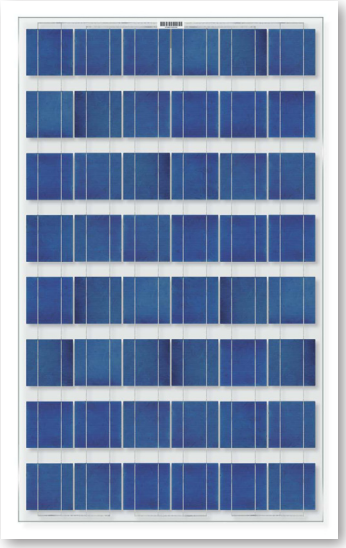
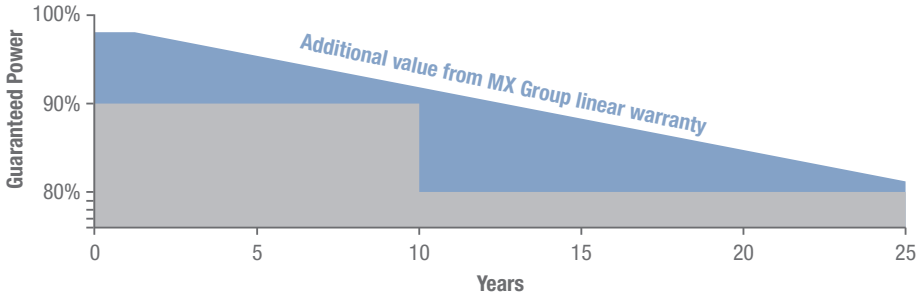
photovoltaic module **SUNCASE MX48**

MX Group
*industria fotovoltaica*

- **Cells**: Suncase MX48 module is composed of 48 high-efficiency multicrystalline PV cells, each measuring 156 mm x 156 mm, and connected in series.
- **Glass**: 4 mm thick with a low ferrous oxide content and specially treated surface that reduces reflectivity and optimizes light transmission to the PV cells as well as assuring protection from the elements.
- **Junction box**: the junction box has an IP65 protection level and it is completed with bypass diodes that provides the best guarantee from hot-spot damages. Cables and polarized connectors have an IP67 protection level.






## Certifications

**Suncase MX 48** photovoltaic module is manufactured in compliance with the following international standards:

- IEC 61215:2005 - Ed. 2
- EN 61730-2:2400/ EN 61730-2:2007

CE

TÜV INTERCERT ISO 9001 Certificate N° 09-0-00088-TIC
TÜV INTERCERT BS OHSAS 18001 Certificate N° 09-0-00088-TIC
TÜV INTERCERT ISO 14001 Certificate N° 09-E-00088-TIC

MX Group is ISO 9001:2008, ISO 14OO1:2004 and OHSAS 18001:2007 certified.

SUNMEET

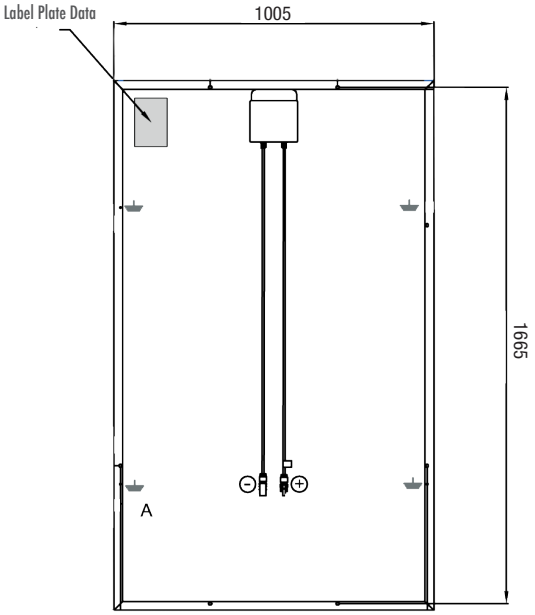
# photovoltaic module **SUNCASE MX48**

## Mechanical specifications

| | |
|---|---|
| Photovoltaic solar cells | Multicrystalline Silicon |
| Cell dimensions | 156 mm x 156 mm (6.14"x6.14") |
| Cell quantity | 48 |
| Layout | 6 x 8 |
| Front glass | High-transmittance |
| Glass thickness | 4 mm (0.46") |
| Cell encapsulation | EVA (Ethylene Vinil Acetate) |
| Back protection | PET multilayer |
| Frame | Extruded anodised aluminium |
| Juction box | 1 box IP65 with 3 bypass diodes |
| Cables and connectors | Unipolar cable 4 mm² MC4/MC3/ TYCO compliant |

| **Photovoltaic Module** | **Frameless** |
|---|---|
| Length | 1657 mm (65.24") |
| Width | 997 mm (39.25") |
| Thickness | 5 mm (0.19") |
| Weight | 9,5 Kg (lb. 42.99) |

## Back




## Electrical specifications

| **Suncase MX48** | **175** | **185** |
|---|---|---|
| Module Power $P_{max}$, W | 175 | 185 |
| Rated voltage $V_{mpp}$, V | 23.1 | 23.5 |
| Rated current $I_{mpp}$, A | 7.58 | 7.87 |
| Open circuit voltage $V_{oc}$,V | 29.2 | 29.4 |
| Short circuit current $I_{sc}$, A | 8.24 | 8.36 |
| Maximum system voltage, V | 1000 | 1000 |
| Module efficiency % | 12.5 | 12.8 |
| Cell efficiency % | 14.4 | 14.7 |

Power measurements are within -0/+4.99W of the indicated values.
Any other electrical characteristics is within -/+5% of the indicated values.
The values refer to Standard Test Conditions (STC): Irradiation 100 W/m²; AM 1.5; temperature 25°C (77° F).

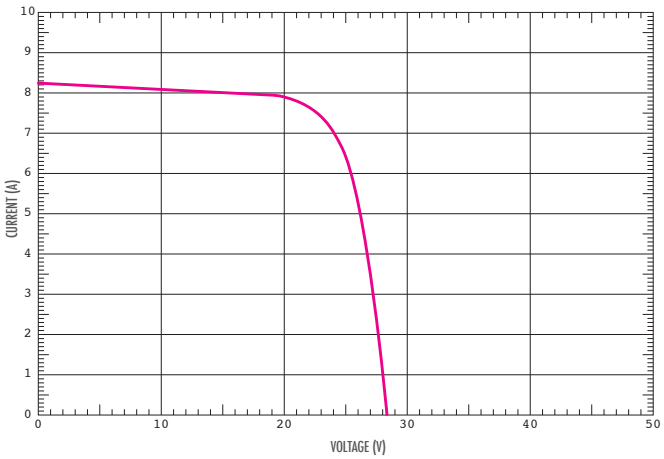
## Information

- Operating temperature range from -40°C to +85°C
- Hail impact: diameter of 28 mm with impact speed of 86 Km/h
- Fire rating Class C. Application Class A – Electrical safety class II
- MX Group guarantees the power of the module to be at least 90% of the initial value up to 10 years and at least 80% up to 25 years.
- **10 years warranty from manufacturing defects**

N.B.: The MX48 module is supplied without a frame: the maximum surface load tolerance and the warranty are therefore only valid if the modules are mounted in compliance with the guidelines provided in the installation manual.

## Graphs of Energetic Behaviour

PHOTOVOLTAIC MODULE SUNCASE MX48 (performance at different solar radiations)




| | |
|---|---|
| Temperature coefficient of open circuit voltage | -0,110 V/°C (-0,375%/°C ) |
| Temperature coefficient of short circuit current | 2,39 mA/°C (0,028%/°C ) |
| Temperature coefficient of power | -0,82 W/°C (-0,46%/°C ) |
| NOCT (±3,5°C) | 44°C |

The specifications are subject to change without notice.



Ed. June 2012

MX Group industria fotovoltaica

MX Group S.p.A.
Via San Fiorano, 85
20852 Villasanta (MB) Italia
T.+39 039 234 03 00 - F.+39 039 234 03 04
www.mxgroup.it - info@mxgroup.it