

# High-Resolution X-Ray Camera



## HR75 X-Ray

### Applications

- X-Ray imaging of diffraction or fluorescence and spectral patterns
- X-Ray transmission of small objects
- X-Ray imaging
- Open face versions for UV and electron detection on request

### Features

- High resolution
- ROI, Binning
- 75 mm fiber optic taper coupling
- 4 Mega Pixel

Low Light Cameras Special Purpose Cameras	Short Exposure Cameras Pulse Generators	Fiber Optical Coupling Phosphor Coatings	Detector and Camera Upgrades and Customised Prototyping
Solar Blind & Visible Image Intensifiers	UV & X-Ray Cameras Corona Detection Cameras	Customised Facilities & Equipment	Vacuum & Open MCP Detectors

**Technical data HR75 X-Ray**

<b>Camera Specification</b>	
Camera interface	GigE
Framerate	15 fps @ full resolution
CCD sensor	Kodak KAI 4021, 1.2"
CCD pixel	2048 x 2048 (H x V)
CCD pixel size	7.4 µm x 7.4 µm (H x V)
Digitisation	8 bits / 12 bits
Synchronization	External Trigger, fixed frame rate, software trigger
Exposure Control	75µs to 60s
Driver software	Included, ROI, Binning
<b>Camera Specification</b>	
Field of view	45 mm x 45 mm
Phosphor Coating	P43, other on request
Typical sensitivity range	about 20 to 100 keV (x-ray, other on request)
Input window	Aluminium 0,5 mm or different material on customer request (also "open face" for UV or electron sensitivity)
Resolution	Standard type: ≤50 µm, 11 lp/mm (@ 20% contrast) resolution-optimised version available on request

**Description**

The camera **HR75 X-Ray** is a high resolution CCD camera with a 75:25 mm fiber optic taper coupling.

X-ray, UV and electron sensitivity is achieved by phosphor coating (typically P43 phosphor).

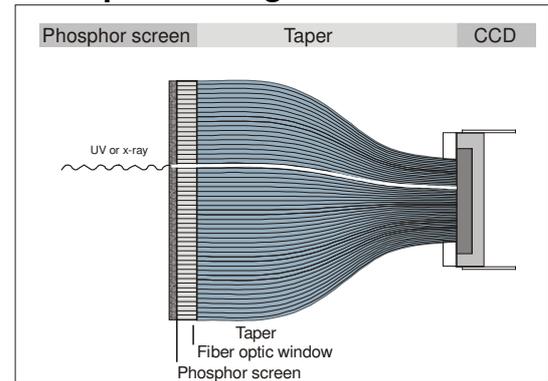
Customised versions are available on request (please specify the radiation to be detected):

- type and thickness of coating
- additional layers (e.g. Alu, ITO)
- type and thickness of input window or "open face"
- camera electronics
- cooling (for certain types)
- vacuum interface
- field of view

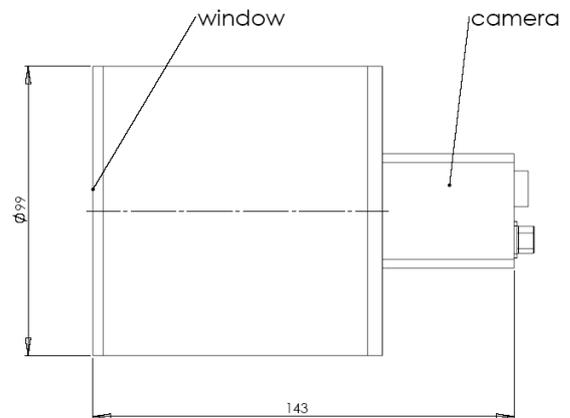
For customised versions please contact us. Based on our engineering and production facilities special versions are available.



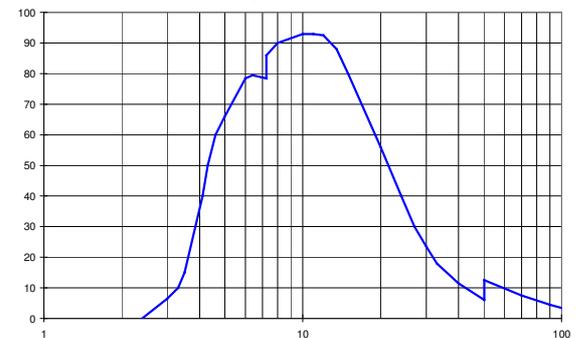
**Principle drawing**



**Dimensions HR75 X-Ray**



**Quantum Efficiency (%)**



Photon Energy (keV) [Quantum efficiency of P 43 (phosphor quantity: 25 mg/cm<sup>2</sup>, layer thickness: ca. 55 µm)]  
P43 is most recommended for a broad x-ray spectrum and UV radiation of a wavelength ≤ 250 nm.

Low Light Cameras Special Purpose Cameras	Short Exposure Cameras Pulse Generators	Fiber Optical Coupling Phosphor Coatings	Detector and Camera Upgrades and Customised Prototyping
Solar Blind & Visible Image Intensifiers	UV & X-Ray Cameras Corona Detection Cameras	Customised Facilities & Equipment	Vacuum & Open MCP Detectors