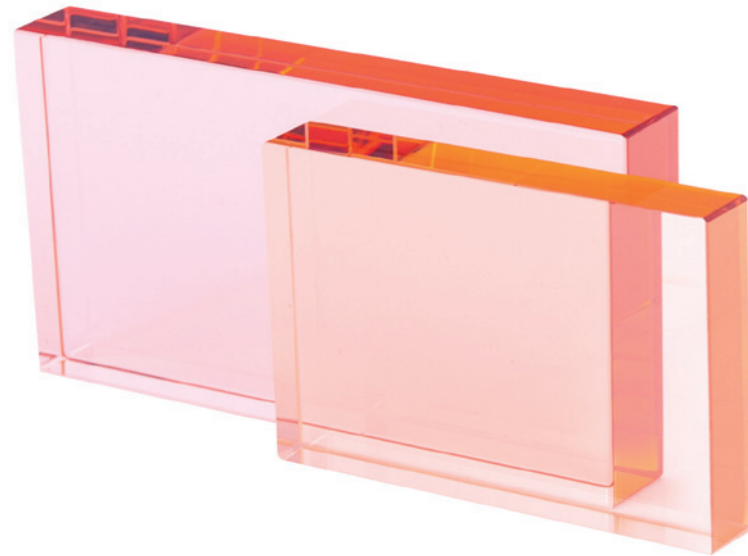


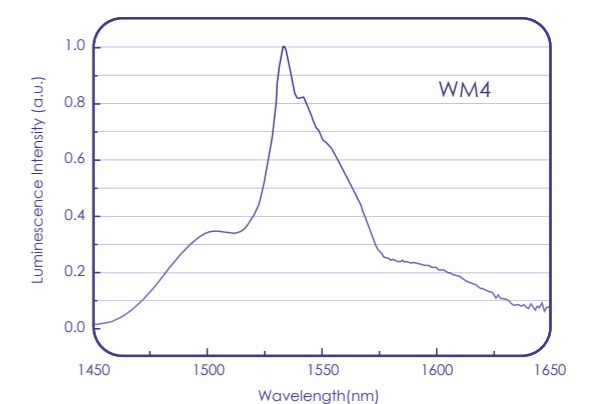
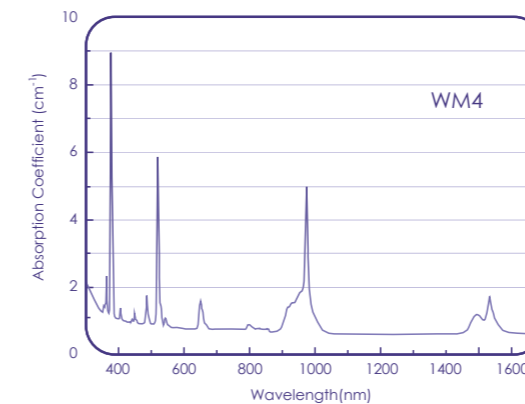
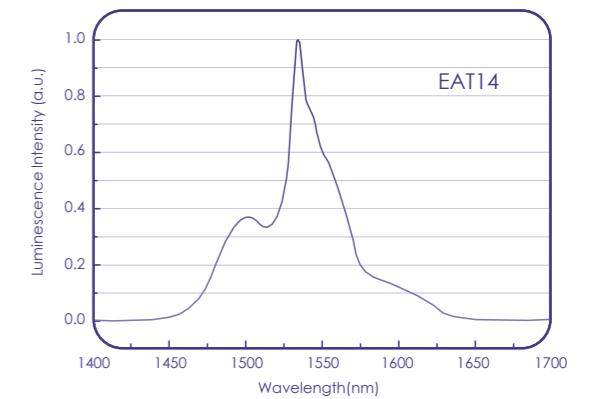
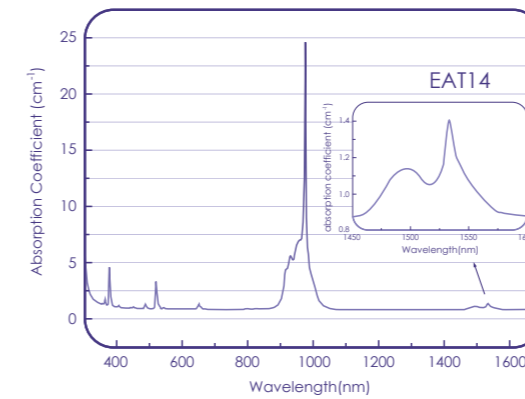
## Erbium doped phosphate glasses for LD pump



Laser output at 1535 nm can be realized in erbium doped phosphate glass. Since this wavelength is safe for the eyes and stays in the communication window, erbium doped phosphate glass can find wide applications in communication, laser rangefinders, laser medical treatment, laser cosmetics, etc. Erbium laser glass with various doping concentrations can be produced according to the customer's requirement.

WM4: Erbium phosphate glass for ion-exchange purpose;

EAT14: Yb<sup>3+</sup>, Er<sup>3+</sup> co-doped phosphate glass, which is applicable in high repetition rate (1-6Hz) laser diode pumped 1535nm laser. High Yb<sup>3+</sup> doping can be realized in this EAT14 glass.



PROPERTIES	EAT14	WM4
<b>Laser Specifications</b>		
Cross section for stimulated emission (10 <sup>-20</sup> cm <sup>2</sup> )	0.8	0.75
Fluorescent lifetime (ms)*	7.7-8.0	7.7-8.2
Center lasing wavelength (nm)	1535	1535
<b>Optical Specifications</b>		
Refractive index (1535nm)	1.524	1.528
Refractive index (d 589.3nm)	1.532	1.536
Abbe value	66	66
dn/dT (10 <sup>-6</sup> /°C) (20~100°C)	-1.72	-3.0
<b>Thermal Specifications</b>		
Transformation temp.(°C)	556	530
Softening temp.(°C)	605	573
Coeff.of linear thermal expansion (10 <sup>-7</sup> /K) (20~100°C)	87	82
Coeff.of linear thermal expansion (10 <sup>-7</sup> /K) (100~300°C)	95	96
Thermal coeff. of optical path length (10 <sup>-6</sup> /K) (20~100°C)	2.9	1.4
Thermal conductivity (25°C) (W/m K)	0.70	0.70
<b>Other Specifications</b>		
Density(g/cm <sup>3</sup> )	3.06	2.83
Chemical durability (weigh loss rate at 100°C distilled water) (µg/hr.cm <sup>2</sup> )	52	82

\*The fluorescent lifetime changes with the erbium concentration

