



ROSS 5100 Streak Camera

The Sydor ROSS Streak Camera is exclusively designed to work with the Sydor ROSS Optical Calibration Module (OCM). Together with the OCM, the Sydor ROSS Streak Camera is capable of 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

Temporal resolution	Photonis P510PSU
Spatial resolution	5 picoseconds
Photocathode size (physical)	10 lp/mm @ 50% contrast > 30 lp/mm @ low accelerating field
Photocathode type	22mm @ 50% contrast 35 mm @ low accelerating field
Accelerating electrode type	S20 on sapphire window
Spatial magnification	slot
Screen phosphor	1.3
	P22N on fiber optic faceplate

ELECTRONICS

Sweep speeds	4 standard speeds: 2ns, 6ns, 12ns, 30ns (configurable to any 4 speeds, 2ns min – 50ns max)
Trigger input voltage level	TTL
Trigger input rise time	<10ns
Trigger jitter	<70 picoseconds rms
Hold-off time (streak retrace)	25 milliseconds
Trigger input width	300ns <Tw < 1ms
Voltage stability	±0.02% closed loop (-15Kv cathode supply) ±0.1% closed loop (bias & sweep supplies)

RECORDING SYSTEM

	SI-800 TE cooled camera with fiber relay, E2V chip 2048 x 2048 pixels @ 13.5um sq.
Dark current	<0.1 electrons/pixel/second at -35 deg C
System noise	<5 electrons per pixel
Full well	>= 90,000 electrons, 1x1 binned

CAMERA SYSTEM PERFORMANCE

Dynamic range	Sweep: 2ns, 6ns, 12ns Ref. Dick Lerche in DR: 175, 405, 855 Review of Scientific Instruments
System gain	101 CCD electrons per photoelectron
CTR	60% at 10 lp/mm

PHYSICAL DATA

	7"W x 12"H x 21"L (Sydor ROSS without OCM) 10"W x 12"H x 21"L (Sydor ROSS without OCM)
Input power	+28VDC power
Shielding	Extensive mu-metal EMI shielding
Computer interface	MTRJ fiber duplex or Serial RS232

Specifications subject to change at any time

FOR MORE INFORMATION PLEASE CONTACT US AT: (585)427-9112

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