Optronis

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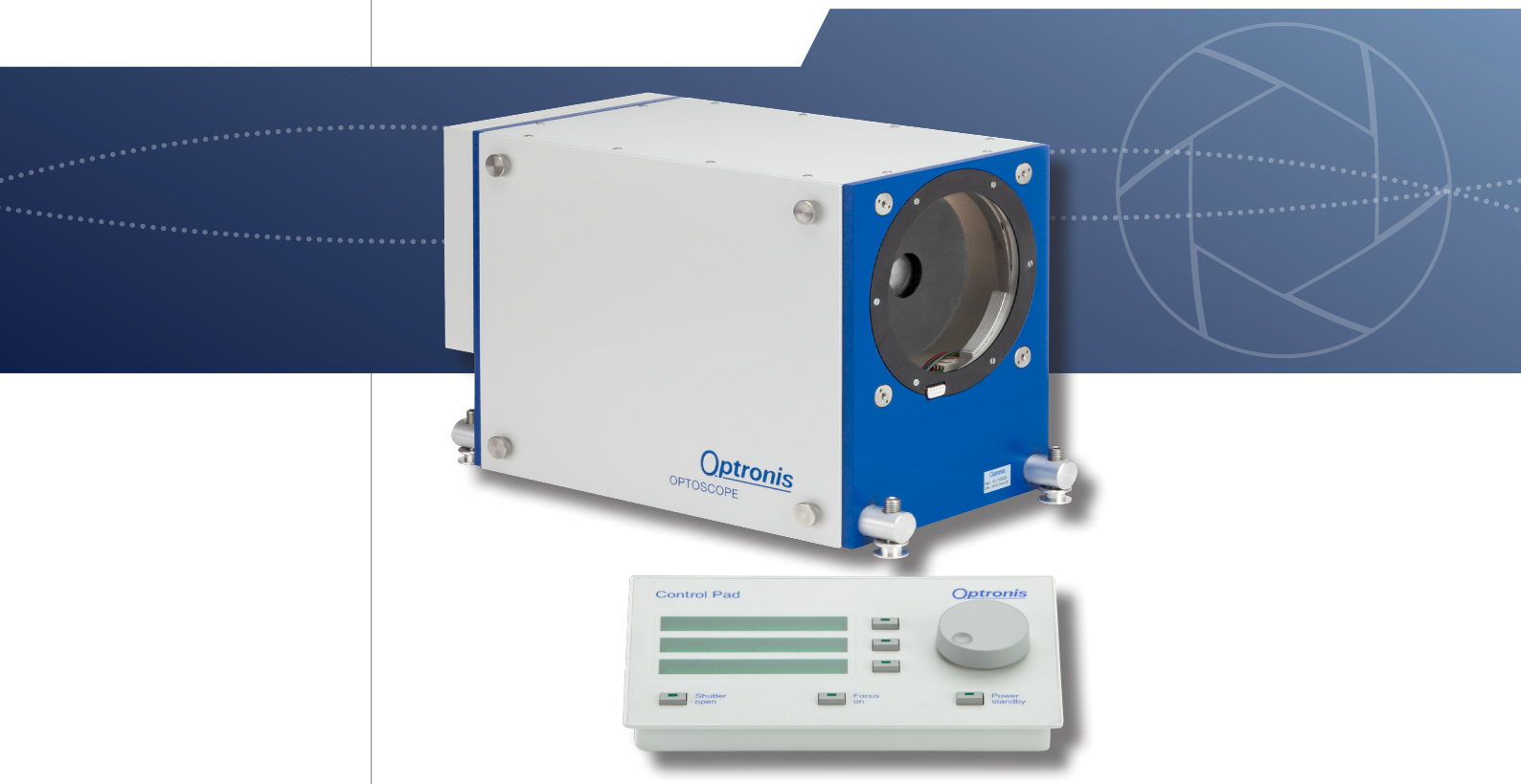
STREAK CAMERA MAIN UNIT

SC-20

Main Unit for SC-20 Systems



- Large photocathode 35 mm
- Modular design for universal use
- Fiber optics input window
- Ethernet interface

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Main Unit SC-20

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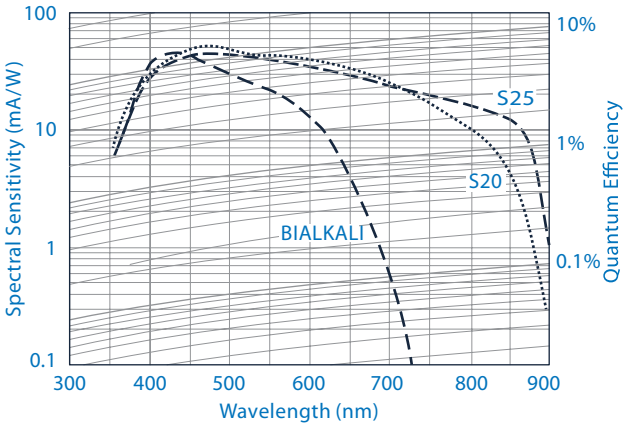
The SC-20 main unit consist of a streak tube with power supply and control electronics including an Ethernet interface. The large photocathode is well suited for simultaneous analyses of multiple optical phenomena and laser doppler interferometry. The fiber optic input window allows a proximity coupling of the the input slit. Therefore the input optics IOS-20 can be used. It additionally provides optical marker input and might be completed with a shutter function. An image intensifier II140 is available to increase system sensitivity.

SPECIFICATIONS

Temporal resolution	≤600 ps (TSU12-20/F2)
Photocathode size	35 mm (hor.) × 4 mm (ver.) 29 mm × 4 mm (tpy. readout lim.)
Input window	Fiber optics (others on req.)
Streak tube magnification (typ.)	0.8
Screen size (typ. readout limited)	23.2 mm (hor.) × 30mm (ver.)
Phosphor type	P43 (others on req.)
Static resolution	<100 µm (FWHM on screen)
Sweep direction	bottom-up
Dimensions	300 × 180 × 245-250 mm³
Weight	16 kg
Temperature	0 - 35°C (op.) / -5 - +45°C (stor.)
Environment	20 - 80% rel. hum. non- cond.
Altitude	sea level up to 3000 m
Power supply	100 - 240 V /45-60 Hz

PHOTOCATHODE

The streak tube is available with different photocathodes having different spectral responses and noise characteristics. Typical data are given.



Type	Ref.	Spectral range	Dark noise
Bialkali	/BI	360 - 700 nm	20 nlux
S20	/S20	360 - 850 nm	0.20 µlux
S25	/S25	360 - 950 nm	1.0 µlux

READOUT CAMERA SELECTION

To be considered: Active screen area is 26.25 mm × 30 mm. Readout camera selection might limit this to a smaller area. Consequently, usable photocathode length might be reduced.

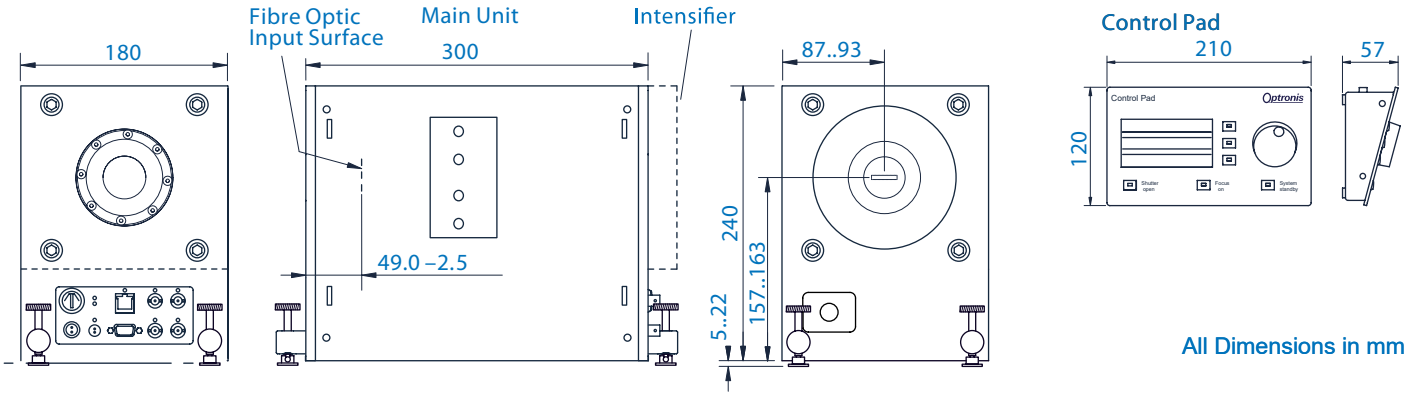
PHOTOCATHODE GATING

Extinction ratio	>10^6 @ 670 nm
Rise time / Fall time	<1 µs / <1 µs
Frequency	0 - 10 Hz
Operation mode	continuous / gated

IMAGE INTENSIFIER II140 (OPTIONAL DEVICE)

Type	Singel stage MCP
Adjustable gain (typ.)	1 - 1000
Gating time	>2 ms
Operation mode	continuous / gated

TECHNICAL DRAWING



All Dimensions in mm

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