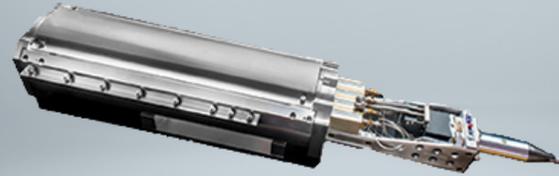


Sydor X-Ray Framing Camera (XRFC)

The Sydor X-ray Framing Camera (XRFC) comes paired with Sydor's Vacuum CCD for a completely integrated solution useful for acquiring sequential image frames for x-rays spanning 0.2-15 keV.

The XRFC is designed for use in vacuum to provide 2D spatially time-resolved frames or 1D spectrally resolved images of target features. This framing camera can be configured with fast or slow detection heads for frames ranging from 40 ps to 1000 ps. The system uses a strip-line activated micro-channel plate and phosphor screen. Captured images are recorded using Sydor's Vacuum CCD—a compact 16 MP sensor with 9 micron pixels.

The XRFC System is provided with high-performance electronics that include trigger units, delay units, pulse forming modules (PFMs), bias supplies, the phosphor pulser, the pulse monitor, and the main control unit. The complete system is enclosed within an air bubble mounting structure that is hermetically sealed, protects the system's electronics, supports the head, and provides system mounting provisions.



Features:

- ⊕ Easy control number of frames, frame rates, and frame size for maximum convenience
- ⊕ Digital readout with Sydor Vacuum CCD eliminates the need for film packs
- ⊕ Sealed and protected electronics prevent contamination within the vacuum system
- ⊕ Remote operation and monitoring allows for use in harsh environments

Applications:

- ⊕ X-ray Radiography
- ⊕ Inertial Confinement Fusion



Product Specifications

Detector

- ⊕ **Micro-Channel Plate:** 1, 2, or 4 strip
- ⊕ **Active Area:** 30 x 30 mm
- ⊕ **Spectral Sensitivity:** 200 nm to 10 keV
- ⊕ **Phosphor:** P11
- ⊕ **Fractal Fiber Optic Phosphor Screen Pixel Size:** 6 mm

Electronics

- ⊕ **Fast Design Frame Speed :** < 100 ps
- ⊕ **Slow Design Frame Speed:** 200 ps-1 ns
- ⊕ **Trigger Input:** Optical or electrical
- ⊕ **Bias voltage for a Photo-Conductive Detector (PCD):** -1 kV to +1 kV
- ⊕ **DC or Pulsed Voltage for the Phosphor Screen:** 0 kV to +5 kV
- ⊕ **Monitor Output:** PDC, channels 1-3, and pulsed phosphor signals
- ⊕ **Power:** 28 VDC at <1.2 A

Mechanical

- ⊕ **Hermetically Sealed Air Closure:** Keeps electronics from contaminating the vacuum or becoming contaminated
- ⊕ **Mounting Rails:** Positioning features for use in a Ten Inch Manipulator (TIM)
- ⊕ **Mounting Points:** Various front-end nose cones and diagnostics
- ⊕ **Weight:** 48 lbs
- ⊕ **Dimensions (without rails or lifting yoke):** 38.5" (L) x 7.125" (W) x 8.5" (H)
- ⊕ **Lifting:** Removable lifting handles and rigging yoke

Readout

- ⊕ **Sydor Vacuum X-Ray CCD:** Compatible vacuum-compatible digital detector
- ⊕ **Sensor:** 4,096 x 4,096 pixels (37 mm x 37 mm imaging area)
- ⊕ **Thermoelectric Cooler:** 0°C in vacuum
- ⊕ **Communication:** Fiber communication through vacuum
- ⊕ **Controller:** 19" rack mount with Ethernet communication, others available
- ⊕ **Controls:** Readout rate, arming/triggering, binning, and CCD temperature

