SYDOR TECHNOLOGIES

FIBERIZED LASER PULSER

COMPLEX MEASUREMENTS—CRITICAL RESULTS

FEATURES

- Compact unit VCSEL with simple to use interface
- Reliable temporal source with initial reference times
- Lower jitter square wave pulse generation
- Embedded in Sydor's DynaCal, streak camera calibration module

APPLICATIONS

- Temporal calibration for streak cameras, gated imagers, and photomultiplier tubes
- Determine delay to center time for each sweep speed
- Initial zero reference fiducial
- Split signal option allows reference or input to multiple devices simultaneously

ABOUT THE FIBERIZED LASER PULSER

Sydor's Fiberized Laser Pulser (FLP) is a temporal calibration tool for use in conjunction with an external pulse generator. The unit supports frequencies from DC to 10 MHz and pulse widths as short as 2.2 ns. A square wave electrical input is reproduced in the format of an optical pulse output.

The FLP can be used in conjunction with Sydor's Streak Cameras to perform a temporal calibration of the sweep windows being used. In this application the optical pulses generated by the FLP are focused into the input slit and swept across the imaged area of the streak camera. Any non-linearity in the temporal distribution of the pulses in the measured streak image are caused by sweep ramp non-linearities. These non-linearities are processed and corrected in Sydor's ROSSApp software.

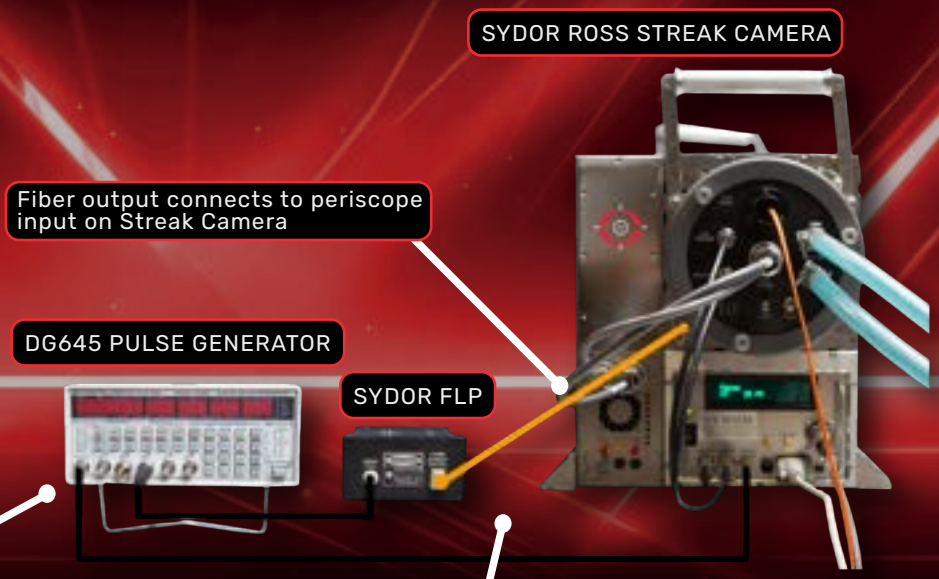
The FLP can be used to calibrate streak camera ramp times >1 µs (For faster ramp speeds, see Sydor Comb Generator). After calibration, the FLP can be used during experiments as a reference signal when coupled to a periscope input. This feature is available on Sydor's Streak Cameras.

The Sydor FLP allows researchers to forego the coordination of multiple pulse sources. Accurate syncing of multiple devices is difficult to achieve and introduces additional potential sources of error. Streak cameras can often be difficult to set up. However, with the correct accessories, such as the Sydor FLP, this setup can be greatly reduced in complexity.

See the setup on page 2 to see how the FLP is used for temporal reference with one of Sydor's ROSS Streak Cameras.

PRODUCT SPECIFICATIONS

- Wavelength: 680 nm
- Laser Safety: Class 1
- Laser Output: Fiber Optic (SC/PC)
- Maximum Power (CW): 1 mW
- Trigger Input: 5V Square Pulse Waveform
- Repition Rate: 0 to 100 MHz



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