



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

STREAK TUBE	Photek ST-X
Temporal resolution	2 picoseconds
Spatial resolution	10 lp/mm @ 50% contrast > 30 lp/mm @ low accelerating field
Photocathode Size (Physical)	18 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	P11, P43, P46, P47, others available

ELECTRONICS

Sweep Speeds	4 standard speeds: 1ns, 3ns, 9ns, 27ns (configurable to any 4 speeds, 1ns min – 100ns 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 < Trigger Width < 1ms
Voltage Stability	+/- 0.02% Closed Loop (-15kV Cathode Supply) +/- 0.1% Closed Loop (Bias & Sweep Supplies)

RECORDING SYSTEM

RECORDING SYSTEM	Custom TE cooled camera with fiber relay 1024 x 1024 pixels @ 13.0 μm^2 with tapered fiber / 1024 x 1024 pixels @ 24.0 μm^2 with straight plug
Dark Current	< 0.1 electrons/pixel/second at -35°C
System Noise	< 5 electrons/pixel
Full Well	\geq 90,000 electrons, 1x1 binned
Input Lens	Singlet or color corrected achromat. AR coated per reqs. Wavelength UV - IR
Input Slit	0 - 4mm, 20 μm resolution

PHYSICAL DATA

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

SOFTWARE

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.

Specifications subject to change at any time

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

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