SYDOR INSTRUMENTS, LLC

Product Specifications

ROSS 5100 Streak Camera

The Sydor ROSS Streak Camera is exclusively designed to work with the Sydor ROSS DynaCal Optical Calibration Module (OCM). Together with the OCM, the Sydor ROSS Streak Camera is capable of better than 1% measurement accuracy, remote operation, and auto-calibration for critical applications such as beam timing, temporal pulse shaping, and shock breakout studies/VISAR experiments.

SYDOR ROSS 5100 (WITHOUT OCM)	**KEY PERFORMANCE PARAMETERS**
STREAK TUBE	Photonis P510 Series
Temporal Resolution	5 picoseconds
Spatial Resolution	10 lp/mm at 70% contrast
Photocathode Size (effective)	20 mm – 27 mm
Photocathode Type	S20 on sapphire window (others available)
Accelerating Electrode Type	Slot
Spatial Magnification	1.3
Screen Phosphor	P22, P43 on fiber optic faceplate (others available)
ELECTRONICS	
Sweep Speeds	Multi speed sweep modules available for pico, nano and microsecond timescales
Trigger Input Voltage Level	TTL
Trigger Input Rise Time	<10 ns
Trigger Jitter	< 25 ps RMS
Hold-off Time (Streak Retrace)	25 ms
Trigger Input Width	300 ns < Trigger Width < 1 ms
Voltage Stability	±0.02% closed loop (-15kV Cathode Supply) ±0.1% closed loop (Bias & Sweep Supplies)
RECORDING SYSTEM	SI-800 TE cooled camera with 1:1 fiber relay, E2V chip, 2048 x 2048 pixels @ 13.5µm2
Dark Current	< 0.1 electrons/pixel/second at –35 deg C
System Noise	< 5 electrons per pixel
Full Well	90,000 electrons, unbinned
CAMERA SYSTEM PERFORMANCE	
Dynamic Range	DR (sweep) 175 (2ns), 405 (6ns), 855 (12ns)
System Gain	~100 CCD electrons per photocathode-electron
Contrast	70% at 10 lp/mm
PHYSICAL DATA	
Dimensions	7"W x 12"H x 30"L (Sydor ROSS without OCM) 12"W x 12"H x 34"L (Sydor ROSS with OCM)
Input Voltage	+28 VDC, 5A
Shielding	Extensive mu-metal EMI shielding
Computer Interface	MTRJ fiber duplex or Serial RS232
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)

Specifications subject to change

FOR MORE INFORMATION PLEASE CONTACT US AT: (585) 278-1168
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