

Thermoelectric Generators

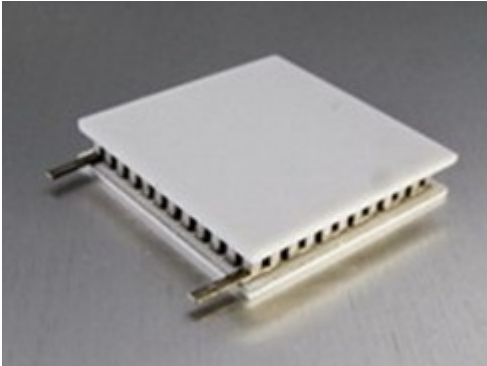


Figure 1.1. The Photo of TEG

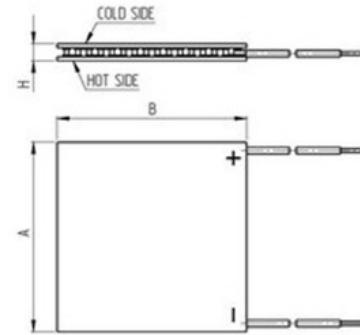


Figure 1.2. The Photo of TEG

System of Notation

An universal abbreviation is used to notate generating modules: ATEG-N-C-H, where:

ATEG — product abbreviation — thermoelectric generating module;

N — the number of the pairs of thermocouples in the module;

C — the height of the thermoelectric element (in millimeters);

H — the power of the product

For example, in the ATEG-127-3R1-1R4: there are 127 pairs of thermocouples. The height is 3.1 mm and the power is 1.4 W.

Application Recommendations:

1. Generating modules (ATEG) must be installed on flat surface. This requirement is especially vital for the cold side of ATEG. The purity of surface processing on which ATEG is installed must be better than 20 microns.
2. The pressing force must be not less than 12-15 kg/cm²
3. Temperature of the hot seam shall not exceed 200 °C

Attention! During the exploitation of ATEG with the decrease of electric load an increase of the hot seam temperature up to 5% off the difference between hot and cold sides of the module can follow.

Part number	Geometrical dimensions (mm)			Cold side= 50°C Hot side = 150°C					
	A	B	H	R _{IN}	R _{Heat*}	U	I	P	Efficiency
				Ohm	K/W	V	A	W	%
ATEG-127-3R1-1R4	30	30	3.1	2.41	1.4	1.83	0.76	1.38	2.3
ATEG-127-3R6-1R2	30	30	3.6	3.92	2.27	2.18	0.56	1.21	2.7
ATEG-127-4R8-R8	30	30	4.8	7.53	4.36	2.55	0.34	0.86	3.2
ATEG-127-3R9-2	40	40	3.9	2.46	1.43	2.25	0.91	2.05	2.8
ATEG-127-4R8-1R6	40	40	4.8	3.84	2.23	2.5	0.65	1.63	3.2
ATEG-199-3R2-2R5	40	40	3.2	1.93	0.45	2.19	1.14	2.49	1.8
ATEG-199-3R6-2R5	40	40	3.6	2.89	0.68	2.69	0.93	2.5	2.2
ATEG-199-3R9-2R4	40	40	3.9	3.85	0.91	3.03	0.79	2.39	2.4
ATEG-287-3R6-2R3	40	40	3.6	8.85	1	4.54	0.51	2.33	2.5
ATEG-287-3R8-2R2	40	40	3.8	10.2	1.16	4.77	0.47	2.23	2.7
ATEG-287-4R8-1R8	40	40	4.8	17	1.93	5.49	0.32	1.77	3.1

Note: R_{IN} refers to the internal resistance.



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