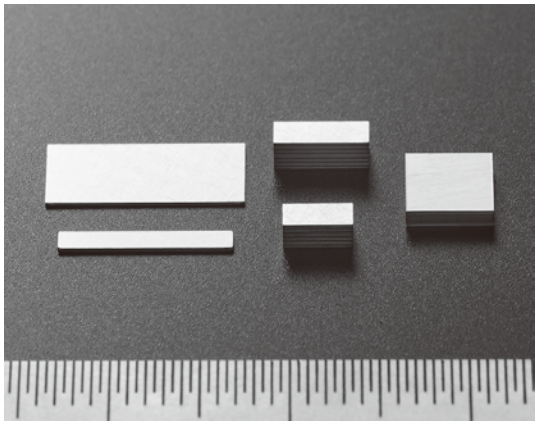
Submount with AuSn Solder

AuSn Solder is easy to handle and does not need to be prepared separately. Cu/Mo multi-layer substrate has a thermal conductivity higher than CuW and CuMo. Graphite + Cu substrate has an ultra-high thermal conductivity property.



Features

- High bonding strength
- Customizable Au/Sn ratio and layer thickness
- Customizable metallized layer
- Pattern coating is available
- Selectable base material

Base Material

CuW, CuMo, Cu/Mo multi-layer substrate, Graphite+Cu, Graphite, Diamond, Cu-AIN-Cu, others

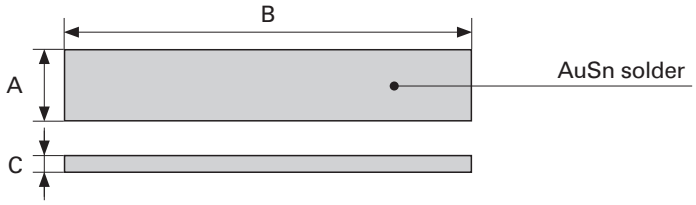
Application

Heat-sink for high-power LD modules

Specification Example

Dimensions (mm) : A=1.50, B=10.00, C=0.25

Ratio Au : Sn= 78 : 22 (wt%)
AuSn thickness 5μm



Base Material Properties

Substrate	Material Ratio	Thermal conductivity (W/m·K)		CTE ($\times 10^{-6}$/℃)
		Z-direction	XY-direction	
CuW	W 90wt%	174	174	6.4
	W 80wt%	206	206	8.3
CuMo	W 85wt%	130	130	6.6
	W 65wt%	207	207	8.0
Cu/Mo multi-layer substrate	Mo 40wt%*1	230	220	6.6
	Mo 20wt%	291	334	7.4
	Mo 10wt%	335	369	11.8
	Mo 5wt%	362	381	14.8
Graphite+Cu*2		50	800	4.0–8.0

* 1 Cu/Mo multi-layer substrate (Mo 40wt%) has a higher thermal conductivity than CuW and CuMo with the same CTE.
* 2 Graphite+Cu has CTE fitting with LD chip and ultra-high thermal conductivity (800 W/m·K).