



## ROSS 5800 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 5800 (WITHOUT OCM) KEY PERFORMANCE PARAMETERS	
<b>STREAK TUBE</b>	Photek ST-DS
Temporal Resolution	5 picoseconds
Spatial Resolution	10 lp/mm at 70% contrast
Photocathode Size (effective)	20 mm – 27 mm
Photocathode Type	S20 on Fused Silica window (others available)
Accelerating Electrode Type	Dual Slot
Spatial Magnification	1.15
Screen Phosphor	P43 on fiber optic faceplate (others available)
<b>ELECTRONICS</b>	
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)
<b>RECORDING SYSTEM</b>	SI-800 TE cooled camera with 1:1 fiber relay, E2V chip, 2048 x 2048 pixels @ 13.5µm <sup>2</sup>
Dark Current	< 0.1 electrons/pixel/second at –35 deg C
System Noise	< 5 electrons per pixel
Full Well	90,000 electrons, unbinned
<b>CAMERA SYSTEM PERFORMANCE</b>	
Dynamic Range	DR (sweep) 175 (2ns), 405 (6ns), 855 (12ns)
System Gain	~100 CCD electrons per photocathode-electron
Contrast	70% at 10 lp/mm
<b>PHYSICAL DATA</b>	
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
<b>SOFTWARE</b>	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