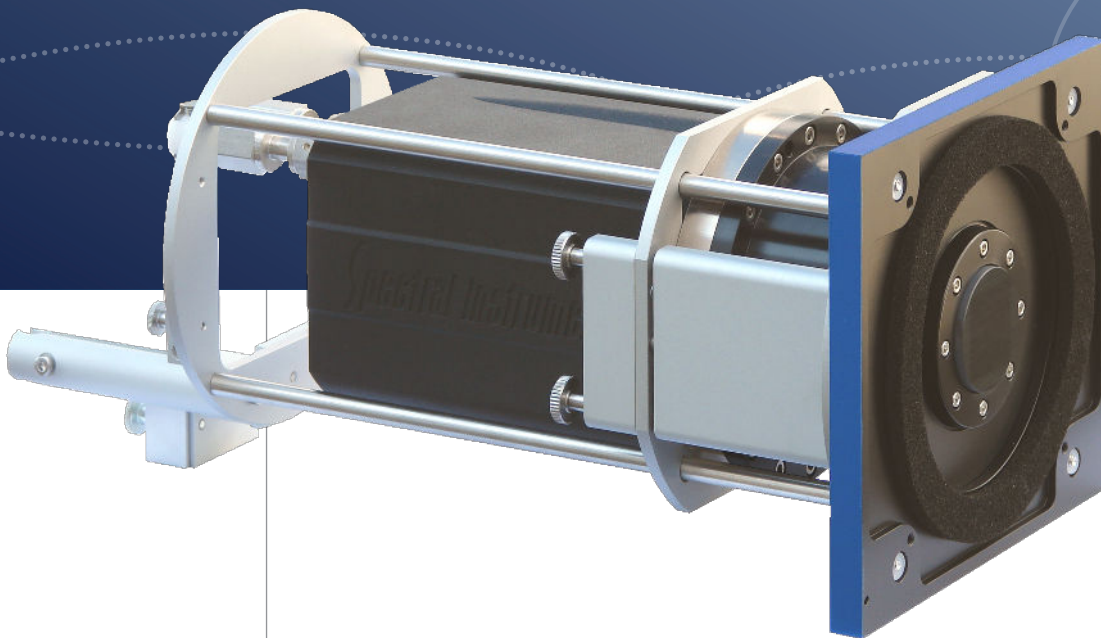


STREAK READOUT UNIT

SI1 900

Large Format Fiber-Optics Camera



- Resolution 2048 x 2048 pixel
- High efficiency fiber-optic coupling
- Cooled CCD sensor
- Back illuminated
- Designed to be used for SC-20 systems

Streak Readout Unit SI1900

Optronis

Make time visible

The SI1900 is a scientific grade high dynamic and large format CCD camera. It is used for streak systems with large format screen like SC-20. Due to best coupling efficiency of the fiber optic faceplate, high system sensitivity is achieved even without image intensifier. Camera can be provided with optional reducing fiber optics to capture larger screen area.

SPECIFICATIONS

Integration time	1 ms .. 100 s
Trigger operation	Continuous / External Trigger
Trigger input	TTL level, positive edge, (for connector Lemo FGG.0B.304)
Interface	Ethernet
Cooling	TE CCD cooling with external closed loop liquid cooling 2 x 3 m cooling tubes
Power supply	100 V .. 240 V external AC/DC converter
Temperature (ambient)	+5°C .. +30°C
Humidity	20% .. 70% rel. humidity, non cond.
Camera dimensions	280 (l) x 180 (w) x 160 (h) mm ³
Cooler dimensions	225 (w) x 360 (d) x 380 (h) mm ³
Weight (typ.)	5.4 kg (camera) / 23 kg (cooling unit)
Delivery	PCIe interface board, supply unit, cooling unit (mini-chiller), power supply, trigger cable

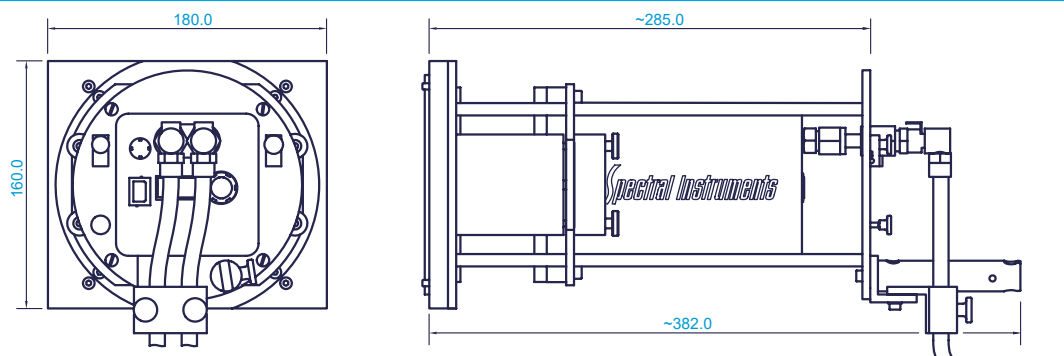
COOLING

The CCD is thermo electrically (TE, Peltier) cooled with additional liquid cooling of the Peltier element. Liquid cooling with closed loop circulation and external chiller provides effective cooling even at high ambiente temperatures.

MODELS

SI1900	camera with 1:1 face plate
SI1900/1.3	camera with 1.3:1 taper

TECHNICAL DRAWING



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ACQUISITION MODES

Image acquisition can be triggered to be synchronised to the event. Together with the StreakViewer acquisition software image accumulation and various image processing options are available.

SI1900

Resolution	2048 x 2048 pixel
Digitalization	16 bit
Pixel size	13.5 µm x 13.5 µm
Readout area	27.6 x 27.6 mm ² (SI1900) 35.9 x 35.9 mm ² (SI1900/1.3)
CCD	e2v 42-40 full frame, back illuminated, grade 1 others on request
Pixel readout frequency	100 kHz, 800 kHz (readout mode dependent)
Image readout time	42 sec @ 100 kHz 5.3 sec @ 800 kHz
Readout noise (typ.)	3 e ⁻ @ 100 kHz 8 e ⁻ @ 800 kHz

COUPLING OPTICS

A 1:1 fibre optic faceplate is used to couple the CCD chip to the fiber optic output window of OPTOSCOPE streak cameras. The camera can also be provided with a 1.3:1 taper to readout larger screens.