SYDOR INSTRUMENTS, LLC

Product Specifications

ROSS 6000 X-ray Streak Camera

The Sydor ROSS 6000 X-ray Streak Camera is Sydor's newest X-ray streak camera designed in collaboration with Kentech Instruments. Featuring a large format 25 mm interchangeable photocathode, the ROSS 6000 is our most versatile x-ray streak camera and is configurable for re-entrant housing as well as a TIM based system. The ROSS 6000 can be used for both single shot and high repetition rate experiments, up to 1kHz.

SYDOR ROSS 6000	KEY PERFORMANCE PARAMETERS
STREAK TUBE	Kentech X-ray Streak Tube
Temporal Resolution	<5 picoseconds
Static Spatial Resolution	10 lp/mm
Photocathode Size (effective)	25 mm
Photocathode Type (changeable)	Au, CsI, KI, KBr (others available)
Accelerating Electrode Type	Mesh
Spatial Magnification	1.2
Screen Phosphor	P43 fiber optic faceplate (others available)
ELECTRONICS	
Sweep Speeds	Multi speed sweep modules available for pico, nano and microsecond timescales
Repetition Rate	1 Hz (rep rates up to 1kHz available)
Trigger Input Voltage Level	TTL
Trigger Jitter	< 50 ps RMS
Hold-off Time (Streak Retrace)	>50 µs
Trigger Delay	30 ns
Voltage Stability	±0.02% closed loop (-15kV Cathode Supply) ±0.1% closed loop (Bias & Sweep Supplies)
RECORDING SYSTEM	SI-1000 TE cooled camera with 1:1 fiber relay, KAF16801E Front Illuminated Chip, 4096 x 4096 pixels @ 9µm2
Dark Current	0.1 electrons/pixel/second at –20 deg C
System Noise	< 7.7 electrons per pixel
Full Well	>85,000 electrons, unbinned
VACUUM REQUIREMENTS	
Pressure	Better than 10^{-4} torr, better than 10^{-5} torr recommended
Mounting	Re-entrant housing, TIM based models available
SOFTWARE	ROSS_App
Compatible Computer OS	Windows XP, Windows 7
Functions, Features	Full control of streak camera, acquisition and display of streak image, image processing, file storage and file exportation (see software manual)
ACCESSORIES	
Image Intensifier (optional)	40 mm single stage MCP fiber coupled to streak tube, MAX Pack
Timing Fiducials	UV FO fiducial system available

Specifications subject to change

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