# Streak camera C10627 series

# Sweep frequency of 20 MHz!

Now make fluorescence lifetime measurements with higher sensitivity.



Introducing the Streak camera C10627 with a maximum sweep frequency up to 20MHz, 10 times faster sweep provides 10 times the signal or 1/10 the acquisition time. Along with faster readout digital readout enables the Streak camera C10627 to capture weak, short-lifetime samples excited by a compact laser or even LEDs. Combined with the confocal microscope or scanning near-field optical microscope (SNOM), the Streak camera C10627 measures luminescence lifetime in extremely small regions and generates lifetime mapping for semiconductor or biological samples.

#### Measurement example

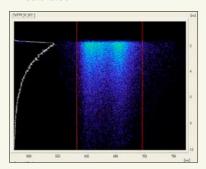
# **● Time-Resolved Fluorescence Lifetime Measurement**

The measurement example for the standard sample with the PLP-10 as the excitation light source.

A few to a few tens seconds accumulation required for the data acquisition per sample.

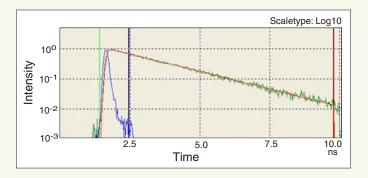
## [Sample]

Zinc Tetraphenylporphyrin Ethanol solution Air-saturated



#### [Excitation wavelength]

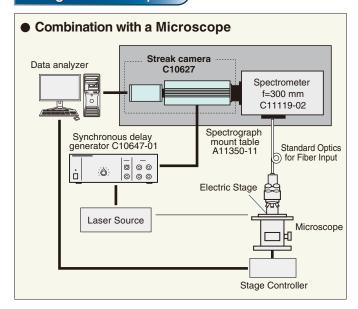
405 nm (PLP-10) Analysis result  $\tau = 1.97$  ns



#### Configuration example 1

#### Combination with PLP-10 Streak camera Data analyzer C10627 Spectrometer f=300 mm C11119-02 Spectrograph Standard optics A8110-01 Synchronous delay generator C10647-01 A11350-11 A8110-02 o o Sample 6 i 0 0 0 PLP-10-xxx Laser diode head Sample holder for M10306-xx Organic chemistry sample M10306-xx A8114 Sample holder for Semiconductor wafer A8113 Controller for PLP-10 C10196

# Configuration example 2



### **Specifications**

Temporal resolution	Better than 15 ps (in single shot)
Sweep time	1 ns to 10 ms/ full scale
Trigger jitter	Better than 20 ps
Trigger delay	Approx. 10 ns (fastest range)
Maximum sweep repetition frequency (max.)	20 MHz (1 ns range, 2 ns range)

# Option

#### ■ Spectrometer C11119-02

The Czerny-Turner Spectrometer C11119-02 with a focal length of 300 mm and F/4 provides highly efficient throughput to the streak camera by the use of an aberration-correction optical system. Includes a multiple-grating turret with more than 20 gratings\* to choose from, integrated software control including entrance slit control. The Spectrograph mount table A11350-11 simplifies the coupling and alignment of the Spectrometer C11119-02 and the Streak camera C10627.

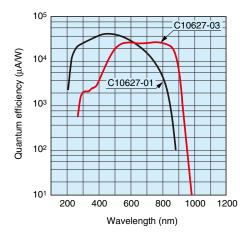
\* Higher resolution gratings may effect temporal resolution.

Optics system	Czerny-Turner type (with aberration-corrected toroidal mirror)
Focal length	300 mm
Aperture ratio	F/4
Incident slit	Variable between 10 μm and 3000 μm
Grating mount	Grating mount accommodates up to 3 gratings. (It is possible to add turret as an optional extra.)



▲ Spectrometer C11119-02

#### Spectral response characteristics



• Subject to local technical requirements and regulations, availability of products included in this promotional material may vary. Please consult your local sales representative.

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