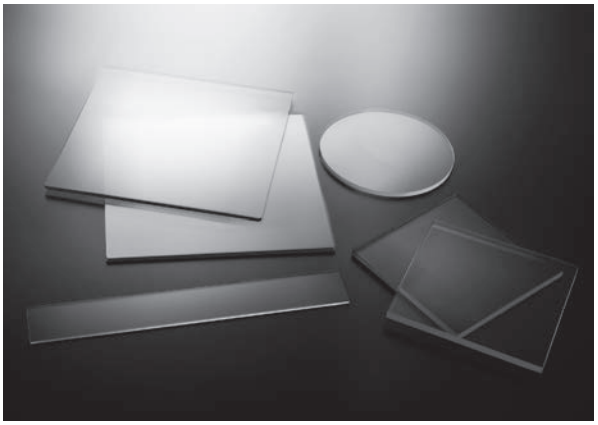
Zero CTE Glass

Ref. No. 2410-46E

ZERØ™

ZERØ™ has zero CTE. It is suitable as a material for temperature compensation.
ZERØ™ is used as a material for various parts that require high levels of thermal dimensional stability.



Properties

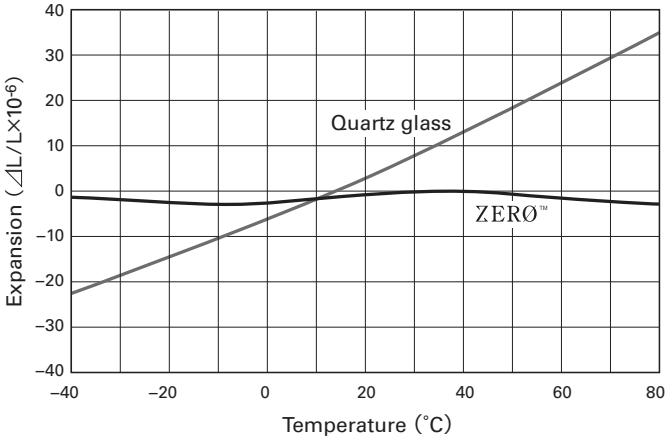
Coefficient of thermal expansion	−40-80°C	$\times 10^{-7}$/K	0
Young's modulus		GPa	95
Vickers hardness	Hv		680
Density		$\times 10^3$kg/m^3	2.55
Refractive index	n_d		1.54
	1550nm		1.53

Reference Data

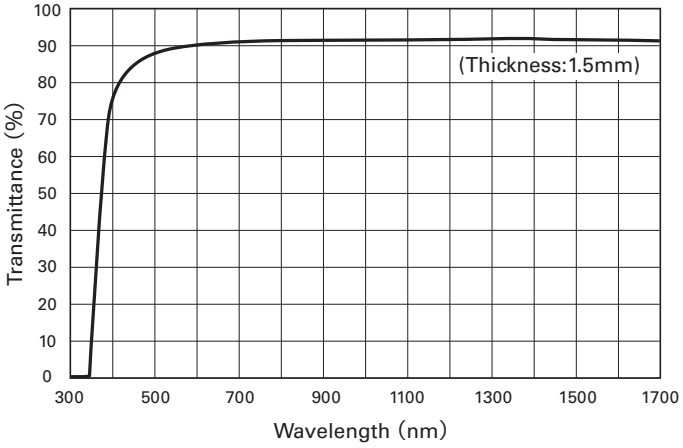
Thermal conductivity	W/m·K	25° C	1.6
		100° C	1.7
Thermal diffusivity index	$\times 10^{-6}$m^2/s	25° C	0.80
		100° C	0.75
Specific heat	kJ/(kg·K)	25° C	0.80
		100° C	0.90
Shear modulus	GPa		39
Poisson's ratio			0.2
Knoop hardness Hk			590
Abrasion Aa		JOGIS	50
Bending strength	MPa	3 point bending	180
Abbe number ν_d			57
Photo-elastic constant		$\times 10^{-6}$/MPa	3
Internal transmittance (10mmt)	%	580nm	88
		1550nm	93
Water resistance		JOGIS RW	Class1
Acid resistance		ISO 8424	Class1
Alkali resistance		ISO 10629	Class1
Volume resistivity (Log ρ)	Ω·cm	350° C	5.4
Dielectric constant		1MHz, 25° C	7.4
		2.45GHz, 25° C	6.5
Dielectric loss tan δ	$\times 10^{-3}$	1MHz, 25° C	17
		2.45GHz, 25° C	43

The figures of the properties are measured values, but they are not guaranteed.

Thermal Expansion



Transmittance



Others