

## OUR SERVICES

- Provision of Solar Modules and Solar Power Systems
- Systems Solutions & Consultancy
- Systems Installation Services

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**TOPSCOM**  
TECHNOLOGY SOLUTIONS

[www.topscm-solar.com](http://www.topscm-solar.com)

## Helios-series Solar Module

A solar module is an essential part of a Solar Power System, regardless of a Grid-connected System or Off-grid System. Hence, it is crucial that performance, safety, reliability must be considered factors when choosing a solar module.

The Helios-series Solar Module offers a unique blend of features and innovative technologies yielding a product with excellent performance and quality that makes it a safe and reliable choice.

Helios-series Solar Module – an ideal investment choice that reaps returns.



## Features

- High efficiency and reliable solar cells ensure best performance
- Excellent output power under high temperature operation

## Quality

- Advanced EVA encapsulation system with triple-layer backsheet meets the most stringent safety requirements for HV operation
- Anodized AL frame allows modules to be mounted on various standard racking systems and to withstand harsh conditions
- Ultra reliable bypass diodes prevent damage through overheating due to shaded or defective cells
- Innovative, environmentally-friendly packing method ensures modules arrive in good condition
- New frame design incorporating hexagonal shaped drainage holes offers flexible installation

## Benefits

- Manufactured in an ISO9001:2000 certified facility insures quality and confidence
- Highly efficient, safe, reliable and stable performance means minimal maintenance required
- Tight tolerance of  $\pm 3\%$  in output power variation achieves optimal system performance

# Product Information

## Specifications (150 – 190 W)

Model Number	H-190/48S	H-180/48S	H-170/48S	H-160/48S	H-150/48S
Peak Power (Pmax)	190W	180W	170W	160W	150W
Cell Type	Poly Crystalline Silicon, 156mmx156mm				
Cell Configuration	54 cells	48 cells in series			
Max. Power Voltage (Vmp)	26.50V	23.50V	23.00V	23.00V	23.00V
Max. Power Current (Imp)	7.17A	7.66A	7.39A	6.95A	6.52A
Open Circuit Voltage (Voc)	32.90V	29.04V	29.00V	29.00V	29.00V
Short Circuit Current (Isc)	8.10A	8.10A	8.10A	7.80A	7.50A
Max. System Voltage	DC 1000V				
Temperature Coefficient of Isc (TK Isc)	0.065 %/°C				
Temperature Coefficient of Voc (TK Voc)	- 0.346 %/°C				
Temperature Coefficient of Pmax (TK Pmax)	- 0.488 %/°C				
Normal Operating Cell Temperature	45.3 ±2°C				
Weight	18.0kg	15.6kg			
Dimensions	1476x992x50mm	1324x992x50mm			

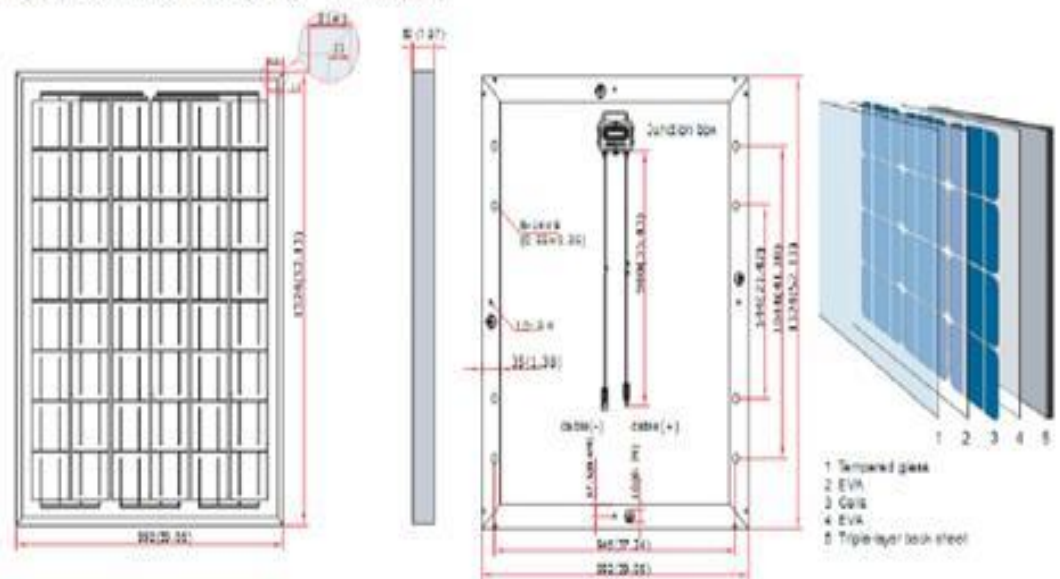
Note: Specifications are obtained under the Standard Test Conditions (STCs): 1000W/m<sup>2</sup> Solar Irradiance, 1.5 Air Mass Index and Cell Temperature of 25°C.

### A GREEN MESSAGE

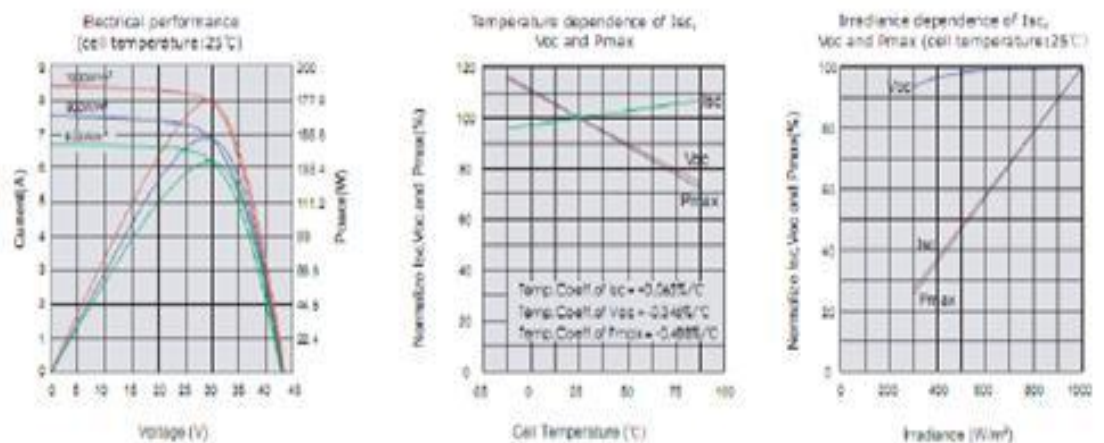
Using renewable solar energy enables us to reduce the use of fossil fuels to generate energy. Fossil fuel energy generation pollutes our environment. You are empowered to help. Do your part. Be a responsible global citizen. **SAVE GAIA.**



### PHYSICAL CHARACTERISTICS Unit:mm (inch)



### ELECTRICAL CHARACTERISTICS



All data presented herein are general information only.

Manufacturer shall not be responsible for any data variation resulting from subsequent engineering improvements.  
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