

STREAK CAMERA SWEEP UNIT

# TSU12-51

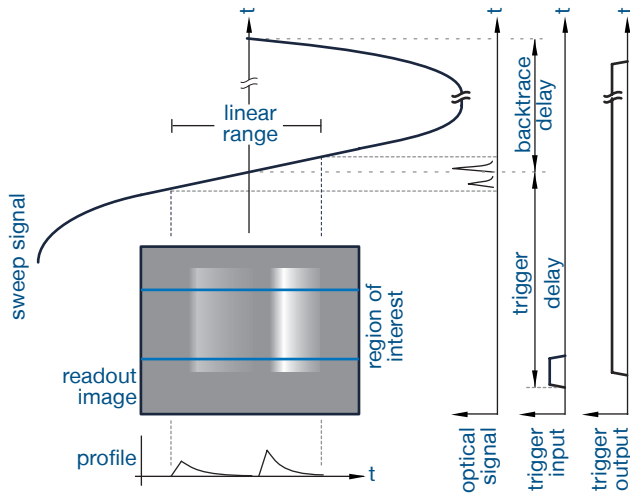
## Triggered Sweep Unit



- To be used with SC-51 main unit
- <math><1\text{ ns}</math> temporal resolution (single-shot)
- 10 ns/mm up to 5  $\mu\text{s/mm}$  sweep speed
- High sweep speed linearity
- Low jitter

# Sweep Unit TSU12-51

The TSU12-51 sweep unit is used with the OptoScope main unit SC-51. Fast sweep speeds can be selected to provide high temporal system resolution. The sweep unit is operated at low sweep frequency either in single-shot or repetitive mode. Focus mode can be selected to simplify optical alignment.



## SPECIFICATIONS

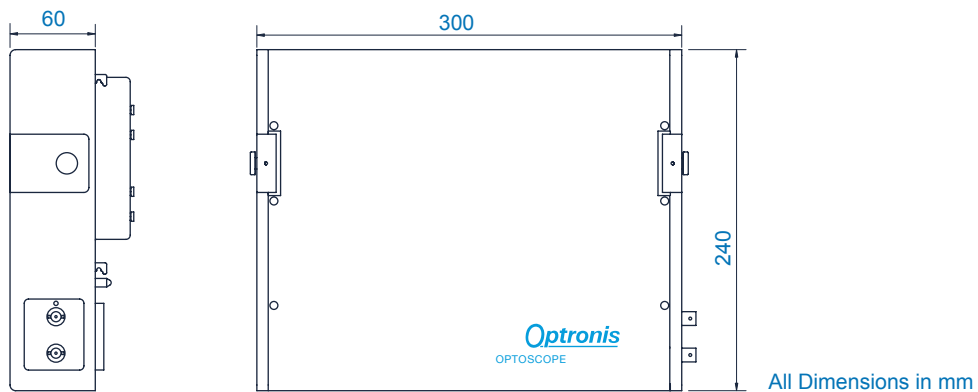
Temporal resolution (single-shot)	<1 ns (FWHM)
Temporal jitter	<1 % of time base (FWHM)
Sweep frequency	0 to 10 Hz
Sweep speed accuracy	±5% (mean over 20 mm)
Sweep speed non-linearity	±2.5% typ. / ±5% max. (30 mm)
Operation modes	Sweep / Focus
Trigger signal input	>+3 V (Trise <10ns, Tpw >50ns)
Trigger signal input connection	BNC / 50 Ω
Trigger signal output	+2 V (typ. Tpw =1.5 μs)
Trigger signal output connection	BNC / 50 Ω
Temperature	0 - 35°C (op.) / -5 - +45°C (stor.)
Humidity	20 - 80% rel. non-condensing
Altitude	sea level up to 3000 m
Weight	3.3 kg (typ.)

## DESCRIPTION

The rising edge of the trigger signal starts a very linear sweep with low temporal jitter. The image of the slit is swept over the screen. It appears in the middle after the trigger delay time. Once the linear sweep is completed, the backtrace starts and the slit image returns to its initial position. In single-shot mode trigger frequency is low and each sweep can be captured individually by the readout system. Ultimate temporal resolution is obtained in this mode.

## TSU12-51

Sweep speed	Time base	Trigger delay (typ.)
10 ns/mm	300 ns	400 ns
25 ns/mm	750 ns	800 ns
50 ns/mm	1.5 μs	1.2 μs
100 ns/mm	3 μs	2.5 μs
250 ns/mm	7.5 μs	6.5 μs
500 ns/mm	15 μs	13 μs
1 μs/mm	30 μs	25 μs
2.5 μs/mm	75 μs	65 μs
5 μs/mm	150 μs	125 μs



All Dimensions in mm

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