LPG-405

Pulsed Laser for Time-Resolved Detector Diagnostics

FEATURES

- Specifically designed for time-resolved diagnostics of high speed optical detectors
- Simple to use with only a trigger input and synch output connector
- A lens control allows the beam to be de-focussed and spread across the detector area
- A variable width control allows pulse widths from 45 ps up to 800 ps

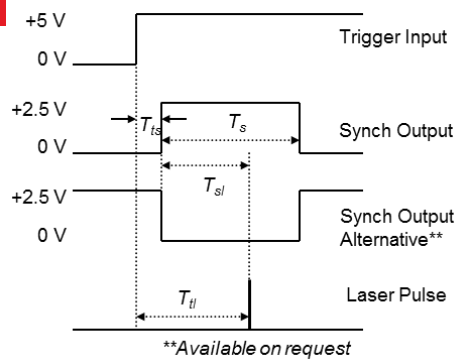
APPLICATIONS

- Time response of high speed photomultipliers
- Gating measurement of image intensifiers

PRODUCT OVERVIEW

LPG-405 Parameters	Minimum	Maximum
Wavelength λ	395 nm	415 nm
Linewidth Δλ	3 nm	3 nm
Laser Class	Class 1	Class 1
Pulse Energy	15 pJ	60 pJ
Repetition Rate	0 Hz "Single Shot"	300 KHz Self-limited
Trigger Input	+3.2 V High Ω input	+5.5 V High Ω input
Power Supply	+9 V	+15 V
Supply Current @ +12 V	85 mA (No Trigger)	110 mA
Synch Pulse Output Impedance	50 Ω	50 Ω

Typical Timing Parameters	Typical Timing Parameters
Trigger – Laser Delay T_{tl}*	46 ns
Trigger – Synch Delay T_{ts}	14 ns
Synch – Laser Delay T_{sl}	32 ns
Synch Pulse Width T_s	90 ns
T_{tl} Jitter	3 ps r.m.s.
T_{sl} Jitter	2 ps r.m.s.



*Can be reduced down to a minimum of 29 ns. This will also reduce T_{sl} to 15 ns.

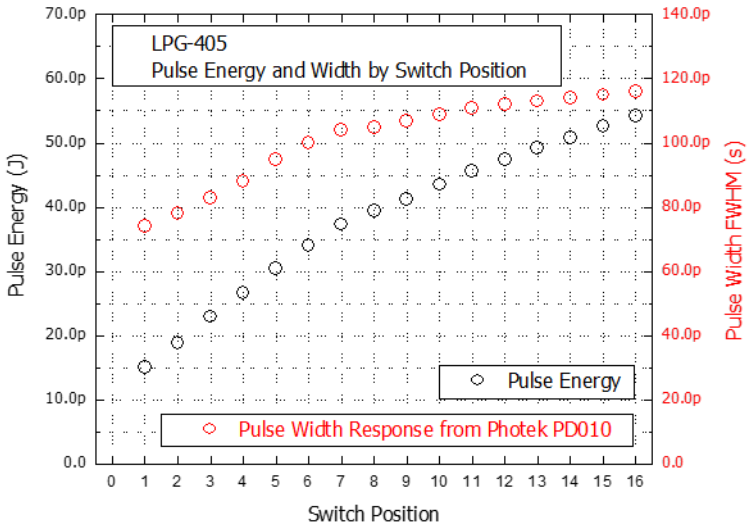
Photek Limited

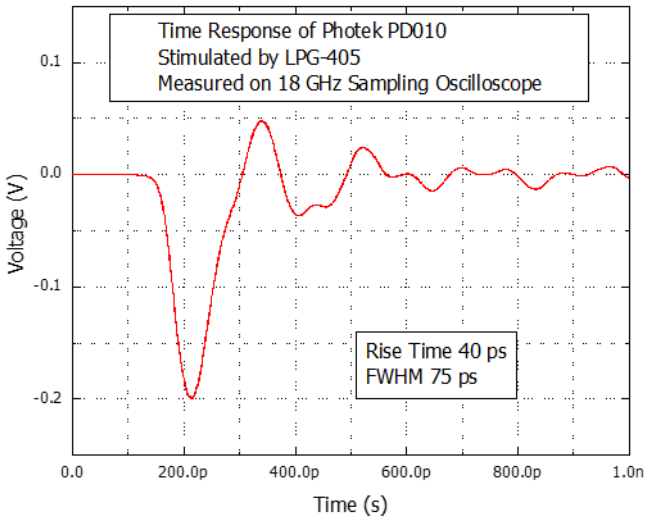
26 Castleham Road, St Leonards on Sea,
East Sussex, TN38 9NS, United Kingdom.

T +44 (0)1424 850555 F +44 (01424 850051
E sales@photek.co.uk W www.photek.co.uk

Datasheet No.	DS036
Issue	02
Date	19th December 2017

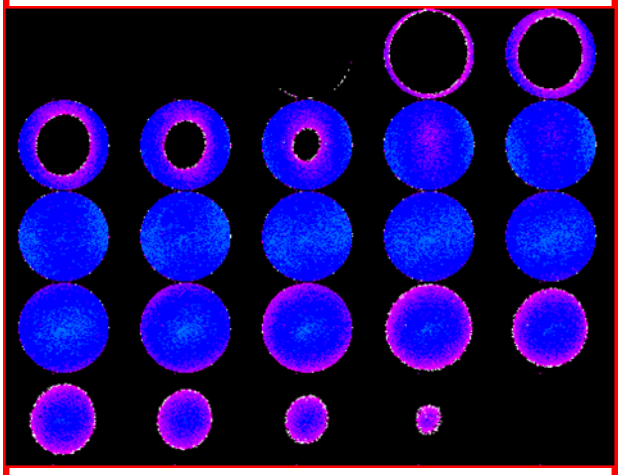
LPG-405





Gating Measurement

The true optical gating of an image intensifier is observed by synchronising the LPG-405 laser pulse with the gate unit, then adjusting the relative delay and stepping the laser through the gate pulse.



This result shows a LPG-405 laser pulse being stepped through a 4 ns gate window generated by a PHOTEK GM200-3N gate unit on a PHOTEK MCP118 image intensifier. Each step represents an extra 200 ps delay on the laser pulse.

MECHANICAL

Mechanical	
Height	54 mm (not including mounting post)
Width	61 mm
Length	149 mm (approx)
Weight	260 g
Mounting Post Length	30 mm, 40 mm, 50 mm, 60 mm*, 80 mm, 100 mm, 120 mm, 150 mm, 200 mm, 250 mm, 300 mm
Mounting Post Diameter	12mm*, 20 mm
Trigger Input Connector	SMA
Power Supply Connector	SMB
Synch Output Connector	SMA

*Standard Issue