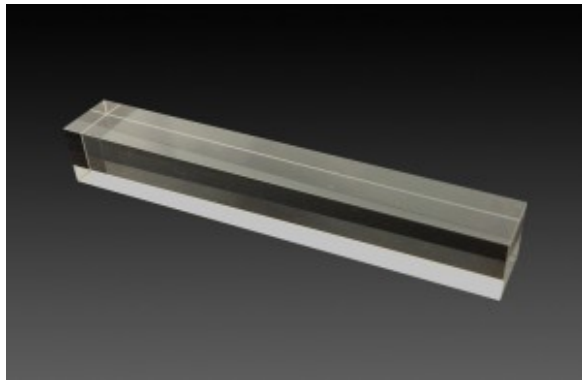


# PbWO<sub>4</sub> Scintillator

## General properties of PbWO<sub>4</sub> scintillator

Melting point(k)	1396
Density (g/cm <sup>3</sup> )	8.28
Radiation length(cm)	0.92
Cleavage plane	<101>
Wavelength of emission Max(nm)	440/530
Decay time (ns)	6/30
Light yield (Photons/Mev)	200
hygroscopic	no
Refractive index	2.16



### Basic information of PbWO<sub>4</sub> scintillator:

Lead Tungstate(PbWO<sub>4</sub>) crystal is distinguished by its short radiation length and strong irradiation hardness, it has emission peaks between 440/550 nm with a fast decay time in the range 6/30 ns.

Growth method: Bridgman

Maximum dimension: ∅50 mm x 200 mm length

Available item: Single crystal

### Features of PbWO<sub>4</sub> scintillator:

PbWO<sub>4</sub> crystal has a heavy density, high Z value and fast decay time, it has the least radiation length and moliere radius values, 0.9 cm and 2.19 cm respectively, and the radiation damage appears at does exceeding 10<sup>5</sup> Gy

### Application of PbWO<sub>4</sub> scintillator:

PbWO<sub>4</sub> crystal is suitable in the high energy physics, like the CMS detector in European Organization for Nuclear Research(CERN), considering its high density and fast decay time, it may also have an extensive application prospect in nuclear medicine