

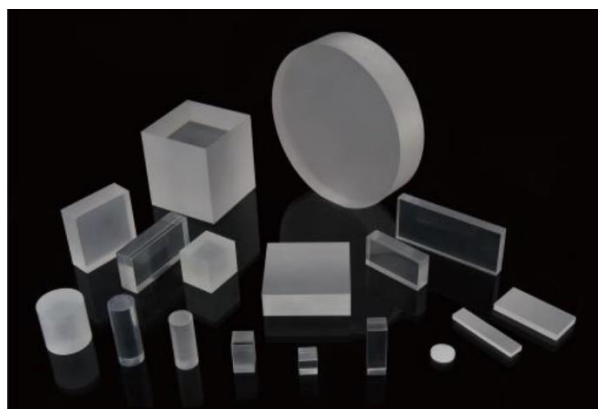
Sodium doped Cesium Iodide – CsI(Na)

Radanite Group

We offer high quality CsI(Tl), CsI(Na), CsI(Pure), NaI(Tl) and GAGG(Ce) scintillation crystals of various shapes and sizes as well as pixelated arrays. We have full capability to cut, shape, polish and coat the crystals as well as couple with silicone photodiode in order to meet your specific requirements.

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CsI(Na) - Sodium doped Cesium Iodide, is a bright scintillation crystal with an emission wavelength of 420nm, only slightly lower than its CsI(Tl) counterpart. CsI(Na) has a light yield of 41 photons/KeV a short decay time of 630ns and very good stopping power. CsI(Na) scintillators possess high mechanical and thermal shock resistance properties which make them well suited for operation in harsh environments.

CsI(Na) is hygroscopic. Contact with water and humidity should be avoided.

CsI(Na) scintillators have the following features:

- Low afterglow
- Good uniformity
- Good radiation resistance
- Low background
- High mechanical and thermal shock resistance
- Suitable for coupling with Si photodiode

Typical applications for CsI(Na) scintillators include:

- High energy physics
- Industrial applications
- Medical physics

Properties:

| | |
|---|---------------------|
| Density (g/cm ³) | 4.51 |
| Effective atomic number | 54 |
| Maximum emission wavelength (nm) | 420 |
| Radiation length (cm) | 1.86 |
| Light yield (photons/KeV) | 41 |
| Decay time (ns) | 630 |
| Thermal expansion coefficient (°C ⁻¹) | 54x10 ⁻⁶ |
| Melting Point (°K) | 894 |
| Hardness (Mohs) | 2 |
| Scintillation afterglow (100ms) | TBA |
| Hygroscopic | Yes |

