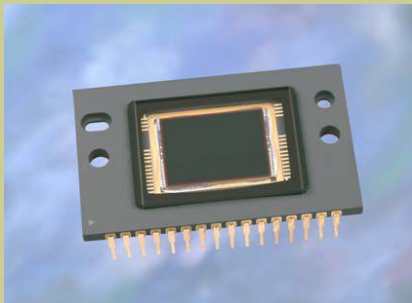


X-ray High Resolution alignment cameras

PSL has supplied X-ray High Resolution alignment CCD cameras for the last 15 years to end users and OEMs. A selection of high responsivity CCDs, combined with low noise characteristics, enables optimum photonic collection with best possible signal to noise ratio. Special read whilst expose mode allows 100% shutterless duty cycle and high sensitivity operation in low light level conditions.



Applications:

- X-ray mirror alignment
- X-ray Fresnel Zone Plate alignment
- X-ray multi layer optics characterization
- X-ray imaging
- Powder Diffraction
- Non Destructive Testing
- Phase Contrast Imaging
- X-ray source qualification
- X-ray coherent diffraction imaging

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Photonic Science Ltd

*Information /
products and
services*



Scientific detector
systems

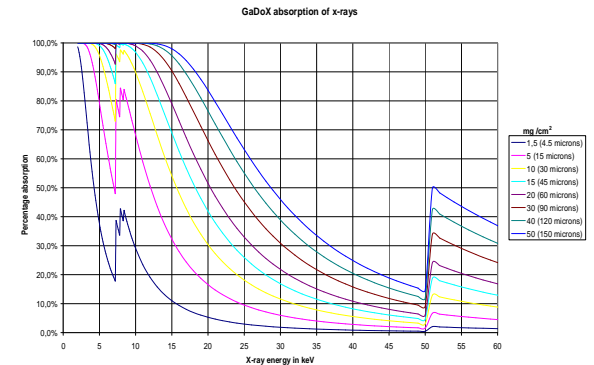
X-ray alignment cameras

Photonic Science Ltd selects premium grade CCD sensors and fibre optic bundles :

- Small pixel size less < 7 microns pixel size at the detector input
- Software switchable 12.5 and 25 MHz scanning frequencies
- Small area sensor with taper input varying 5.6 mm up to 11 mm diagonal
- Low readout noise
- Stabilized dark current 3 electrons per pixel per second
- Gating time from milliseconds to few seconds
- Simultaneous integration / readout enabling 100% duty cycle acquisition
- GdOS polycrystalline or single crystal scintillators
- On chip binning with increased acquisition frame rate
- Camera link and GigE digital interface
- Low profile electronics

X-ray alignment megapixel CCD camera

- 1392 (h) x 1040 (v) CCD array
- Input pixel size : available from 3.2 x 3.2; 6.45 x 6.45 microns
- Input size : available from 4.45 x 3.33 mm; 8.9 x 6.7 mm respectively
- 13 fps at full resolution @ 25 MHz and 6 fps @ 12.5 MHz
- Readout noise : 8 electrons @ 12.5 MHz
- Full well capacity : 18,000 electrons in binning 1x1
- Fast frame rate > 100 fps in binning 8x8 or reduced area of interest 1392 x 130 pixels
- Full vertical binning mode with 6 ms readout time
- 12-bit digitisation
- GdOS:Tb scintillator for operation from 5-55 keV with minimum feature recognition less than 10 microns.
- Camera link / GigE interface
- Synchronisation / control : via TTL pulse



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