



High-Resolution X-Ray Camera HR-40-X-Ray



Model HR-40-X-Ray

Applications:

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

Technical data HR-40-X-Ray

Camera Specification	
Camera interface	IEEE1394b or GigE
Framerate	17 or 30 fps
CCD sensor	Sony ICX285 Progressive Scan 2/3"
CCD pixel	1392 x 1040 (H x V)
CCD pixel size	6.45 μm x 6.45 μm (H x V)
Digitisation	8 bits / 12 bits
Synchronization	via external trigger, or free run
Exposure Control	programmable
Driver software	Included, ROI, Binning
Camera Specification	
Field of view	32 mm x 24 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: $\leq 50 \mu\text{m}$, 10 lp/mm (@ 20% contrast) resolution-optimised version available on request

Description

The camera **HR40-X-Ray** is a high resolution CCD camera with a 40:11 mm fiber optic taper coupling.

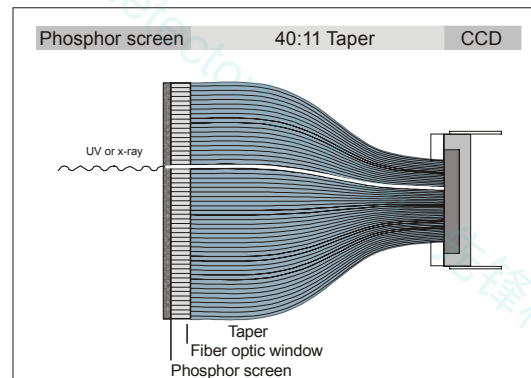
X-ray, UV and electron sensitivity is achieved by phosphor coating (typically P43 phosphor)

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

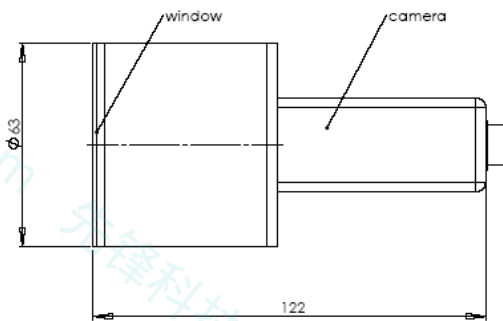
- type and thickness of coating
- additional layers (e.g. Alu, ITO)
- type and thickness of input window or "open face"
- camera electronics
- cooling (for certain types)
- vacuum interface
- field of view

For customised versions please contact us. Based on our engineering and production facilities special versions can be realised.

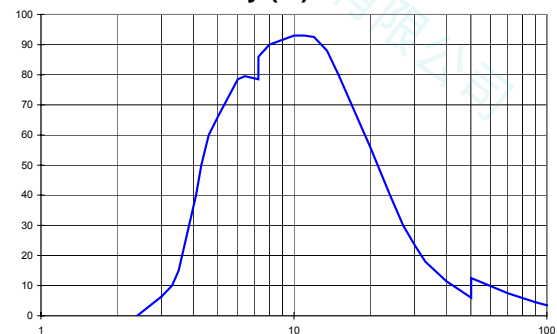
Principle drawing



Dimensions HR-40-X-Ray



Quantum Efficiency (%)



Photon Energy (keV) [Quantum efficiency of P 43 (phosphor quantity: 25 mg/cm², layer thickness: ca. 55 μm)]
P43 is most recommended for a broad x-ray spectrum and UV radiation of a wavelength $\leq 250 \text{ nm}$.