

Specification of CuSbS-Based Thermoelectric Ingot (TIG-CuSbS-P-1)

Description

The CuSbS-based thermoelectric ingot is grown by the Thermonamic with the alloy of Cu, Sb,S and others , and our unique crystallizing processes. The CuSbS-Based thermoelectric ingot is used to fabricate the modules for power generation, good for converting 600~1000 K heat sources into electricity. The peak dimensionless figure of merit (ZT) of our p-type ingots is larger than 1.1 around 850 K, and good for waste heat recovery. Meanwhile, our ingot is featured with good mechanical strength and highly stable property, providing the key elements for producing the high performance and reliable power generation modules used for middle temperature range heat sources.

Features

- Silver-gray Color
- p-Type ingot $ZT \geq 1.1 @ 850 \text{ K}$

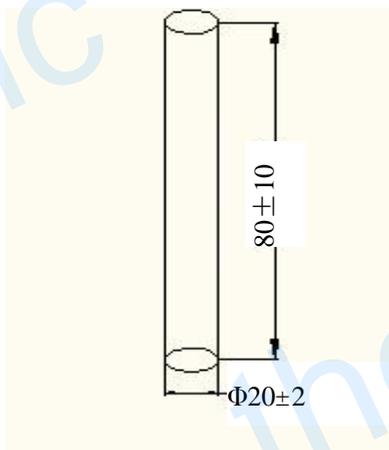
Application

- High performance and reliable power generation modules

Performance Specification Sheet

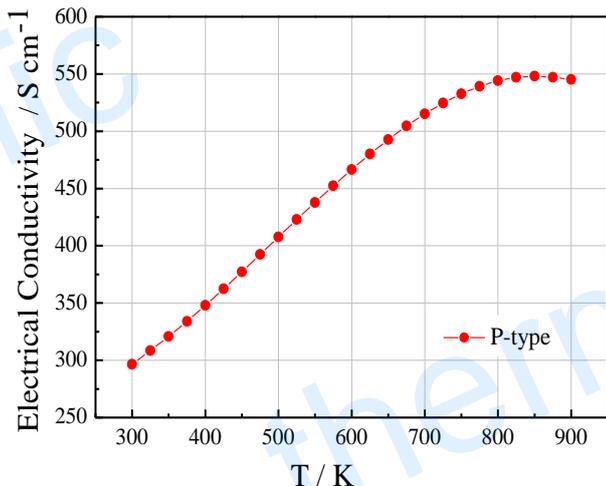
Performance Specification	p-Type	Note
Part Number	TIG-CuSbS-P-1	
Diameter (mm)	20 ± 2	
Length (mm)	80 ± 10	
Weight (g)	200 ± 20	
Electrical Conductivity σ (10^2Sm^{-1})	300 ~ 540	300 ~ 900 K
Seebeck Coefficient α (μVK^{-1})	150 ~ 200	300 ~ 900 K
Thermal Conductivity ($\text{Wm}^{-1}\text{K}^{-1}$)	1.4~ 1.8	600 ~ 900 K
Power Factor P (WmK^{-2})	≥ 0.0016	600~900 K
Peak Dimensionless ZT value	≥ 1.1	850 K

Geometric Characteristics (in millimeters)

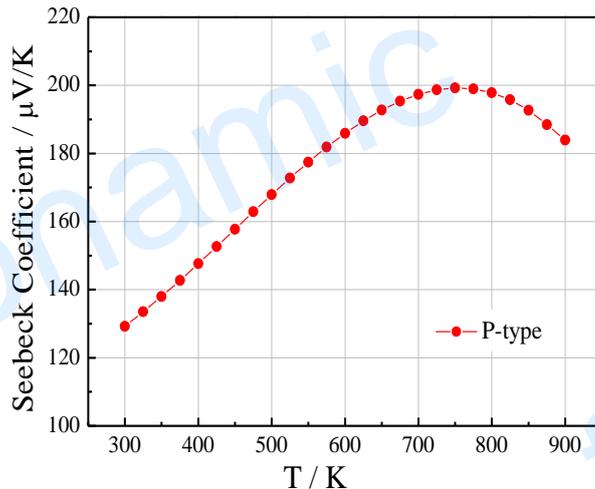


P-type Ingot

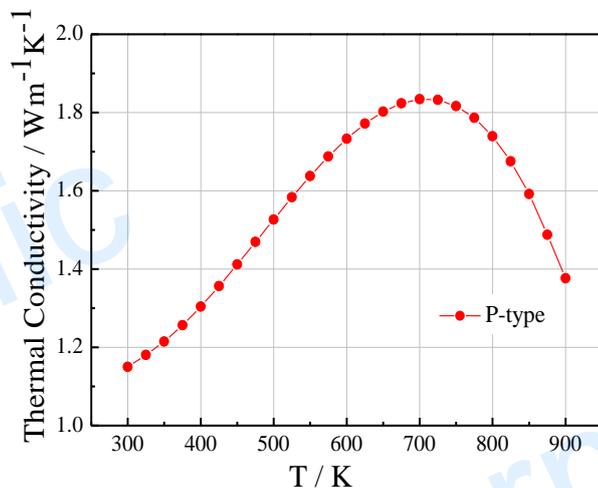
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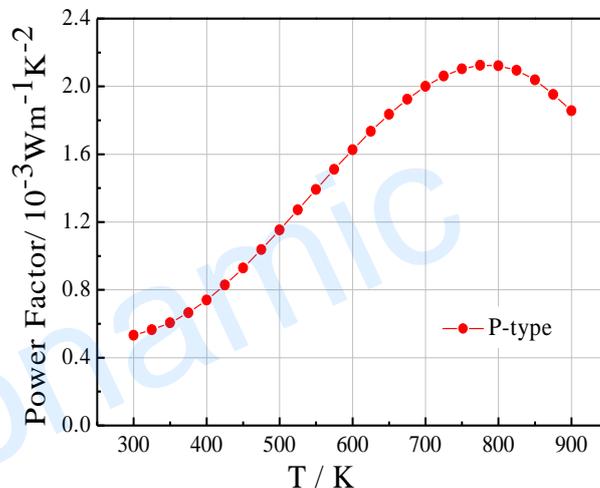
Electrical conductivity of the CuSbS-based ingot



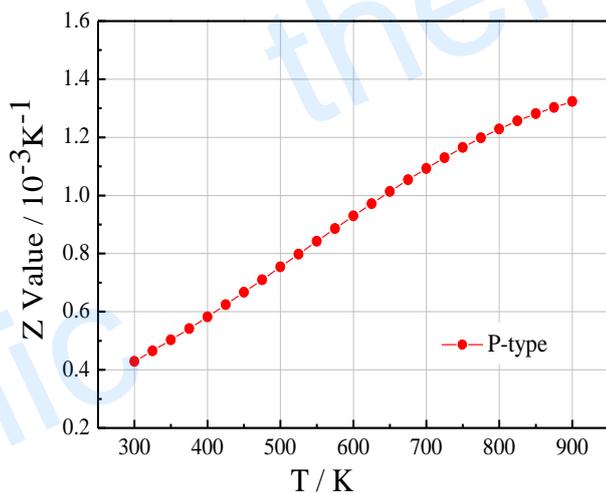
Seebeck coefficients of the CuSbS-based ingot



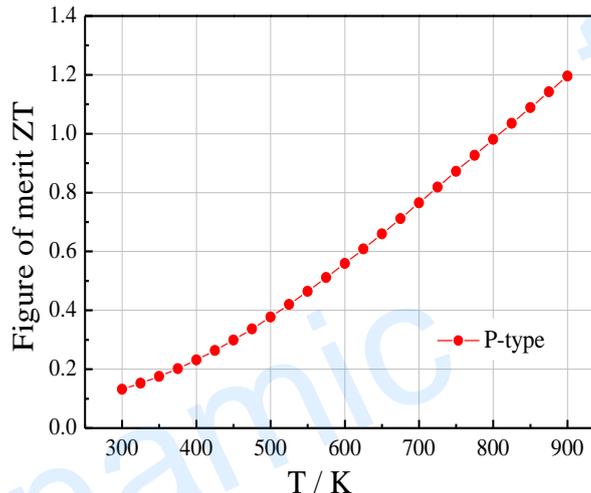
Thermal conductivity of the CuSbS-based ingot



Power factors of the CuSbS-based ingot



Z values of the CuSbS-based ingot



ZT values of the CuSbS-based ingot

Operation Cautions

- Caution on handling
- Storage in dry environment

Remarks:

All measurements are performed in the temperature range from 300 to 900 K.

Creative technology with fine manufacturing processes provides you the reliable and quality products.

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