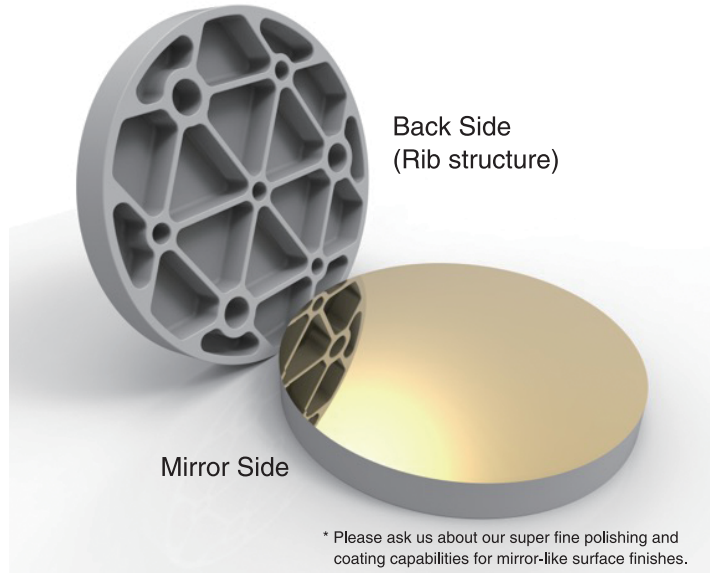


Low Thermal Expansion Ceramic Mirror

Enabling High Precision and Light Weight with High Rigidity

Characteristics

- **Minimal temperature deformation** due to dense cordierite ceramic with extremely low thermal expansion rate
- **Approx. 70% weight reduction** when compared to low CTE glass (* according to our research) via slim ribbed structure design with high rigidity
- **Rapid process time** even for complex designs due to good machinability property.

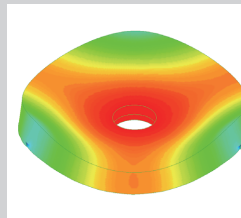


Material Characteristics comparison with Low CTE Glass

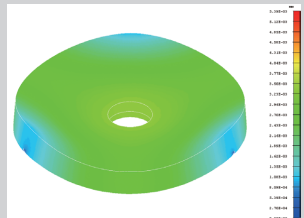
Item	Unit	Low CTE Glass	Ceramic < Cordierite CO720 >
Density	kg/m ³	2.53	2.55
CTE	ppm/K	0.02	0.02
Elasticity Modulus	GPa	90	144
Specific Rigidity	—	36	56

Displacement Map

Low CTE Glass

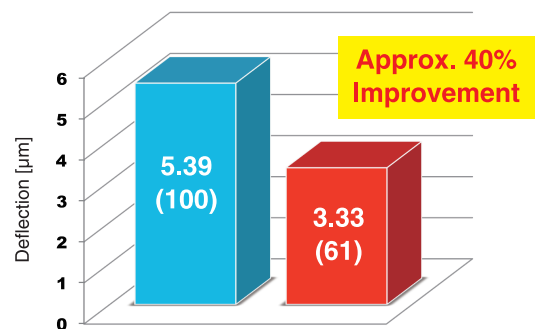


Cordierite Ceramic



3-point Supported Deflection

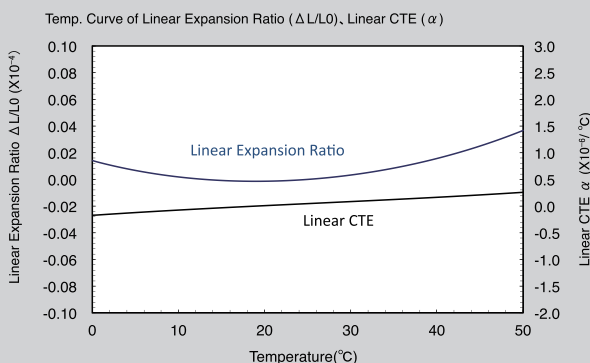
Low CTE Glass vs. Cordierite Ceramic



Comparison Conditions

- Product Size : $\Phi 1020 \times 120\text{mm}$ (Rib Structure)
- Supported Points : Outside 3 Points
- Load : Self-weight

Temperature Dependency Graph <Cordierite CO720>



Values are typical properties, and may vary depending on product configurations or manufacturing processes.