

Coupler Housing for Optical Fiber

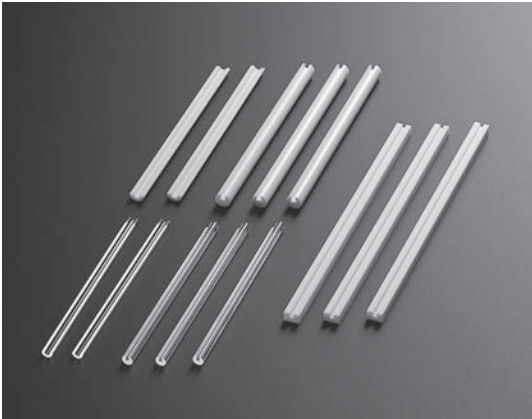
Neoceram N-0 and N-11

Ref. No. 2410-36E

Neoceram is a glass-ceramic with almost zero thermal expansion. There are two types of Neoceram: transparent N-0 and opaque N-11. High-precision Neoceram products are used for optical fiber coupler housings and cover glass.

Features

- Good α matching with quartz-type fiber
- High dimensional precision
- High hardness and durability
(Resistance to water, weather and vibration)
- Available in both transparent N-0 and opaque N-11

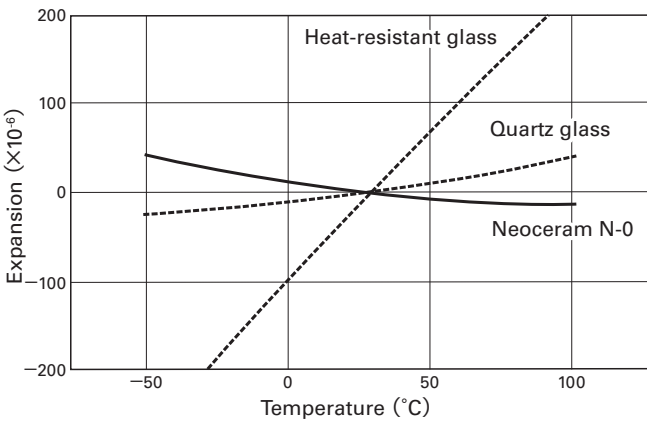


Properties

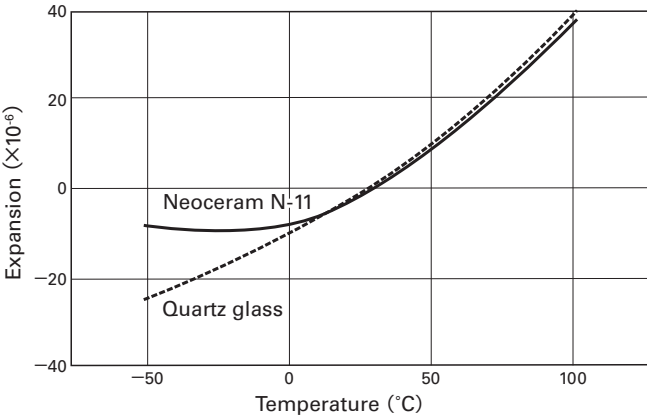
Properties/Glass Code			N-0	N-11
Coefficient of thermal expansion	30-380°C	$\times 10^{-7}/K$	-1	10
	30-750°C	$\times 10^{-7}/K$	1	13
Heat resistant temperature* (Short term)	°C		800	900
Refractive index (n_d)			1.54	-
Density		$\times 10^3 \text{kg/m}^3$	2.5	2.5
Bending strength	JIS R1601	MPa	170	220
Vickers hardness	Hv (0.2)		700	800
Young's modulus		GPa	94	86
Acid resistance	5% HCl, 90%, 24hrs	mg/cm ²	0.05	0.1
Alkali resistance	5% Na ₂ CO ₃ , 90°C, 24hrs	mg/cm ²	0.3	0.8

*Heat resistant temperature is based on mechanical deformation. Specifically, it is the temperature at which a 100x300x3.8mm plate specimen (supported to form a 280mm span) deforms by 1mm after 24-hour heating.

Thermal Expansion



Thermal Expansion

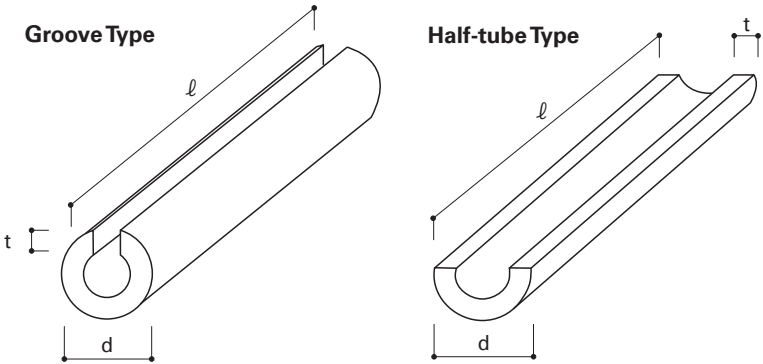


Dimensions (examples)

Tube

Groove Type, Half-tube Type (mm)		
Outer Diameter (d)	Wall thickness (t)	Length (ℓ)
2.00±0.15	0.50±0.10	10 to 70
3.00±0.15	0.75±0.10	10 to 70
3.00±0.15	1.00±0.10	10 to 70
3.50±0.15	1.00±0.15	10 to 70
4.00±0.15	1.00±0.15	10 to 70

Other groove dimensions are available upon request.
Minimum groove width: 0.20±0.10mm.

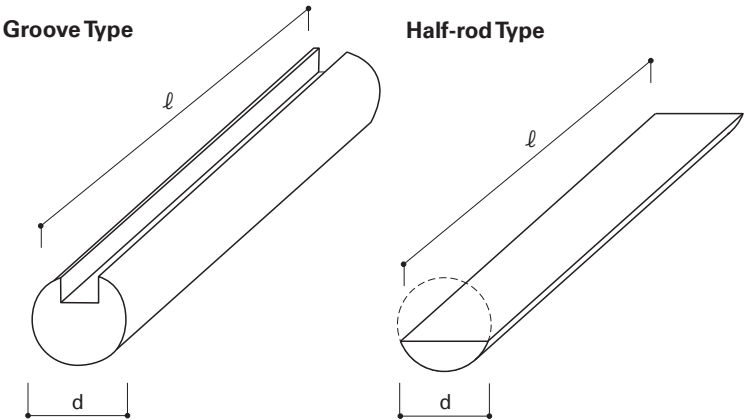


Rod

Groove Type (mm)	
Diameter (d)	Length (ℓ)
2.00±0.15	10 to 70
3.00±0.20	10 to 70
3.50±0.30	10 to 70
4.00±0.30	10 to 70

Half-rod Type	
Diameter (d)	Length (ℓ)
2.00±0.15	40
3.50±0.30	40
4.00±0.30	40

Other groove dimensions are available upon request.
Minimum groove width: 0.20±0.10mm.



Plate

Groove Type (mm)		
Width (w)	Height (h)	Length (ℓ)
3.00±0.10	2.00±0.10	60.00±0.50

Groove Dimensions	
(w)	(d)
0.80±0.10	0.80±0.10

Other groove dimensions and the number of grooves are available upon request.
Minimum groove width: 0.20±0.10mm

