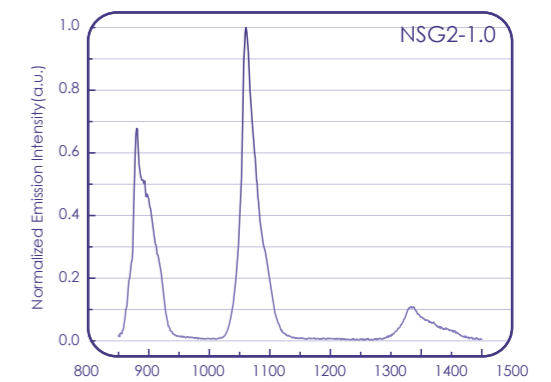
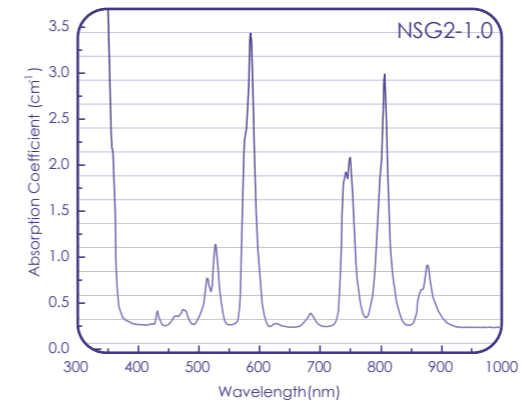


## NSG2 Nd<sup>3+</sup>-doped silicate glass



NSG silicate glass has high cross section for stimulated emission, broad effective emission width and high thermal stability properties.



### Laser Specifications

Cross section for stimulated emission ( $10^{-20}\text{cm}^2$ )	2.7±0.1
Lifetime at 1053nm ( $\mu\text{sec}$ )	≥380 (Nd <sub>2</sub> O <sub>3</sub> : 0.5wt%) ≥360 (Nd <sub>2</sub> O <sub>3</sub> : 1.0wt%) ≥330 (Nd <sub>2</sub> O <sub>3</sub> : 2.0wt%) ≥270 (Nd <sub>2</sub> O <sub>3</sub> : 3.0wt%)
Effective bandwidth (nm) Fluorescence peak wavelength (nm) Absorption coefficient ( $\text{cm}^{-1}$ )	34 1060 ≤0.0015 (1053nm)

### Optical Specifications

Non-linear refractive index coeff. $n_2 (\times 10^{-13} \text{e.s.u})$	≤1.6
Refractive index (1053nm)	1.560±0.003
Abbe value	59
$dn/dT (10^{-6}/^\circ\text{C}) (20\sim 100^\circ\text{C})$	2.0

### Thermal Specifications

Transformation temp. ( $^\circ\text{C}$ )	485
Softening temp. ( $^\circ\text{C}$ )	530
Coeff. of linear thermal expansion ( $10^{-7}/\text{K}$ ) (30~100 $^\circ\text{C}$ )	95
Coeff. of linear thermal expansion ( $10^{-7}/\text{K}$ ) (30~300 $^\circ\text{C}$ )	102
Thermal coeff. of optical path length ( $10^{-6}/\text{K}$ ) (50~100 $^\circ\text{C}$ )	7.0
Thermal conductivity (25 $^\circ\text{C}$ ) (W/m K)	1.2

### Other Specifications

Density ( $\text{g}/\text{cm}^3$ )	2.55
------------------------------------	------