



CRYSTALS



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Erbium Laser Glass

Basic Properties:

Laser properties	
Cross section for stimulated emission (10-20cm ²)	0.8
Fluorescent lifetime (ms)	7.7-8.0
Center lasing wavelength (nm)	1535
Optical Properties	
n (1535nm)	1.530
nd	1.539
Abbe value	64
dn/dT (10-6/°C) (20~100°C)	-5.2
Coeff. of linear thermal expansion (10-7/°C)(20~100°C)	103
Thermal coeff. of optical path length (10-7/°C) (20~100°C)	3.6
Thermal Properties	
Transformation temp. (°C)	455
Softening temp. (°C)	493
Thermal conductivity (25°C) (W/m. K)	0.70
Coeff. of linear thermal expansion (10-7/°C) (100~300°C)	127
Other Properties	
Density (g/cm ³)	3.10
Chemical durability (weigh loss rate at 100°C distilled water) (µg/hr.cm ²)	103

The fluorescent lifetime will have some change according to the erbium concentrations.

HGO offers various type of concentration:

1	Er: 0.13% , Yb: 22%
2	Er: 0.26% , Yb: 22%
3	Er: 0.5% , Yb: 22%
4	Er: 1.0% , Yb: 22%
5	Er: 1.3% , Yb: 22%
6	Er: 1.5% , Yb: 22%
Other concentration combination are also available upon request	