Isc        | [A]  | 13,55     | 10,94 | 13,59 | 10,97 | 13,66 | 11,02 |
| Module Efficiency      | Eff        | [%]  | 20,5      |       | 20,8  |       | 21,0  |       |
| Maximum Series Fuse    | <b>I</b> R | [A]  | 25        |       |       |       |       |       |
| Maximum System Voltage | Vsys       | [V]  | 1500 V DC |       |       |       |       |       |

<sup>(1)</sup> Measurement Tolerances: Pmax (± 3%), Isc & Voc (± 3%) - Power Classification 0/+5W

Bi Facial Output (4)

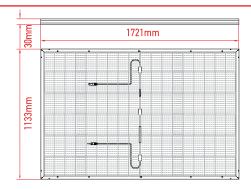
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|----------------------|-----|-----|-----------|---------|-----------|--------|-----------|---------|
| POWER CLASS          |     |     | 400       |         | 405       |        | 410       |         |
|                      |     |     | Pmax [Wp] | Eff [%] | Pmax [Wp] | Eff[%] | Pmax [Wp] | Eff [%] |
|                      | +5  | [%] | 420,0     | 21,5%   | 425,3     | 21,8%  | 430,5     | 22,1%   |
| Power                | +10 | [%] | 440,0     | 22,6%   | 445,5     | 22,8%  | 451,0     | 23,1%   |
| with Backside Gain   | +15 | [%] | 460,0     | 23,6%   | 465,8     | 23,9%  | 471,5     | 24,2%   |
|                      | +20 | [%] | 480,0     | 24,6%   | 486,0     | 24,9%  | 492,0     | 25,2%   |
|                      | +25 | [%] | 500,0     | 25,6%   | 506,3     | 26,0%  | 512,5     | 26,3%   |
|                      | +30 | [%] | 520,0     | 26,7%   | 526,5     | 27,0%  | 533,0     | 27,3%   |

(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<br>Weight | 1721 x 1133 x 30mm (67.76 x 44.60 x 1.18 in)<br>20,5 Kg (45.19 lb)    |
|----------------------|---|
| Cell Type            | Mono Perc – 182 x 91mm (7.17 x 3.59 in) (2x54 Pcs) – M10              |
| Front Glass          | 3.2 mm (0.13 in) Tempered and low iron glass + ARC                    |
| Rear Side            | Anti-age film (Clear)   |
| Frame                | Anodized Aluminium Alloy (Black)                                      |
| Junction Box         | IP68 - 3 Bypass Diodes  |
| Connector            | Original MC4-EV02   |
| Output cable         | 4mm <sup>2</sup> (0.16 in <sup>2</sup> ) - Length = 1200 mm (47,24in) |

## **Dimensions**

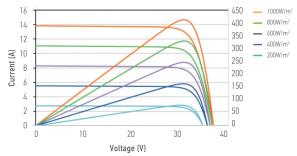


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### I-V Curve

The module relative power loss at low light irradiance of 200W/m² is less than 3%.



### **Temperature Characteristics**

| Pmax Temperature Coefficient                | -0.35% / °C                |
|---|----------------------------|
| Voc Temperature Coefficient                 | -0.22% / °C                |
| Isc Temperature Coefficient                 | +0.05% / °C                |
| Operating Temperature (IEC)                 | -40~+85°C                  |
| Operating Temperature (UL)                  | -40~+90°C                  |
| Nominal Operating Module Temperature (NMOT) | $42\pm2^{\circ}\mathrm{C}$ |

# **Packing Configuration**

| Container             | 40'HC                                 |
|-----------------------|---------------------------------------|
| Pieces per Pallet     | 37                                    |
| Pallets per Container | 26                                    |
| Pieces per Container  | $(37+37) \times 13 = 962 \text{ pcs}$ |

<sup>(2)</sup> STC (Standard Testing Condition): Irrandiance 1000W/m², Cell Temperature 25°C, AM 1.5

<sup>(3)</sup> NMOT (Nominal Operating Module Temperature): Irrandiance 800W/m², NMOT, Ambient Temperature 20°C, AM 1.5, Wind Speed 1m/s