

SOLAR ROOF TILES

The Solar Roof Tile is an excellent combination of photovoltaic components and slates. The base slate as part of the structural materials, is the carrier of photovoltaic components and it is made of synthetic materials. With advantages of high strength, anti-aging, corrosion resistance, no radiation and easy installation.

At the same time with making full use of sloping roof for power generation, it gives building the beauty of modern technology and achieves a unity of both function and aesthetic.



Specification of Solar Roof Tiles

- Size: 490(L) x 360(W)mm
- Thickness: 7mm
- Weight: 3.7Kgs
- Batten space: 290mm
- Headlap: 70mm
- Warranty: 15 years



15W Solar Roof Tile – Front View

Specification of Solar Module

■ Electrical Characteristics

Maximum power (Pmax) at STC	15W
Voltage at maximum power(Vmp)	3.07 V
Current at maximum power(Imp)	4.924 A
Open Circuit Voltage (Voc)	3.7V
Short Circuit Current (Isc)	5.3 A
Maximum system voltage	600 V

Note: STC: Irradiance 1000W/m²,
module temperature 25°C, AM=1.5



15W Solar Roof Tile – Back View

CHING HAN TECHNOLOGY CO., LTD.

10F-23, No. 6, Lane 180, Sec. 6, Min-Chuan East Road, Taipei, Taiwan, R.O.C.

Tel: +886-2-27922640

Fax: +886-2-27922690

E-mail: chinhan.tech@msa.hinet.net

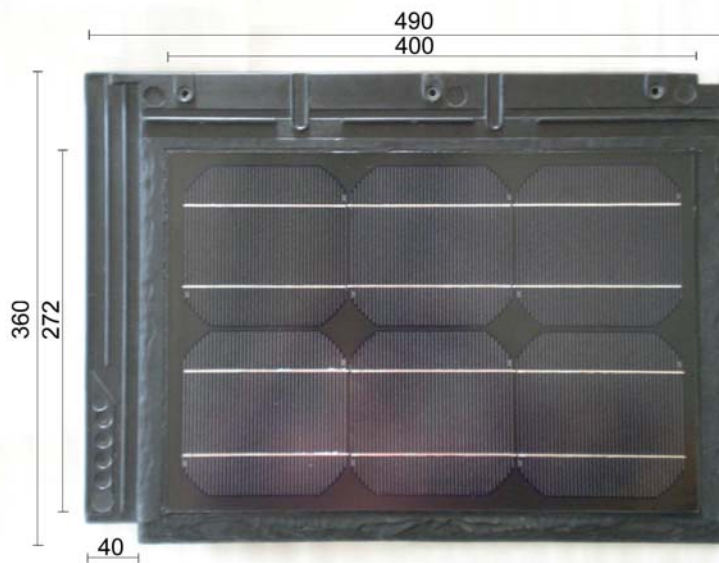
■ Temperature Coefficients

NOCT (°C)	46 ±2
Open circuit voltage Voc (%/°C)	-0.38
Short circuit current Isc (%/°C)	+0.1
Maximum power Pmax(%/°C)	-0.47
Maximum power current Imp (%/°C)	+0.1
Maximum power voltage Vmp (%/°C)	-0.38
Operating Temperature (°C)	-40 to +80

■ Mechanical Characteristics

Active Material of Cell	6pcs x Monocrystalline silicon (125 x 125mm)
Dimensions of solar module	400(L) x 272(W) mm

Dimension



Unit mm

Accessory



Barge Board



Ridge Unit



Terminal Ridge-1



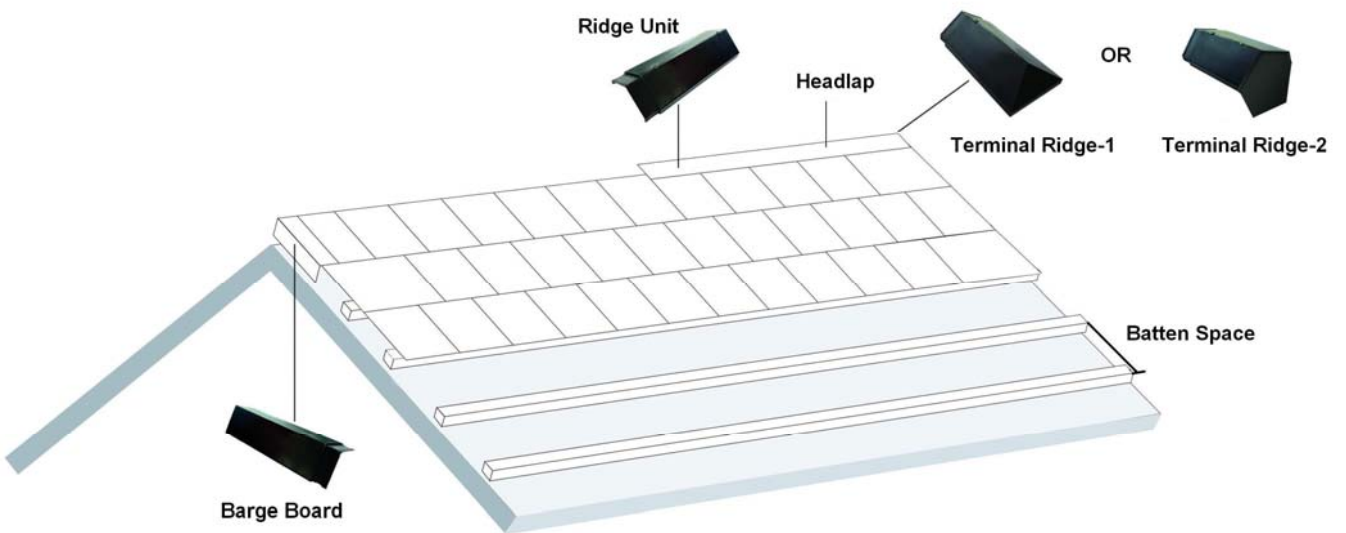
Terminal Ridge-2



Multi-connector



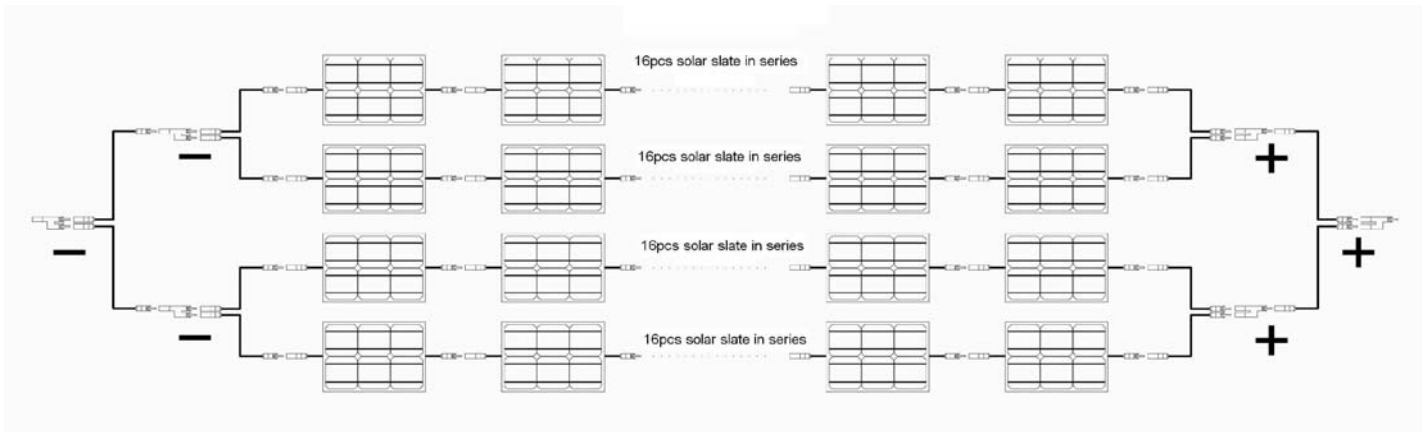
Connection Cable (1pc)



Connection Diagram for 1kW system

16pcs solar tiles in series, totally 64 solar tiles are needed for 1kW system.

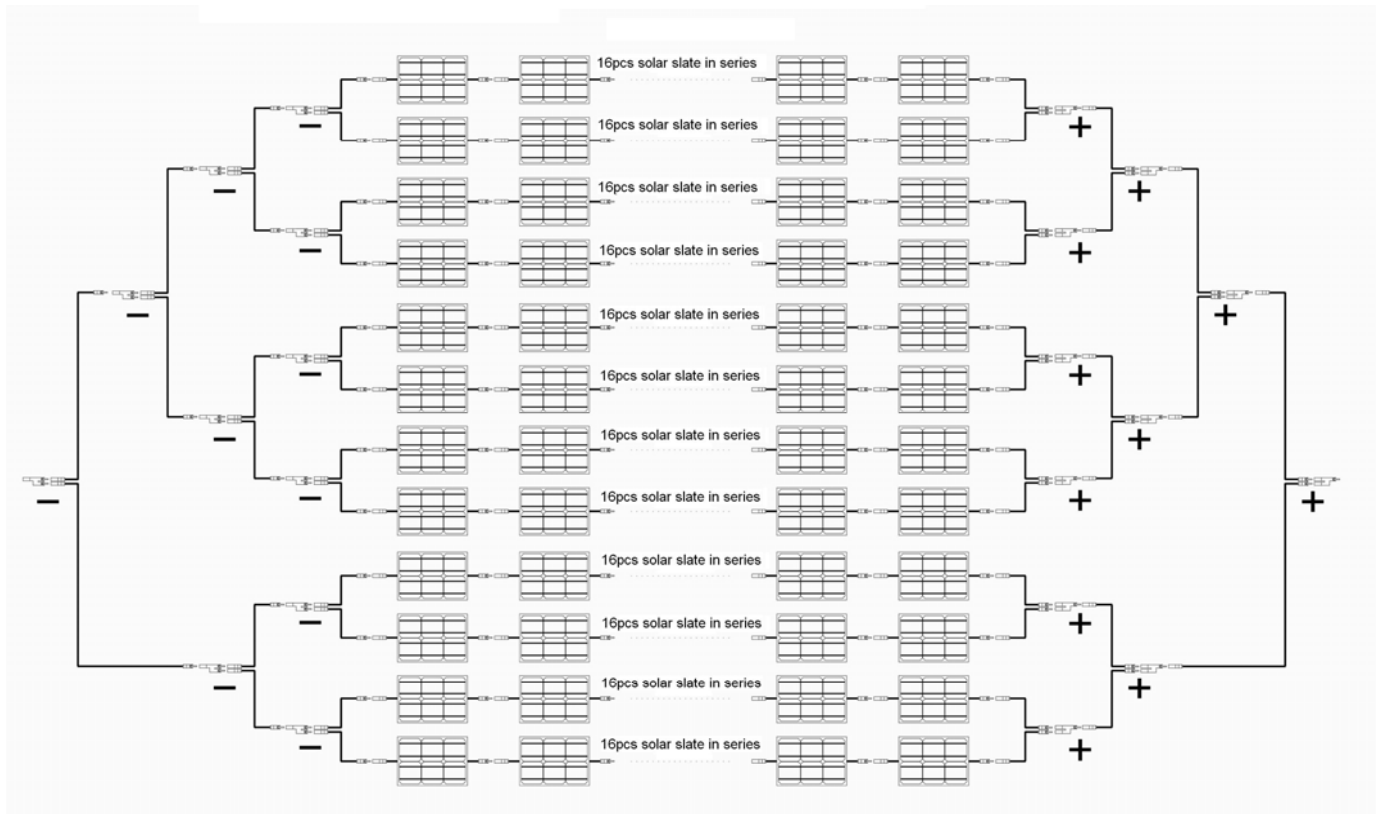
System output voltage: 48V



Connection Diagram for 3kW system

16pcs solar tiles in series, totally 192 solar tiles are needed for 3kW system.

System output voltage: 48V



Every 1kW can generate about 3kWh per day. The quantity of solar tiles required for one house depends on the power of household appliance. For example, if a family use 10 kWh one day, then the power of solar tiles should be more than 3000 watts and about 250pcs of solar tiles will be needed.