

STREAK CAMERA MAIN UNIT

SC-10

Main Unit for SC-10 Systems



- High temporal resolution 2 ps
- Modular design for universal use
- Synchroscan and triggered operation
- Dual sweep available
- Ethernet interface

Main Unit SC-10

The streak camera main unit is the central part of a streak camera system. The main unit consist of a streak tube with supply and control electronics including an Ethernet interface to control the system. The SC-10 main unit is completed with a shutter SH25-10 and a fiber optically coupled image intensifier II125. Using a separate image intensifier within the electro-optical signal chain provides photon counting sensitivity combined with high detection efficiency and low amplification noise. The modular design allows removing shutter or image intensifier for particular requirements.

SPECIFICATIONS

Temporal resolution	≤2 ps (TSU11-10 or SSU11-10)
Photocathode size	8 mm (hor.) × 2 mm (ver.)
Input window	fused Silica (others on req.)
Streak tube magnification (typ.)	2
Screen size	15 mm (hor.) × 20 mm (ver.)
Phosphor type	P43 (others on req.)
Static resolution	<100 μm (FWHM on screen)
Sweep direction	left-right (slow) / bottom-up (fast)
Dimensions	365 × 180 × 245-250 mm ³
Weight	16 kg (incl. SH25-10 and II125)
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

OPTION /H2 - HIGH FREQUENCY SYNCHROSCAN

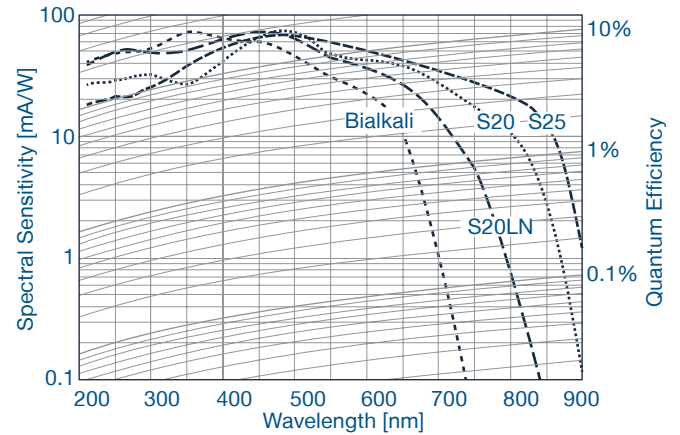
To operate the SC-10 with the synchroscan sweep unit SSU11-10/H2 at high sweep frequency above 150 MHz, the /H2 option for the main unit is needed.

SHUTTER SH25-10

Type	Electro-mechanical
Delay	<20 ms
Frequency	<10 Hz
Operation mode	manual / external control

PHOTOCATHODE

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



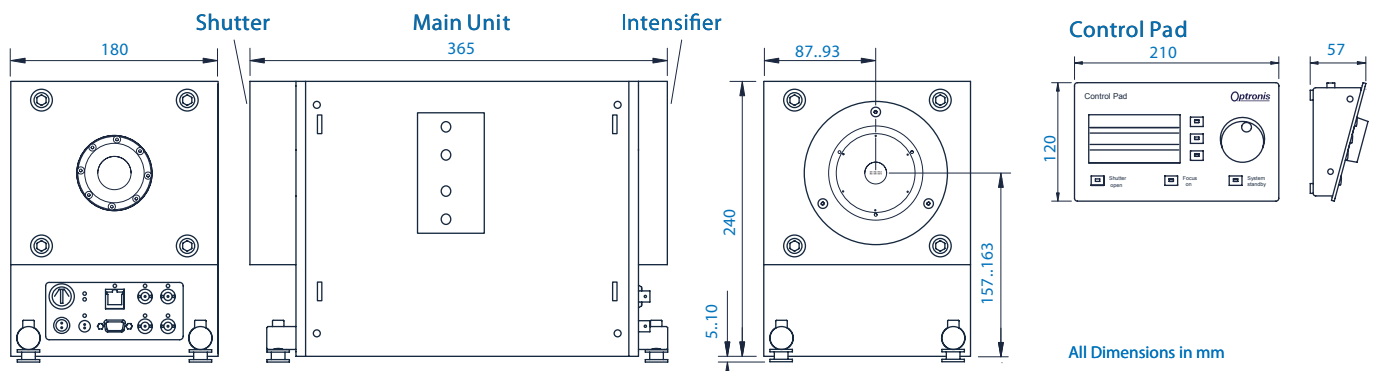
Type	Ref.	Spectral range	Dark noise
Bialkali	/BI	200 - 700 nm	20 nlux
S20LN	/S20LN	200 - 750 nm	40 nlux
S20	/S20	200 - 850 nm	0.20 μlux
S25	/S25	200 - 950 nm	0.40 μlux

OPTION /PB - PHOTOCATHODE GATING

Extinction ratio	>10 ⁶
Rise time / Fall time	<1 μs / <1 μs
Frequency	0 - 2.5 kHz
Operation mode	continuous / gated

IMAGE INTENSIFIER II125

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



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