



MM-2 High Gain Short Length

KIGRE, INC.

WAVEGUIDE, WDM, & FIBER 1.54um ERBIUM AMPLIFIER GLASS FOR TELECOMMUNICATIONS APPLICATIONS

Kigre's MM-2 has become a world standard 1.54um laser material for use in the next generation of EDWAs and EDFAs. It is only natural that this high performance athermal phosphate glass laser material be utilized in the evolution of the optical communications component industry.

Designed specifically for telecommunications applications, this patented ion-exchangeable material is now available for use in the fabrication of miniature, monolithic, high performance C-band power splitters, EDWAs, EDFAs, gain blocks, pre-amplifiers, and (WDM) wavelength-division multiplexing integrated optical devices.

Demonstrated internal gain (waveguide configuration).....	0.5 to >3.0 dB/cm
Laser Wavelength Peak (nm)	1535
Tunable Output Range (nm).....	1520 to 1575
Emission Cross Section (x10 ⁻²⁰ cm ²) Er ³⁺ @1.535 & Yb ³⁺ @1025.....	0.8 & 1.4
Absorption Cross Section (x10 ⁻²⁰ cm ²) Er ³⁺ @1.54 & Yb ³⁺ @975.....	0.7 & 1.7
Fluorescence Lifetime (us)	7900
Fluorescence Linewidth (nm) FWHM.....	55
Index of Refraction (nD).....	1.54
Index of Refraction (laser line)	1.53
dn/dt (20-40 °C.) (x10 ⁻⁷ /°C.).....	-3.8
Temperature Coeff. of Optical Path (x10 ⁻⁶ /K)	3.3
Transformation Temperature (°C.).....	506
Deformation Temperature (°C.)	535
Coeff. of Thermal Expansion (20-40 °C) (x10 ⁻⁷ /°C).....	72
(20-100 °C)	84
Density (g/cc)	2.70
Thermal Conductivity (W/mK)	0.85
Young's Modulus (x10 ³ N/mm ²).....	.71
Poisson's Ratio.....	0.24
Stress Optical Coeff. (x10 ⁻⁶ mm ² /N)	2.1
Knoop Hardness (kgf/mm ²)	435
Durability (Wt. loss x10 ⁻⁵ g/cm ² ,H ₂ O,100°C,1Hr)	5.0
Note: Standard Silicate glasses have a 5.5 x 10 ⁻⁵ g/cm ² durability rating	

Custom Fiber Preforms & Fiber Pulling Also Available

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