Cesium Iodide
Microcolumnar Scintillators

CsI

High Resolution

High Sensitivity

Versatile Geometry

The Science Behind the Technology

RMD
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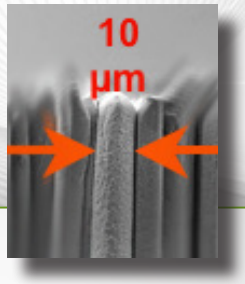
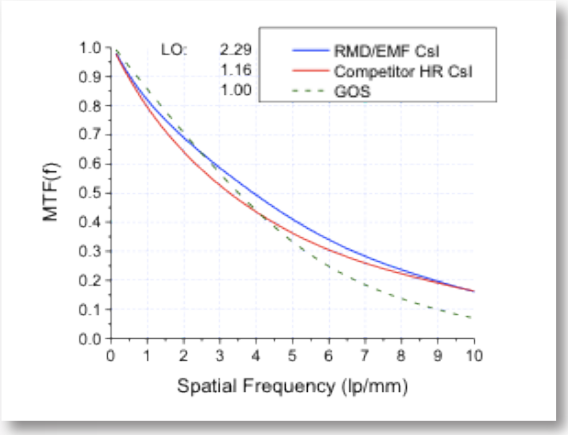
Microcolumnar Scintillators





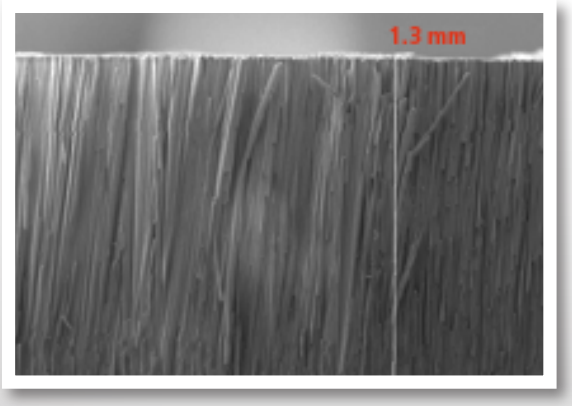
Modulation Transfer Function (MTF)

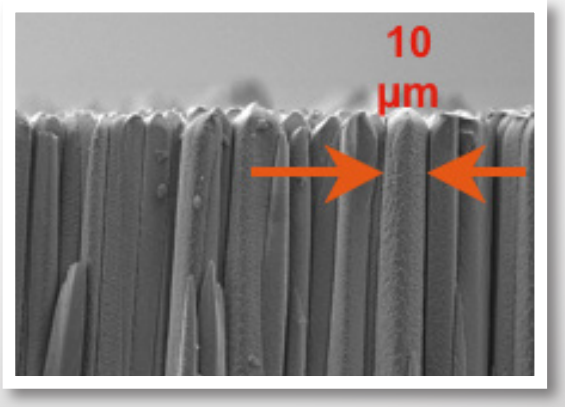
Large-Area CsI Films

CsI

Microcolumnar film scintillator materials channel and conserve scintillation light within densely packaged, highly uniform microcolumns. The microcolumns are parallel, needle-like structures controllable in diameter from 250 nm to 10 µm. They number into the millions per square centimeter yielding very high resolution X-ray imaging performance. Films are typically 10 to 700 µm thick, however structures up to 3 mm in thickness are routinely synthesized. Physical sizes may vary from under 1 cm^2 to over 48 x 48 cm^2 in area, and may be fabricated to any desired shape.

Total internal reflection of the scintillation light within microcolumns yields high spatial resolution, enhanced contrast resolution and near-maximum light yield, without the spread and loss of light inherent in single-crystal amorphous scintillators.





Electron-Scanning Micrographs of CsI Scintillator

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