

# Lead Molybdate ( $\text{PbMoO}_4$ )

Acousto-optic Devices

<b>Crystal Properties</b>	Crystal Class	Tetragonal
	Point Group	4/m
	Space Group	$I4_1/a$
	Lattice Parameter	a 0.5435, c 1.211 nm
	Melting Point	1065 °C
	Density	6.95 g/cm <sup>3</sup>
	Hardness	3 Mohs
	Photo-elastic Coefficient	$P_{11}$ 0.240, $P_{13}$ 0.255, $P_{31}$ 0.175, $P_{33}$ 0.300 (632.8 nm)
	Figure of Merit	$M_2$ $36.1 \times 10^{-18} \text{S}^3/\text{g}$
	Transparency Range	420 ~ 5500 nm
	Refractive Index	$n_o$ 2.386, $n_e$ 2.262 (632.8 nm)
	Transmittivity	70% (632.8 nm)
	Phase Velocity	3600 m/s (Longitudinal [110] - Propagation)
Gradient of Refractive Index	$5 \times 10^{-5}/\text{cm}$	

<b>Specifications</b>	<b>Boules</b>	Typical Diameter	$\varnothing 35 \pm 2, \varnothing 50 \pm 2$ mm
		Typical Length	50 mm
		Typical Orientation	[100]
	<b>Blocks</b>	Typical Size	30x30x50 mm
		Polish	0.25 ~ 0.016 $\mu\text{m}$

