

Structural and Physical Properties:

	YVO ₄	α-BBO	Calcite	LiNbO ₃
Crystal structure	Zircon Tetragonal	Trigonal,	Crystalline Rhombohedral	Trigonal
space group	D _{4h} -I4/amd	R _{3c}		R _{3c}
Cell parameters	a=b=7.1193, c=6.2892	a = b = 12.532 Å, c = 12.717Å, Z = 6		a=5.148Å , c=13.863Å
Melting point	1825	1095± 5°C		1253° C
Mohs hardness	4-5	4	3	≈5
Density	4.22g/cm ³	3.85 g/cm ³	2.7 g/cm ³	4.64 g/cm ³
Thermal expansion coe.:	a:4.43x10 ⁻⁶ /K c:11.37x10 ⁻⁶ /K	a:4 x 10 ⁻⁶ /K; c:36 x 10 ⁻⁶ /K	a :24.39 x 10 ⁻⁶ /K; c: 5.68 x 10 ⁻⁶ /K	//a, 2.0x10 ⁻⁶ /K //c, 16.7x10 ⁻⁶ /K
Thermal conductivity	//C: 5.23W/m/K ⊥ C: 5.10W/m/ K	⊥c, 1.2 W/m/K; //c, 1.6 W/m/K		38 W/m/K at 25 ⁰ C
Therm-optic coe.:	dn _e /dT=2.9x10 ⁻⁶ /°C	dn _o /dT = -9.3 x 10 ⁻⁶ /°C dn _e /dT = -16.6 x 10 ⁻⁶ /°C		dn _o /dT=-0.874x10 ⁻⁶ /K at 1.4m m dn _e /dT=39.073x10 ⁻⁶ /K at 1.4m m
Transparency Range:	400-5000nm	189 - 3500 nm	350nm - 2300nm	420nm-5200nm