

100 Watts Hot Plate to Liquid type Thermoelectric Power Generator

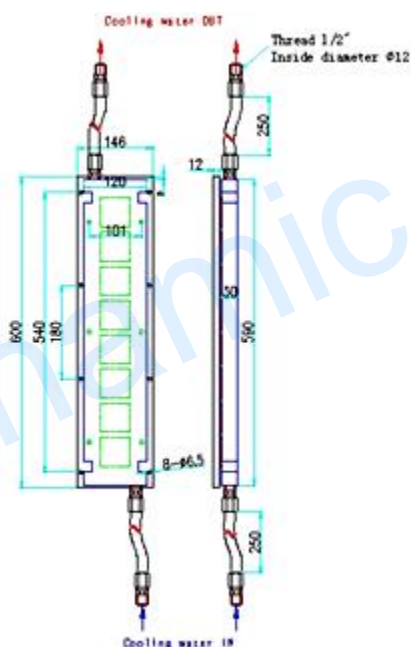
Description

The below is a 100 watts thermoelectric power generator designed for mounting on a flat hot surface to generate the electricity. The cooling of the generator is by circulated water. The generator can be attached to the outside hot plate of a heater to convert its waste heat to generate electricity. The thermoelectric power generator consists of 8 pcs thermoelectric modules, one aluminum plate used for collecting heat and a liquid cooling block. The aluminum plate conducts the heat from the heat source surface to the hot side of the thermoelectric module. The heat flowing through the thermoelectric modules of the generator is dissipated by liquid like water. Higher heat source temperature will generate higher output power and voltage.

The generator is installed with 8 pcs 56 mm× 56 mm modules connected in series. With 30 °C cooling water flow-in in 1.2 liter / min, the generator can generate 100 watts if its hot plate is heated up to 270 °C. Its output with different hot plate temperature is plotted as below. The generator features with light in weight, no noise, no vibration, reliability and easy installation.



100 Watts Output Thermoelectric Power Generator

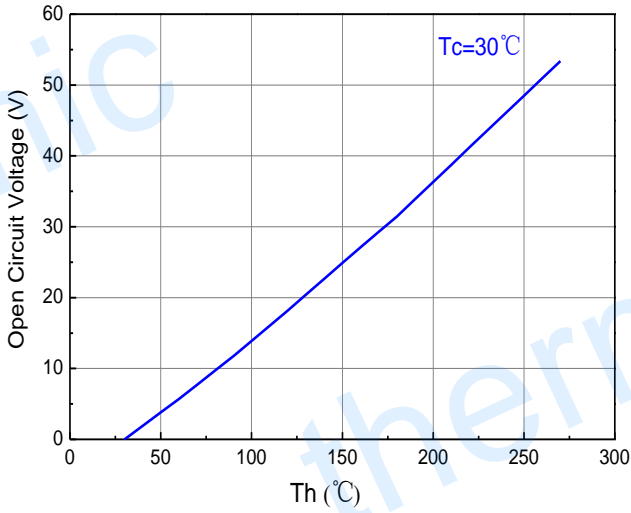


100 Watts Output Thermoelectric Power Generator Diagram

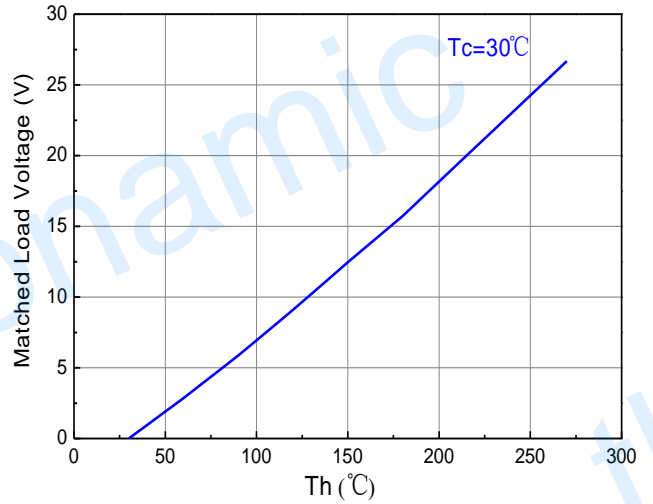
Specifications:

Part Number	TEG-HL100-24V
Matched output power / W	100
Open circuit voltage / VDC	48
Matched load output Voltage / VDC	24
Matched load output current / A	4.2
Hot side temperature / °C	270
Input Water Temperature and Input Rate/ liters/min	30°C/1.2
Specifications the inlet/ outlet pipe	G1/2"
Dimension of the unit / mm	600 × 146 × 57
Weight / Kg	7.8

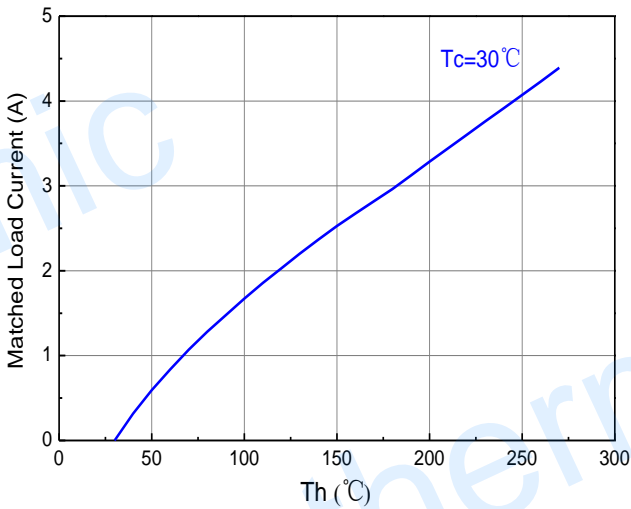
Performance Curves of the Generator



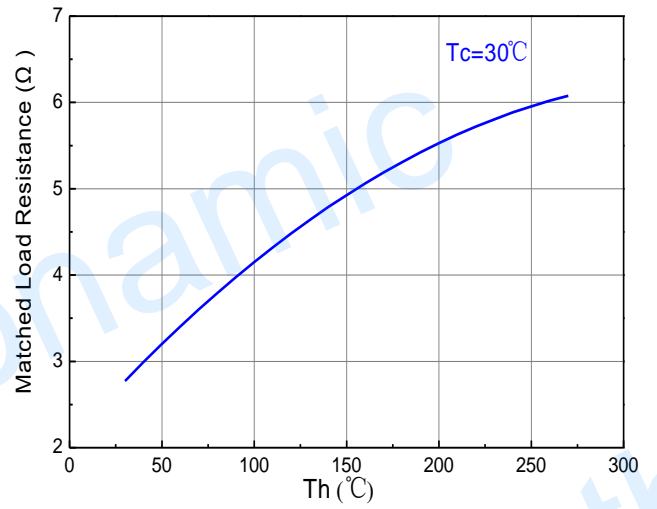
The chart for open circuit voltage Vs Th under Tc=30°C input water temperature



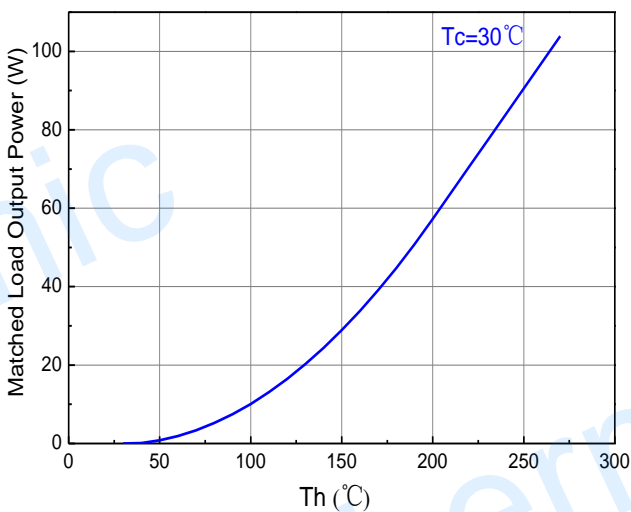
The chart for matched load voltage Vs Th under Tc=30°C input water temperature



The chart for matched load current Vs Th under Tc=30°C input water temperature

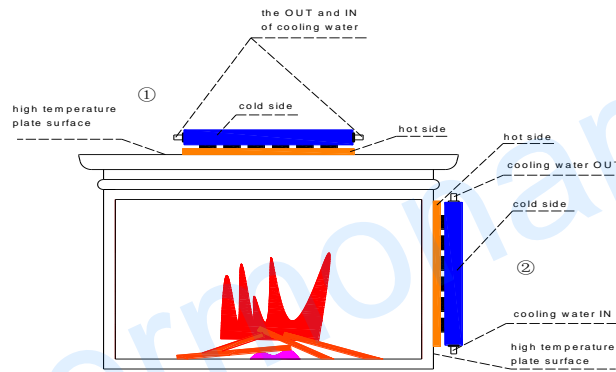


The chart for matched load resistance Vs Th under Tc=30°C input water temperature



The chart for matched load output power Vs Th under Tc=30°C input water temperature

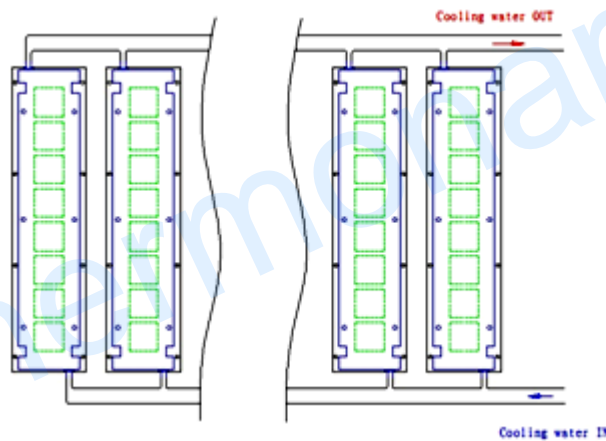
How To Use :



The generator can be fixed at the top of high temperature heat source plate surface as shown ① or at the side as shown ② .

Instructions in use

1. There are eight mounting holes in the hot plate of the generator, please fix to flat surface of heat source by screws.
2. If the generator is put in the vertical direction, it is better to let the cooling liquid flow from the inlet in the bottom and out from the outlet on its top.
3. You can install a lot of units for larger output power. If you install 10 units, it can generate 1000 watts. Please see below.



Notes

Please drain the water when you do not use to keep dry.

Packing List

- | | |
|---------------------|----------|
| 100 Watts generator | one set |
| Water pipe | two sets |

Serial Number

Date	
NO.	