

## MORE POWER LESS SPACE

The **H900** photovoltaic module is one of the highest power density modules available in the market, (90 Watts in just 0.7 square metres) due to advanced manufacturing process and high efficiency I-Max® monocrystalline cells.

I-Max® Technology, developed by Helios for its range of high efficiency modules, increases current output by 10-17% at operating battery voltage.

Although very effective in grid connected installations, because of its power output and compact lightweight design, it is even more effective in battery charging applications such as stand alone, rural electrification and telecommunications. They are even more efficient where space is limited and more average power is required such as RV and marine markets.

The **H900** comprise 36, 135x135 mm I-Max® high efficiency monocrystalline cells. They are suitable for single or multiple module systems, providing power in virtually any climate, under the toughest environmental and operating conditions.

Every single cell and module is tested throughout the manufacturing process in order to guarantee at least 30 years effective service life.

Easy and practical interconnection, optimise voltage and current configurations for grid-connected and stand alone systems. Heavy-duty anodised aluminium frame design makes these modules safe, easy and quick to install in many field situations.

**H900** module is covered by ISPRA IEC 61215 homologation.

### Guaranteed power ≥ 80% 25 years

Relative humidity up to 100%

Dimensions 565 x 1250 x 34 mm ±1 mm

Weight Kg. 9.44

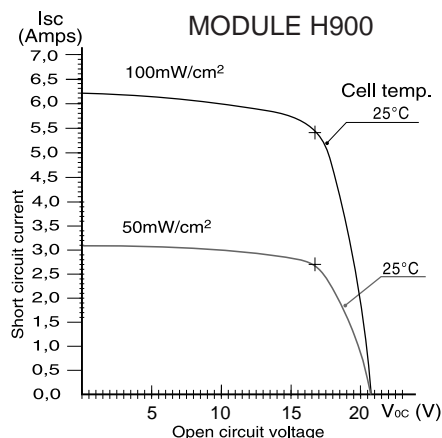
Tolerance on technical data: ± 5%

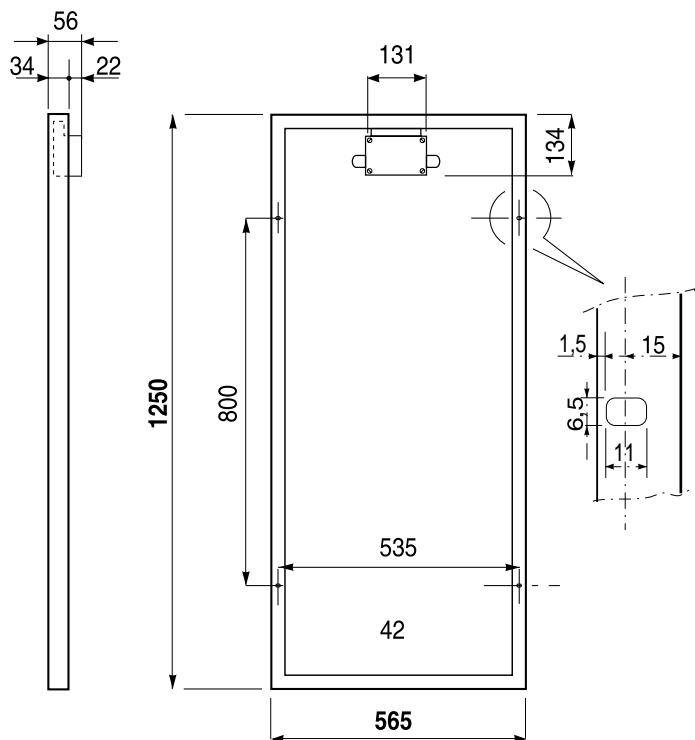


**H900/90W**

## ELECTRICAL SPECIFICATIONS (at 100 mW/cm<sup>2</sup>, 25°C, AM 1,5) MODULE H900

Peak Power (Wp)	Watts	90
Short circuit current (Isc)	Amps	6.2
Open circuit voltage (Voc)	Volts	20.7
Voltage at maximum power (Vmp)	Volts	16.7
Current at maximum power (Imp)	Amps	5.4
<b>Typical Current at battery operating voltage (12-13.8 V)</b>	<b>Amps</b>	<b>5.7</b>
NOCT (Nominal operating cell temperature)	°C	43±2
Change of Voc with temperature β	mv/°C	-90
Wind loading or surface pressure	N/m <sup>2</sup>	2400 (200 km/h equiv.)
Hailstone Impact Resistance	24 mm	at 80 km/h
Storage and operating temperature	°C	from -40 to +95
Maximum System Voltage	Volts	1000





Tolerance  $\pm 1\text{mm}$

## MODULE PHYSICAL FEATURES

Helios modules incorporate the latest manufacturing technologies, and extensive experience gained in the field as well as many professional installer suggestions.

The result is a module frame with 4 mounting holes unmatched in the market for its practical design and attention to detail, making Helios modules the most adaptable, quick and easy to install.

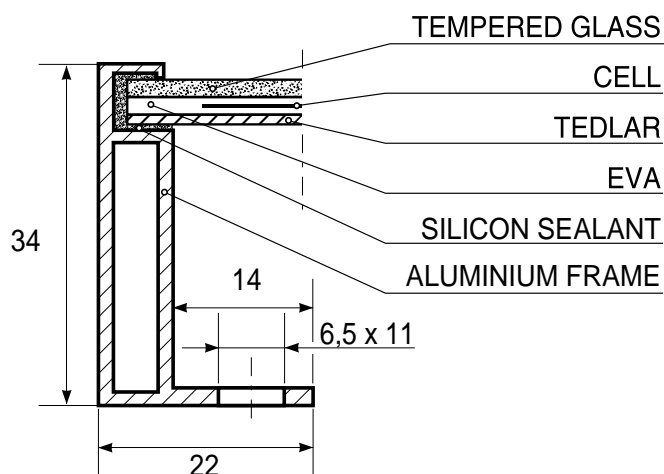
The corner/frame assembly system devised by Helios since 1982 has proven very effective in providing perfect electric continuity within the frame components for better safety on high voltage systems.

## MODULE CROSS SECTION

The cells are laminated between sheets of ethylene vinyl acetate (EVA), tempered glass and Tedlar, which offers an ideal weatherproof package against moisture and saline corrosion.

The high transparency, low iron, antireflection tempered glass is secured in the frame by silicon sealant providing protection against environmental and mechanical effects.

The high insulation between the cells and frame minimise current leakage so crucial in major PV high voltage installations where such leakage is the cause of major power losses.



## JUNCTION BOX

A waterproof, high capacity junction box with protection grade IP65 contains two by-pass diodes and oversized connecting terminals. The junction box is equipped with two PG11 cable glands for easy interconnections. Always with the installers in mind:

1. All screws can be easily tightened using flat or star screwdrivers.
2. Cover screws are prevented from falling off even when loose.
3. All covers are hooked to the junction box, for easy handling and maintenance.
4. All connections are soldered for longer life.
5. The junction box components are PC board mounted, for easy replacement in case of damage by lightning.



Helios Technology reserves the right to change the technical features without notice.