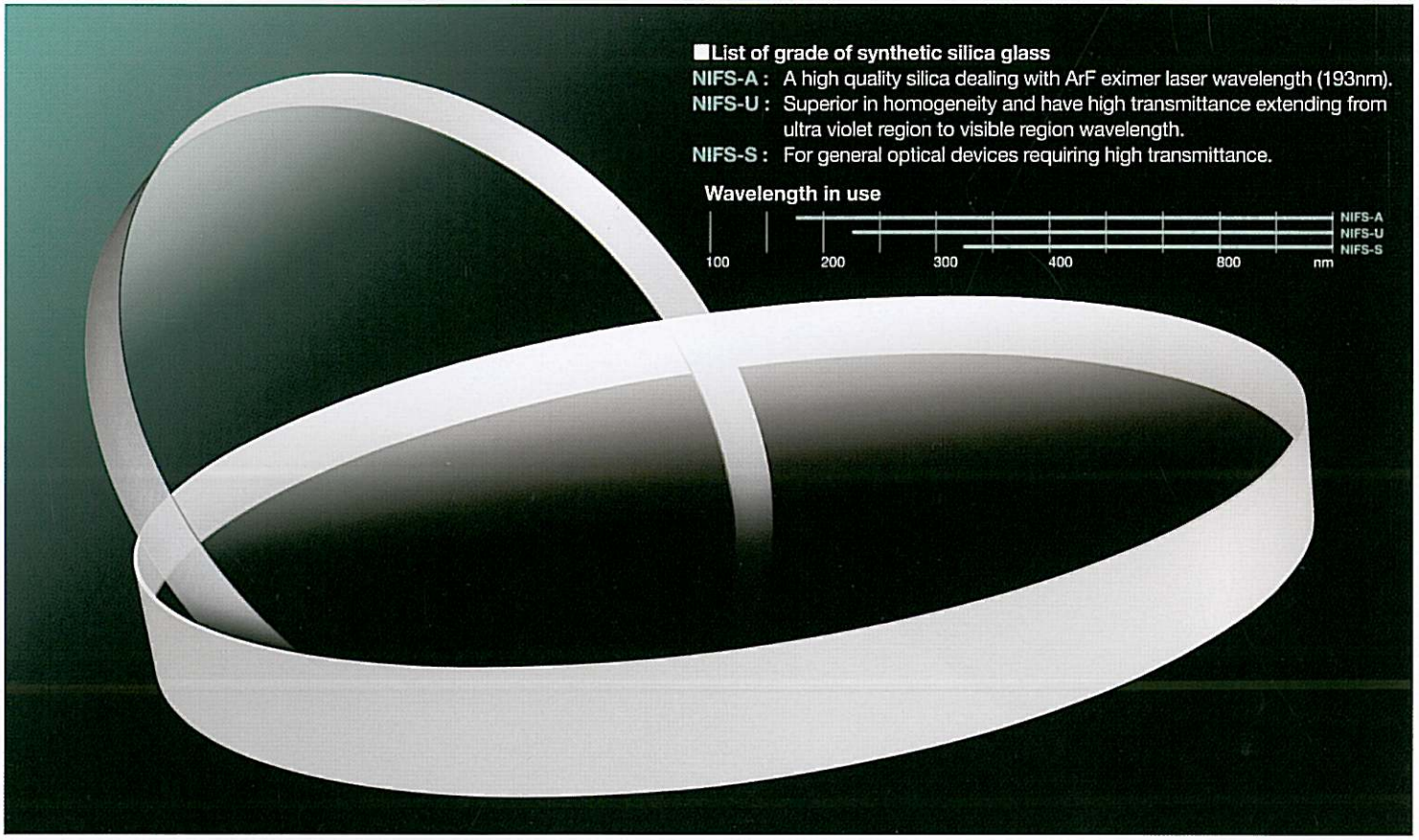
NIFS Series

Nikon Synthetic Silica Glass (SiO_2), NIFS Series

Silica glass stands out among optical materials that offer various properties and capabilities. It provides the highest standards of purity, homogeneity, and durability. Nikon Synthetic Silica Glass (SiO_2), NIFS Series, features homogeneity of refractive index and high transmittance, for durability against excimer lasers. In working with its silica glass to match customer requirements, Nikon is capable of factoring in any material-grade specification or mass-production criterion using proprietary accurate-analysis technology and material measurement.



Impurity concentration

Metal elements	NIFS-A series Measuring example
Li	<0.2
Na	<0.2
Mg	<0.2
K	<0.2
Ca	<0.2
Al	<0.2
Ti	<0.2
Cr	<0.2
Fe	<0.2
Cu	<0.2

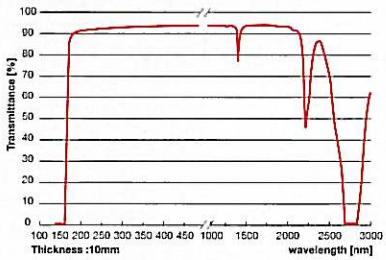
[ppb]

Grade	Internal transmittance [%/cm]	Laser durability	Birefringence [nm/cm]	Recommended wavelength
NIFS-AL	≧99.9 (at 193 nm)	A	≦10	ArF excimer laser (193nm)
NIFS-AB		B	≦ 2	KrF excimer laser (248nm)
NIFS-UL	≧99.9 (at 248 nm)	C	≦10	KrF excimer laser (248nm)
NIFS-UB		D	≦ 2	
NIFS-S	≧99.9 (at 365 nm)	-	≦10	UV region, Visible region

※ "L" ending in grade indicates that the laser durability at the wavelength of use is improved, and "B" glass that enhances birefringence in the wavelength.
※ With regard to dimensions rather than ϕ30 ~ϕ350[mm], t5 ~t100[mm], details of various properties will be decided separately.
※ Laser durability; "A" - "D" mentioned in laser durability are classified groups according to the relative evaluation. "A" is the highest grade.

Optical properties

Transmittance properties
(measuring example of NIFS-A)



Laser durability
(measuring example of NIFS-UL)