

Key Technologies & Features

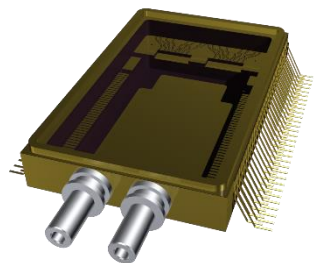
- Advanced Simulation and Design Capability
 - Excellent electric characteristics (S-parameter),
 - Analysis for electrical stress and thermal characteristics
- 50 years experience in ceramic package/substrate business
 - High physical strength, stability and reliability
- Recently data speeds are further accelerated through digital coherent innovation. NGKED multilayer ceramic solution backed by simulation technology.

Product Line-Up

Telecom Market

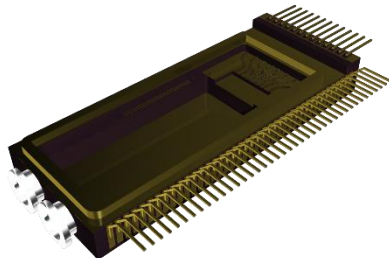
43G TROSA

(Transmitter Receiver OSA)



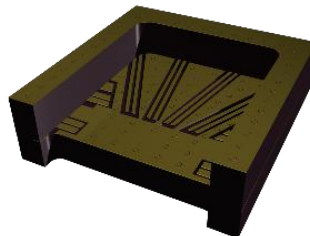
HB-CDM

(High Band Coherent Driver Modulator)



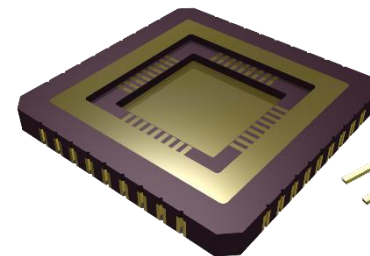
Datacom Market

Ceramic FeedThrough (Al₂O₃)

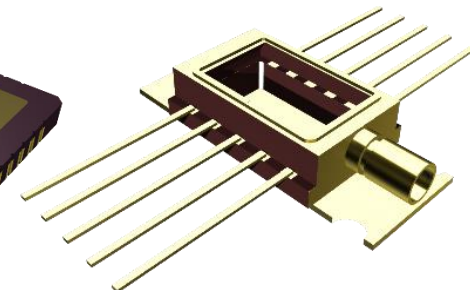


Lidar Application

MEMS PKG



Butterfly PKG



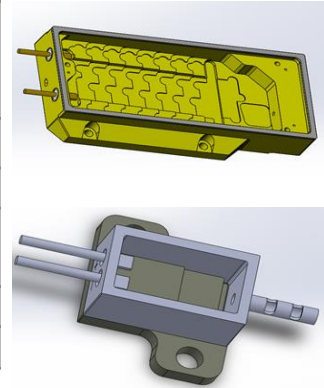
High Power Laser Package

Common Structure Material

Common Metal Housing Material

Pin Shell	KOVAR	Fe-Ni alloy 50 copper core
Oxygen free copper	95% Al ₂ O ₃	
KOVAR	BH-G/K OR 95% Al ₂ O ₃	
AISI 1010	95% Al ₂ O ₃	ELAN 13#
AISI 304	95% Al ₂ O ₃	ELAN 13#

Material	Density (g/cm ³)	Thermal conductivity (w/mk)	Expansion coefficient (ppm/° C)
KOVAR	8.2	17	5.8
CuW	16.4	200	7.2
Oxygen free copper	8.9	398	17.8
AISI 304	7.93	17	17.7
AISI 1010	7.8	50-76	12-14



Capabilities

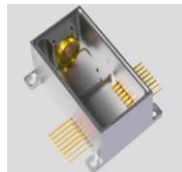
No.	Part	Material	Remarks
1	Base	CuW	
2	Frame	Kovar	
3	Seal Ring	Kovar	
4	Lens holder	Kovar	
5	Window	Sapphire	AR coating on both side
6	Plating	Ni/Au	Ni:2um min, Au 1um Min

- In house capability
 - Plating
 - Brazing
 - Glass hermetic sealing

- Customization



5G communication



Laser package with To cap