

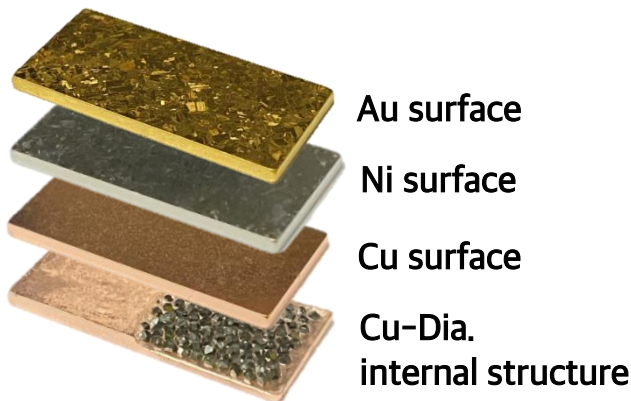
● Applications

- 5G wireless communication
- Military & aero space communication
- Server, Internet switch, ASIC, Wearables

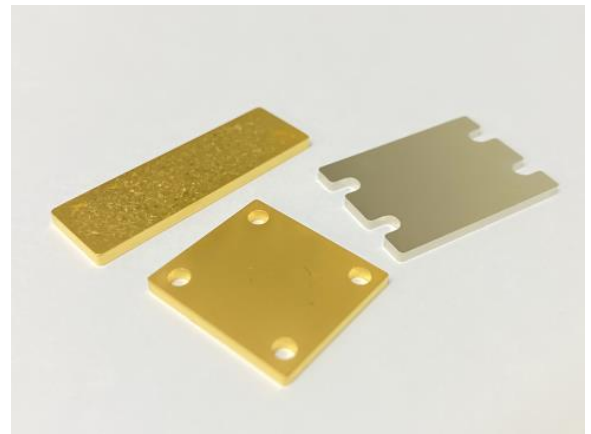
● Features

- High Thermal Conductivity: >700 W/mK
- Low CTE: < 9 ppm/K @ RT
- High reliability

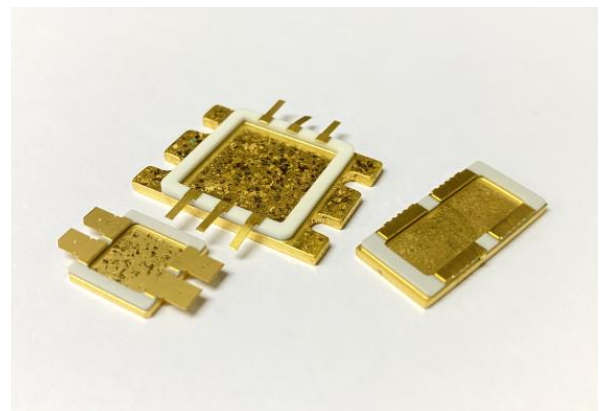
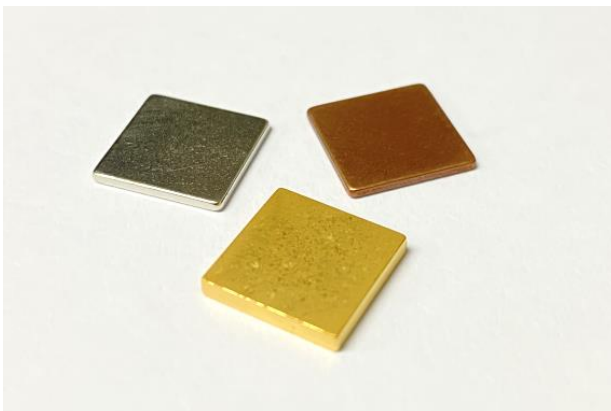
● Structure



● Hole, Ear, Rectangular type



● Surface finishing : Cu, Ni, Au ● Ag-Brazing (800°C) is available



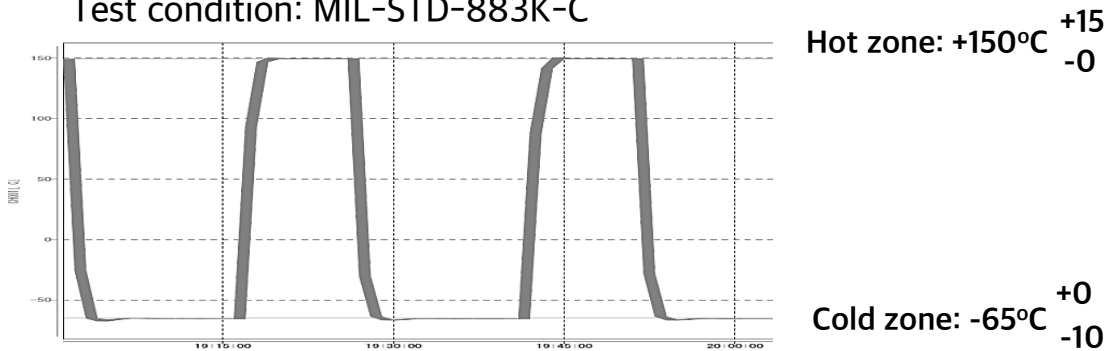
● Properties of Cu-Diamond heat spreader

- *arCuDia = arcadia = utopia
- *SbS (Strain-balanced Structure)

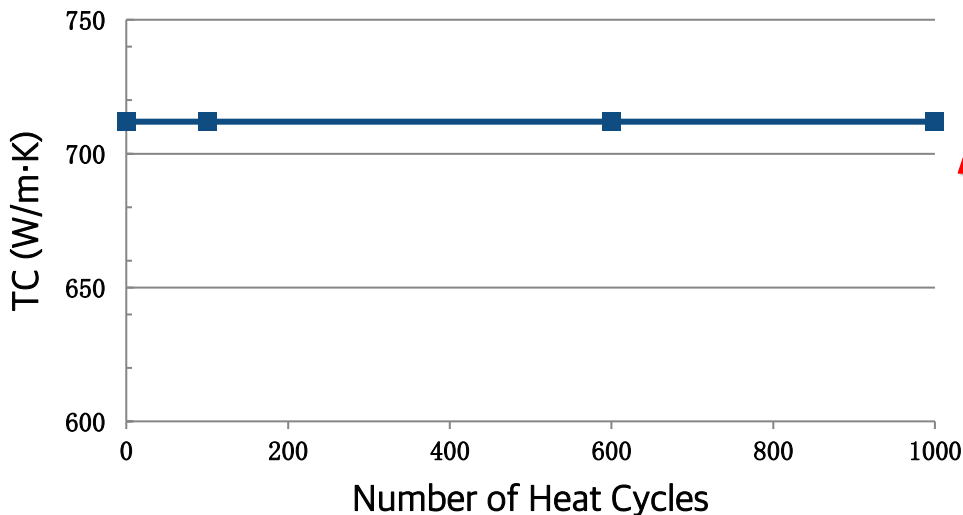
Model		*arCuDia	*SbS-Dia.
Structure		Copper-Diamond composite	Cu/CuMo/CuDia/CuMo/Cu
Dia. Volume ratio		30%	23%
CTE (Coefficient of Thermal Expansion) (ppm/K)	RT	7.73	8.12
	RT~200°C	10.23	9.67
	RT~400°C	11.66	9.57
	RT~800°C	14.07	8.25
Thermal conductivity (W/m·K)		714	591
Thickness (mm)		$0.7 \leq t$	$1.0 \leq t$

● Temperature profile for thermal cycle test

Test condition: MIL-STD-883K-C



- Thermal conductivity variation after -65 ~ +150°C, 1,000 cycle



**Wow!!
No TC Drop!!**