

PREMIUM

# BISOL Spectrum

Monocrystalline PV Modules With Coloured Glass



Designed & manufactured in EU



Double insulation



On-roof or BIPV



PID free



Module presorting for higher profitability



Supremely low degradation



A perfect colour match to your roof

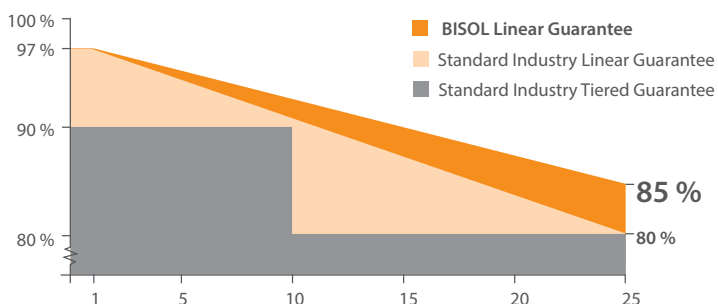


Available in variety of colours



Excellent low light performance

## Guarantees:



Linear Guarantee  
85 % power output in 25<sup>th</sup> year



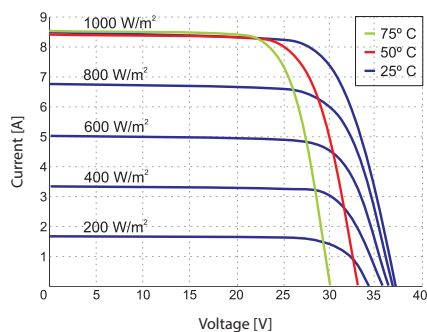
Product Guarantee  
15 years

## In compliance with:

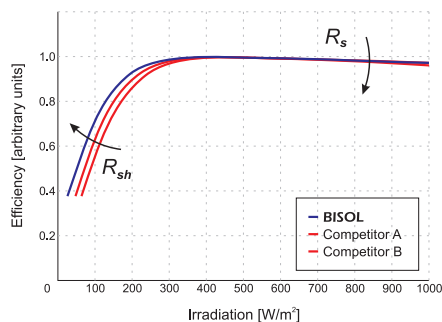


Certificates available upon special request. Additional charges may apply.

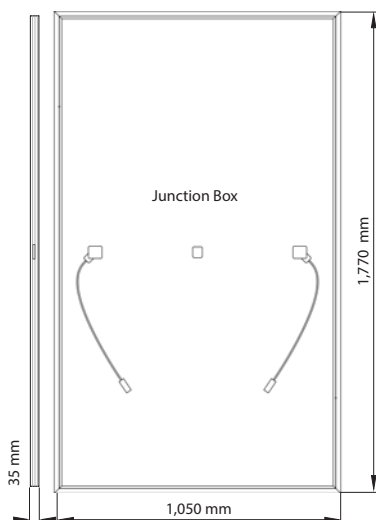
## I-V Curve at Various Irradiation Levels and Various Cell Temperatures



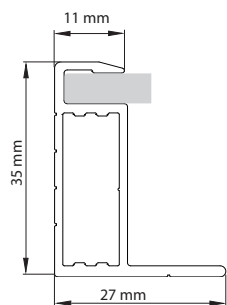
## Effective Efficiency



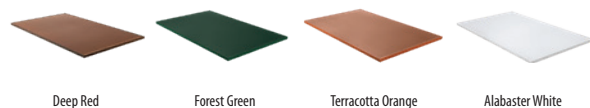
## Dimensions



## Frame Cross Section



## Electrical Specifications @ STC (AM1.5, 1,000 W/m², 25 °C):



| Module Type             | BDO           | 320       | 300  | 280  | 220  |
|-------------------------|---------------|-----------|------|------|------|
| Nominal Power           | $P_{MPP}$ [W] | 320       | 300  | 280  | 220  |
| Short Circuit Current   | $I_{SC}$ [A]  | 9.55      | 9.30 | 8.30 | 6.55 |
| Open Circuit Voltage    | $V_{OC}$ [V]  | 41.5      | 41.1 | 43.2 | 40.9 |
| MPP Current             | $I_{MPP}$ [A] | 9.10      | 8.70 | 7.55 | 6.20 |
| MPP Voltage             | $V_{MPP}$ [V] | 35.2      | 34.5 | 37.1 | 35.5 |
| Power Output Tolerance  |               | $\pm 3\%$ |      |      |      |
| Maximum Reverse Current |               | 20 A      |      |      |      |
| Protection Class        |               | Class II  |      |      |      |

Efficiency at irradiation 200 W/m²: 99.3 % of STC efficiency or higher. | Tolerances for  $V_{OC}$  and  $I_{SC}$  are 3 %.

## Electrical Specifications @ NOCT (AM1.5, 800 W/m², 20 °C, wind: 1 m/s; Cell Temperature 44 °C):

| Module Type           | BDO           | 320  | 300  | 280  | 220  |
|-----------------------|---------------|------|------|------|------|
| Nominal Power         | $P_{MPP}$ [W] | 239  | 224  | 209  | 164  |
| Short Circuit Current | $I_{SC}$ [A]  | 7.73 | 7.52 | 6.72 | 5.30 |
| Open Circuit Voltage  | $V_{OC}$ [V]  | 39.4 | 39.0 | 41.0 | 38.8 |
| MPP Current           | $I_{MPP}$ [A] | 7.36 | 7.04 | 6.11 | 5.02 |
| MPP Voltage           | $V_{MPP}$ [V] | 32.5 | 31.8 | 34.2 | 32.8 |

Power measurement tolerance:  $\pm 3\%$ .

## Thermal Specifications:

|                                 |          |                    |
|---------------------------------|----------|--------------------|
| Current Temperature Coefficient | $\alpha$ | + 0.06 %/C         |
| Voltage Temperature Coefficient | $\beta$  | - 0.27 %/C         |
| Power Temperature Coefficient   | $\gamma$ | - 0.35 %/C         |
| NOCT                            |          | 44 $\pm$ 2 °C      |
| Temperature Range               |          | - 40 °C to + 85 °C |

## Mechanical Specifications:

|                                 |                                                                                             |
|---------------------------------|---------------------------------------------------------------------------------------------|
| Length x Width x Thickness      | 1,770 x 1,050 x 35 mm                                                                       |
| Weight                          | 20.5 kg                                                                                     |
| Solar Cells                     | 120 Half-Cut mono c-Si / 166 mm x 166 mm                                                    |
| Junction Box / Connectors / IP  | Three bypass diodes / MC4 compatible / IP 68                                                |
| Cable Length                    | Default: 1,200 mm<br>On demand (for portrait orientation): 300 mm                           |
| Frame                           | Standard frame (anodized AL with drainage holes and rigid anchored corners)                 |
| Backsheet Colour                | Black                                                                                       |
| Glass                           | 3.2 mm glass with anti-reflective coating / tempered / high-transparency / low-iron content |
| Certified Test Load (Snow/Wind) | 5,400 Pa / 2,400 Pa                                                                         |
| Impact Resistance               | Hailstone / $\Phi$ 25 mm / 83 km/h (51 mph)                                                 |

Tolerances of values are  $\pm 5\%$ . Unspecified product properties remain under full discretion of BISOL.

## Packaging Information:

|                    |                                        |           |                |                          |
|--------------------|----------------------------------------|-----------|----------------|--------------------------|
|                    |                                        |           |                |                          |
| Modules per Pallet | Packing Dimension: Length/Width/Height | Stackable | Packing Weight | Tot. Nr. of Pallets/Load |
| 30                 | 181 x 109 x 128 cm                     | 3 pallets | 653 kg         | 28                       |

Additional terms & conditions apply. Please see *Standard Limited Guarantee* and *General Sales Terms & Conditions*.

© BISOL Production Ltd. February 2022. All rights reserved. All information presented in this document is subject to change without prior notice and serve for informative purposes only.