GRUPPOSTG
SOLARGREEN®
PV COMPANY

# Half cut 108 cell monocrystalline module
# VE454PV

**POWER RANGE**
from 400 to 410 Wp

**CELL TECHNOLOGY**
10BB "Half Cut " Monocrystalline

**GUARANTEES**
20 year warranty against manufacturing defects;
30 year linear warranty to 85% of the maximum declared power*

## OUR COMPANY VISION

High quality, certified and controlled raw materials are the distinctive features of our products.

Constant company research and development have always increased our standards both in terms of performance and in terms of architectural integration.

The combination of aesthetics and functionality is a fundamental point in a society that is increasingly attentive to the approach of the product with the context.

### Product certifications:

- CEI EN / IEC 61215 (2016)
- CEI EN / IEC 61730-1/2 (2016)
- Factory Inspection
- Class of reaction to fire I (UNI 9177)
- Production "Made extra EU"
- EC Directives: EMC 2004/108/EC; 2006/95/EC low Voltage

### Company certifications :

- Corporate Quality Management EN ISO 9001:2015
- Environmental Management EN ISO 14001:2015
- Management of Health and Safety at the Workplace EN ISO 45001:2023
- Certificates issued by ASACERT Assessment & Certification

*If used and installed according to technical and operational instructions. The Company reserves the right to make changes to product specifications.

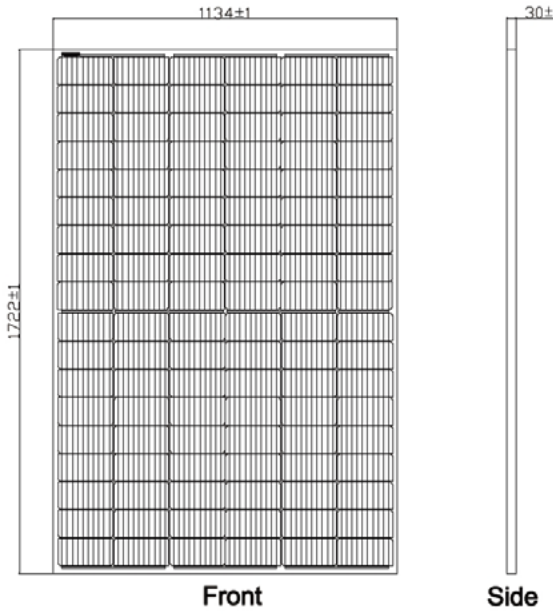
## AVAILABLE POWERS [1] [2]

| | | | |
|---|---|---|---|
| Maximum power[3] | $P_{max}$ [W] | **410** | **400** |
| Maximum power voltage | $V_{mp}$ [V] | 31,46 | 31,14 |
| Current at maximum power | $I_{mp}$ [A] | 13,04 | 12,85 |
| Open-circuit voltage | $V_{oc}$ [V] | 37,45 | 37,05 |
| Short-circuit current | $I_{sc}$ [A] | 13,85 | 13,67 |
| Efficiency | Eff. [%] | 20,97 | 20,46 |

[1] Electrical values measured under STC conditions: Irradiation 1000 W / m2 - Module temperature = 25 ° C - Air mass AM 1.5 - Wind speed 1 m / s.
[2] Measurement tolerance of Pmp, Vmp, Imp, Voc, Isc values equal to (- / + 3%) with A class solar simulator in accordance with IEC 60904-9.
[3] Sorting tolerance Pmax : 0/+3 W

## CONSTRUCTION PROPERTIES

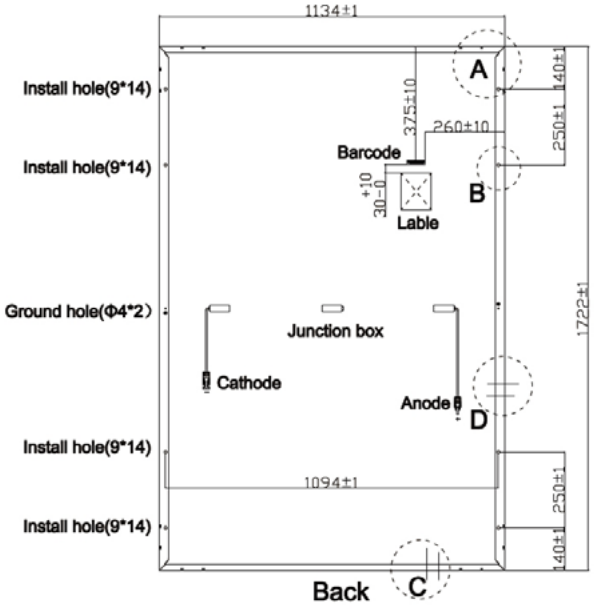
| | |
|---|---|
| Module size [mm] | **1722 x 1134 x 30** |
| Cell technology | **Half cut PERC monocrystalline silicon** |
| Cell size [mm] | 182 mm x 91 mm |
| Cell number | **108** |
| Front side | Anti-glare tempered solar glass (EN 12150) |
| Back side | White PET |
| Frame type | Aluminum |
| Frame finish | Silver anodized |
| Cables type | Solar cables with a section of 4.0 mm2 |
| Cable length [mm] | 350 |
| Connector type | MC4 |
| Number of bypass diodes | 3 |
| Module weight [kg] | 21,5 |




## PARAMETERS FOR INTEGRATION INTO THE SYSTEM

| | |
|---|---|
| Maximum system voltage [V] | 1500 |
| Class of protection against electrical leakage | Class II |
| Load capacity of reverse current [A] | 25 |
| Maximum permissible load in pressure/traction [Pa] | 5400 / 2400 |
| Nominal operating temperature range [°C] | -40/+85 |
| Maximum allowable relative humidity [%] | 85 |
| Hail impact resistance [Km/h] [4] | 84,6 |

[4] Test carried out with a sphere with a diameter of 25 mm according to IEC 61730.




## THERMAL CHARACTERISTICS [5]

| | |
|---|---|
| NMOT [°C] | 45 +/-2°C |
| Temperature coefficient of electric current Alfa [%/°C] | 0,045 |
| Temperature coefficient of electrical voltage Beta [%/°C] | -0,285 |
| power temperature coefficient Gamma [%/°C] | -0,350 |

[5] NMOT value tested under the following conditions:
1. Air temperature Te, NOCT = 20 °C;
2. GNOCT irradiance = 800 W/m2; Wind speed 1 m/s;
3. Module placed on 37° inclined surface, therefore no thermal convection on the underside.

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The Company reserves the right to make changes to product specifications. This data sheet corresponds to the requirements of Standard EN50380.

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