



ROSS Optical Calibration Module

The Sydor ROSS Optical Calibration Module (OCM) is exclusively designed to work with the Sydor ROSS Streak Camera for system calibration and imaging of fiber coupled and free space signals onto the streak tube of the Sydor ROSS Streak Camera. This patented module enables 1% measurement accuracy, remote operation, and auto-calibration for the Sydor ROSS Streak Camera.

THE FOLLOWING SPECIFICATIONS ARE UNIQUE TO THE SYDOR ROSS OPTICAL CALIBRATION MODULE (OCM):

FEATURE	KEY PERFORMANCE PARAMETERS
IMAGING OPTICS	Achromatic all reflective Offner relay with a motorized secondary mirror
	Aluminum w/MgF2 broadband HR coating
	1:1 magnification
	25mm field of view
	F/2.5 to F/10 continuously variable (motorized)
	10mm FOV – MTF @ F/8.0, 75% @ 20 lp/mm
FREE SPACE OPTICAL INPUT	Imaged on the cathode by internal high-performance imaging optics
	25mm slit input height
	Variable slit width 100µm to 1mm with 10µm resolution (motorized)
	35mm shutter
FIBER COUPLED INPUT	20 total fiber input channels (connector options available)
	10 IR/visible and 10 UV channels with graded index fiber
	Up to any 10 channels simultaneously imaged to the cathode
	2 additional dedicated comb pulse or Fiducial channels imaged to the cathode
	1.5mm H x (50µm, 100µm or 600µm)W cathode illumination
	Four axis adjustment, motorized in x,y,z, and theta
	25mm shutter
FIBER SWITCH NETWORK	Software controlled Optical Switching Network
	Input is external fiber input or internal comb generator
	Outputs to any channel on the data head
	Custom configurations for unique applications
FLAT-FIELD CORRECTION IMAGE ACQUISITION	25mm H x (50µm, 100µm or 600µm)W cathode illumination
	<1% peak to valley illumination uniformity
	4 internal illumination LEDs: Red (630nm), Green (517nm), Blue (472nm) and choice of IR (1050nm) or UV (365nm)
	Four axis adjustment, motorized in x,y,z, and theta
	Patented slow ramp acquisition technique

Specifications subject to change at any time

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FEATURE	KEY PERFORMANCE PARAMETERS
STATIC SPATIAL RESOLUTION MEASUREMENT	25mm H x (50µm, 100µm or 600µm)W cathode illumination 4 user selectable resolution targets <1% peak to valley illumination uniformity 4 internal illumination LEDs: Red (630nm), Green (517nm), Blue (472nm) and choice of IR (1050nm) or UV (365nm)
DYNAMIC SPATIAL RESOLUTION CAPABILITY	25mm H x (50µm, 100µm or 600µm)W cathode illumination 20 total fiber input channels 10 IR/visible and 10 UV channels with graded index fiber Up to any 10 channels simultaneously imaged to the cathode 4 user selectable resolution targets
GEOMETRIC CORRECTION IMAGE ACQUISITION	25mm H x (50µm, 100µm or 600µm)W cathode illumination Continuously variable grid density in the temporal direction 2 user selectable grid densities in the spatial direction <1% peak to valley illumination uniformity 4 internal illumination LEDs: Red (630nm), Green (517nm), Blue (472nm) and choice of IR (1050nm) or UV (365nm) Four axis adjustment, motorized in x,y,z, and theta
TIME BASE CALIBRATION	Internal or external optical comb pulse generator 2 user selectable internal comb rates from 100MHz to 4GHz 60ps internal comb pulse width Simultaneously sweep the internal and the external comb pulses while acquiring data With Fiber Switch Network can automatically calibrate time base at any spatial position
PHYSICAL DATA	12"W x 12"H x 35"L (Sydor ROSS with OCM) +28VDC, 5A (provided by the Sydor ROSS base camera) Extensive EMI shielding

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