

Cadmium tungstate CWO scintillation crystal is a self-activating scintillator material. It has the characteristics of high density, high atomic number, low afterglow, strong radiation resistance and no radioactive background. Therefore, it is widely used in luggage and container security inspection, industrial CT, medical CT, high-energy physical detection and other fields.

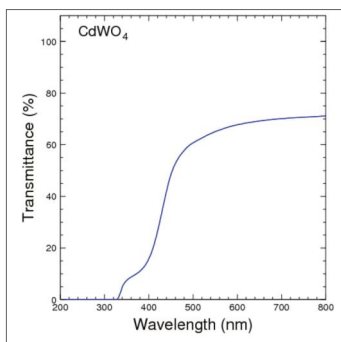
General parameters	CdWO ₄	Unit
Density	7.90	g/cm ³
Wavelength of Emission Peak	475	nm
Light Output	13,000	ph/MeV
Decay Constant	12.7	μs
Hardness	4.0-4.5	mohs
Refractive Index	2.2-2.3	/
Hygroscopic	no	/
Cleavage	(010)	/
Thermal Expansion Coefficient	10.2×10 ⁻⁶	k ⁻¹

Basic Information

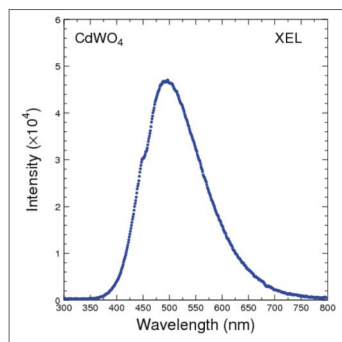
- Growth technique Bridgman
- Dimension(max) Diameter 80 mm×200 mm
- Achieved items Single crystal and array

Characterization

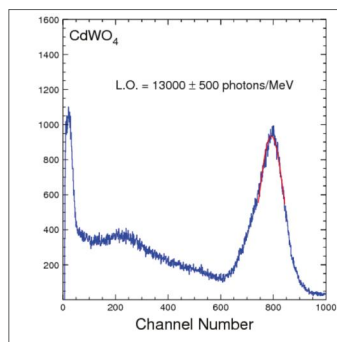
- Dimension of CWO: 16×16×16 mm; PMT: R1306; Reflector: Teflon(0.80 mm); Radiation Source: Cs¹³⁷; HV: 650V; Absolute value of light output: 13,000 photons/MeV; Energy resolution: 14.6%; Decay time: 12,700 ns



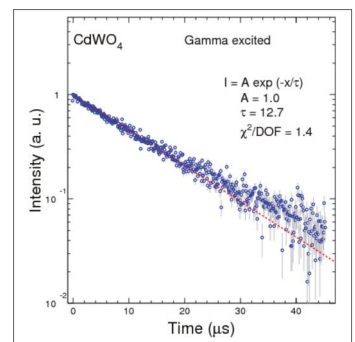
Transmittance curve



X-Ray excited Luminescence curve



Light output curve & Energy resolution curve



Scintillation decay curve by gamma ray excited