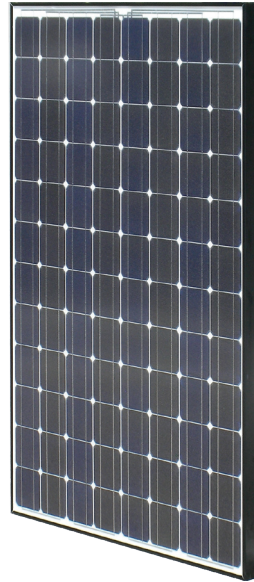


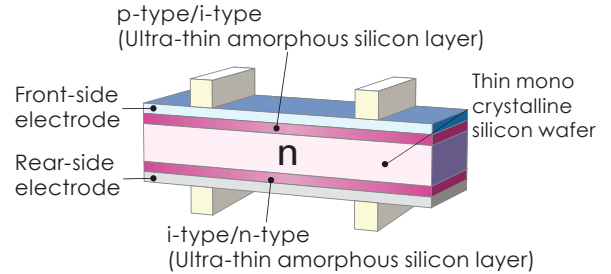
# HIT Photovoltaic Module

**HIT** Power 190  
Photovoltaic Module

**Module Efficiency: 16.4%**  
**Cell Efficiency: 18.8%**  
**Power Output: 190 Watts**



## SANYO HIT® Solar Cell Structure



### High Efficiency

HIT® Power solar panels are leaders in sunlight conversion efficiency. Obtain maximum power within a fixed amount of space. Save money using fewer system attachments and racking materials, and reduce costs by spending less time installing per watt.

### Power Guarantee

SANYO's power ratings for HIT Power panels guarantee customers receive 100% of the nameplate rated power (or more) at the time of purchase, enabling owners to generate more kWh per rated watt, quicken investment returns, and help realize complete customer satisfaction.

### Temperature Performance

As temperatures rise, HIT Power solar panels produce 10% or more electricity (kWh) than conventional crystalline silicon solar panels at the same temperature.

### Proprietary Technology

HIT solar cells are hybrids of single crystalline silicon surrounded by ultra-thin amorphous silicon layers, and are available solely from SANYO. HIT Power models are ideal for grid-connected solar systems, areas with performance based incentives, and renewable energy credits.

### Structural Strength

HIT Power panels have a double-wall black anodized aluminum frame for extra strength, and are tested to 60PSF. The panels come pre-equipped with a touch-safe junction box, USE-2 outdoor rated cables, MC4™ locking connectors, and are UL 1703 safety rated for wind, hail, and fire.

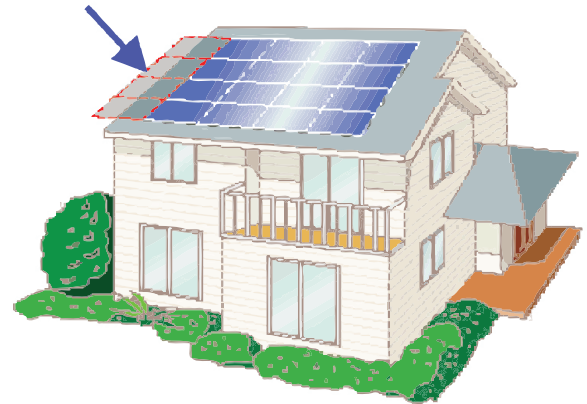
### Valuable Features

HIT Power solar panels operate silently, have no moving parts and are among the lightest per watt in the industry. Unique eco-packaging minimizes cardboard waste at the job site. The packing density of the panels reduces transportation, fuel, and storage costs per installed watt.

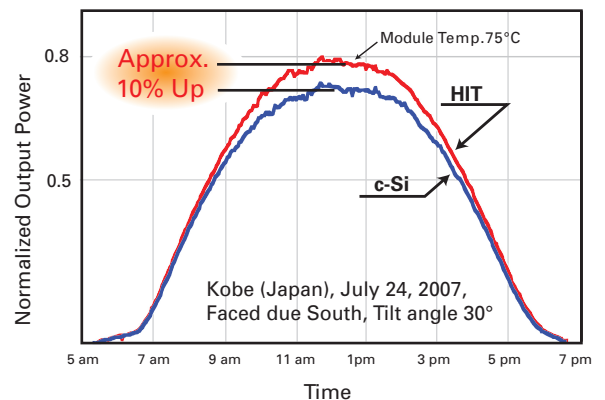
### Quality Products

SANYO silicon wafers located inside HIT solar panels are made in California, USA, and the panels are assembled in an ISO 9001 (quality), 14001 (environment), and 18001 (safety) certified factory. The panels have a Limited 20-Year Power Output and 5-Year Product Workmanship Warranty.

## Unnecessary Section When Using SANYO



## Increased Performance with SANYO



## Electrical Specifications

Model	HIT Power 190 or HIP-190BA19
Rated Power (Pmax) <sup>1</sup>	190 W
Maximum Power Voltage (Vpm)	54.8 V
Maximum Power Current (Ipm)	3.47 A
Open Circuit Voltage (Voc)	67.5 V
Short Circuit Current (Isc)	3.75 A
Temperature Coefficient (Pmax)	-0.30% / °C
Temperature Coefficient (Voc)	-0.169 V / °C
Temperature Coefficient (Isc)	0.86 mA / °C
Cell Efficiency	18.8%
Module Efficiency	16.4%
Watts per Ft. <sup>2</sup>	15.2 W
Maximum System Voltage	600 V
Series Fuse Rating	15 A
Warranted Tolerance (-/+)	-0% / +10%

## Mechanical Specifications

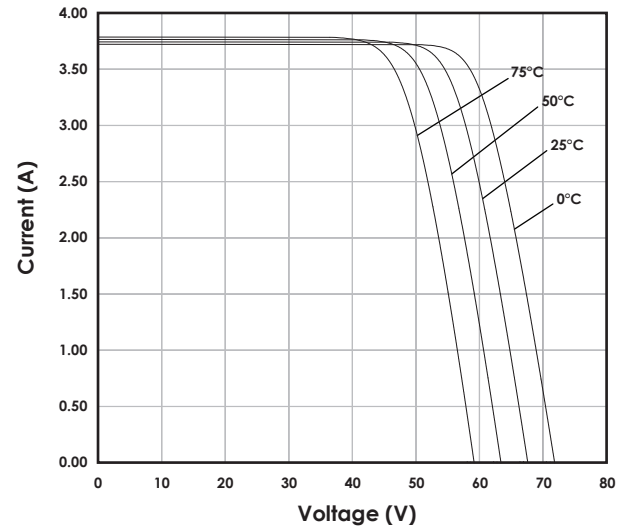
Internal Bypass Diodes	4 Bypass Diodes
Module Area	12.49 Ft. <sup>2</sup> (1.16m <sup>2</sup> )
Weight	33.07 Lbs. (15kg)
Dimensions LxWxH	51.9x34.6x1.8 in. (1319x880x46mm)
Cable Length -Male/+Female	30.7/24.8 in. (780/630mm)
Cable Size / Connector Type	No.12 AWG / MC4™ Locking Connectors
Static Wind / Snow Load	60PSF (2880Pa) / 39PSF (1867Pa)
Pallet Dimensions LxWxH	53x35x77 in. (1346x897x1952mm)
Quantity per Pallet / Pallet Weight	34 pcs. / 1102 Lbs. (500kg)
Quantity per 20', 40', and 53' Container	340 pcs., 714 pcs., 918 pcs.

## Operating Conditions & Safety Ratings

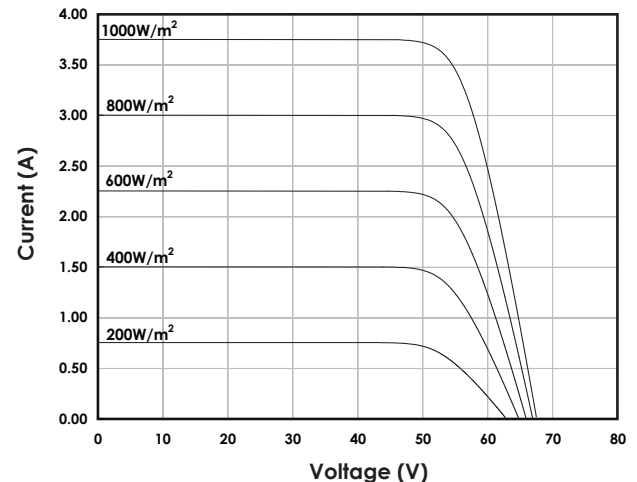
Ambient Operating Temperature	-4°F to 115°F (-20°C to 46°C) <sup>2</sup>
NOCT	116.4°F (46.9°C)
Hail Safety Impact Velocity	1" hailstone (25mm) at 52 mph (23m/s)
Fire Safety Classification	Class C
Safety & Rating Certifications	UL 1703, cUL, CEC
Limited Warranty	5 Years Workmanship, 20 Years Power Output

<sup>1</sup>STC: Cell Temp. 25°C, AM1.5, 1000W/m<sup>2</sup> <sup>2</sup>Monthly average low and high of the installation site.  
**Note:** Specifications and information above may change without notice.

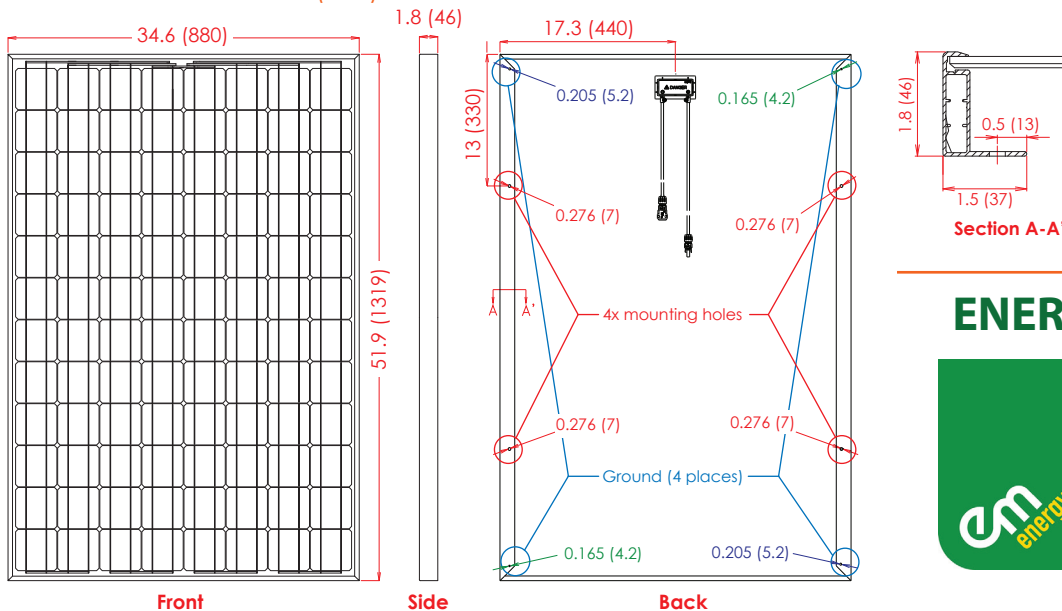
## Dependence on Temperature<sup>1</sup>



## Dependence on Irradiance<sup>1</sup>



## Dimensions Unit: inches (mm)



**CAUTION!** Read the operating instructions carefully before use of these products

## ENERGY MATTERS



63 - 69 Market St  
 South Melbourne  
 Australia, Vic 3205  
 Tel: +61 3 9697 1900  
 Fax: +61 3 9697 1900  
[www.energymatters.com.au](http://www.energymatters.com.au)  
[info@energymatters.com.au](mailto:info@energymatters.com.au)