



CRYSTAL MATERIALS INDEX

Thallium doped Caesium Iodide **CsI(Tl)**

| Properties | Value |
|--|-----------------------------------|
| Cleavage Planes | None |
| Decay Constant (ns) | 1000 |
| Density (g.cm-3) | 4.51 |
| Emission Spectral Range (nm) | 350-725 |
| Gamma and X-ray absorption coefficients (cm-1) | 0.48 at 660keV 10.00 at 100KeV |
| Melting Point (K) | 894 |
| Peak Scintillation Wavelength (nm) | 550 |
| Photons/MeV | 52000 |
| Radiation Length (cm) | 1.86 |
| Refractive Index at peak emission | 1.78 |
| Solubility (g/100g H ₂ O @ 300K) | 44.0 |
| Stability | Slightly Hygroscopic |
| Structure | BCC |
| Therman Conductivity (W·m-1·K-1) @ 300K | 1.13 |
| Transmission Range (nm) | 240-70000 |

CsI(Tl) is a useful scintillator offering high light yield and emits at a wavelength suitable for silicon photomultipliers (SiPMs). Typical applications include arrays of this material used in security imaging systems, such as baggage scanners.

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