



ROSS 2550 Streak Camera

The Sydor ROSS 2550 Streak Camera is an economical, smaller format streak camera for a variety of ultrafast applications where multiple data channels and auto-calibration is not required. The ROSS 2550 can operate as a stand alone, single beam instrument or expanded to incorporate the features of the Sydor ROSS Optical Calibration Module (OCM) for auto-calibration. The ROSS 2550 shares many of the same attributes of the ROSS platform such as remote operation, extensive EMI shielding, and fast, reliable data acquisition. The 2550 is most suitable for applications such as spectroscopy, detonics, energetics, VISAR experiments, and other diagnostic applications where single beam imaging is most important.

SYDOR ROSS 2550 (WITHOUT OCM):

KEY PERFORMANCE PARAMETERS

STREAK TUBE

Temporal resolution	36 picoseconds nominal (4ps high accelerating field)
Spatial resolution	10 lp/mm @ 50% contrast (>20 lp/mm low accelerating field)
Photocathode size (effective)	13 mm
Photocathode type	S20 / S25 on fiber optic. Other materials available
Accelerating electrode type	Slot or mesh
Spatial magnification	0.7 to 1.5
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	<10ns
Trigger jitter	<25 picoseconds rms
Hold-off time (streak retrace)	25 milliseconds
Trigger input width	300ns <Trigger Width <1ms
Voltage stability	± 0.02% Closed Loop (-15kV Cathode Supply) ± 0.1% Closed Loop (Bias & Sweep Supplies)

RECORDING SYSTEM

	TE cooled camera 1024 x 1024 pixels @ 13.0 μm ² with 1:1 fiber relay
Dark current	<0.1 electrons/pixel/second at -35°C
System noise	<5 electrons/pixel
Full well	100,000 electrons, unbinned

INPUT OPTIONS

	100/140μm multimode graded index fiber
	Free space
	Variable slit

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 2000 or Windows XP
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 at any time

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

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