

The SESO X Ray Beam Monitor (XBM) has been designed by ESRF (European Synchrotron Radiation Facility) for monitoring the alignment and focussing of monochromatic x-ray beams with energies ranging from 5 to 100 keV.

The software package provided allows visualisation of the beam (with profile analysis), and measurement of the integrated power and centroid position with a high precision.

SESO provides a fully integrated solution. The small size and light weight eases the integration with your beamline end station.

The large dynamic range of integration times (from 10  $\mu$ s to 0.25 s) allows the measurement of beams with very different intensity levels: from  $8 \times 10^6$  ph/mm<sup>2</sup>/s (integration time: 0.25s) to  $5 \times 10^{14}$  ph/mm<sup>2</sup>/s (integration time: 10 $\mu$ s) at 13 keV.

SESO can provide additional features on request. Please contact SESO to obtain more information and a quotation.

Please contact SESO for a camera sensitive to energies below 5 keV.

### APPLICATIONS

- Beam Visualisation
- Beam Displacement Monitoring and Control
- Cross calibration of non destructive detectors
- Test and Measurement
- Synchrotron Experiments

### FEATURES

- High precision
- Fast response (several Hz)
- True 8-bit digitisation
- Progressive scan readout
- High performance specifications
- Fully integrated system
- Small Size
- Light Weight
- Distant host real time communication



XBM camera

**System includes:** Optics (fluorescent coated radiation-hard glass), CCD Camera, Software, Frame Grabber, 5m Cables (up to 25m total length allowed).

### SPECIFICATIONS

(all specifications valid for X ray beam dimension)

Magnification	1x	2.4x	5x	x10
Image Resolution	648 x 494 pixels			
Pixel Size ( $\mu$ m squared)	7.4	3.1	1.5	0.74
Field of View (mm <sup>2</sup> )	5.8 x 4.9	2.4 x 2.0	1.1 x 0.9	0.6 x 0.5
Point spread function	12 $\mu$ m	12 $\mu$ m	6 $\mu$ m	2 $\mu$ m
Frame Rate	10 Hz max, depends on integration time			
Sensitivity	Better than $1 \times 10^6$ ph/mm <sup>2</sup> /s at 13 keV			
Spectral Response	From 5 keV to 50 keV			
Dynamic Range	Integration time from 5 $\mu$ s to 0.25 s - software adjustable			
Accuracy of position measurement	< 1/100 to 1/1000 of pixel (position monitoring within 0.1 $\mu$ m)			
Size	(L) 100 to 140 mm x $\varnothing$ 48			
Power Supply	From the frame grabber.			

Computer Requirements: PC >500 MHz, Windows NT or 2000, XP 64 MB RAM

OPTION: UHV Compatible

### Contacts

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