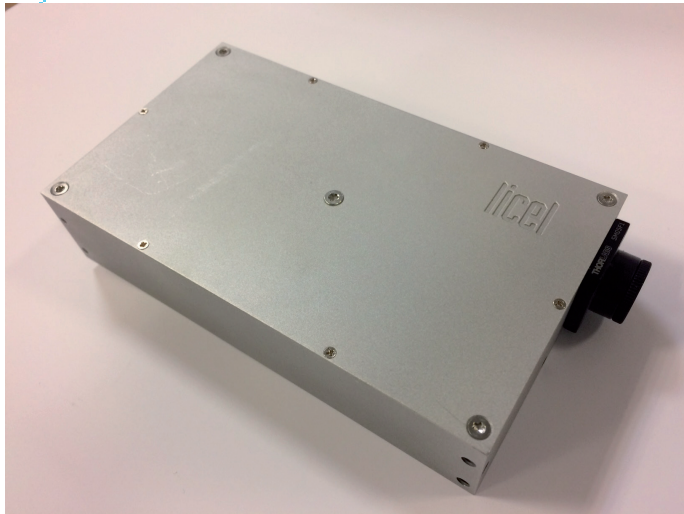


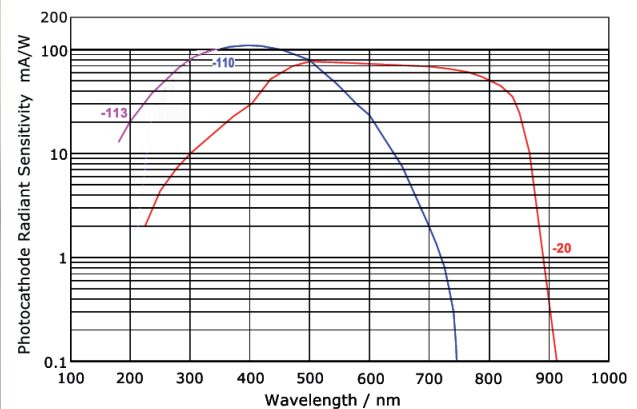
Integrated Lidar Detection System



*All in One System with high temporal resolution:
625ps/94cm*



Spectral Sensitivity:



Applications:

- Mini Lidars
- short range/high resolution channels
- Raman wavelengths acquisition
- kHz/ μ J laser based lidars

Features:

- Mini PMT detector
- 1.6 GHz max. single photon count rate
- 625 ps pulse pair resolution
- 230 MHz sustained photon count rate
- on board signal averaging
- integrated HV supply
- fast signal averaging

System overview:

The Licel integrated lidar detector is a compact "All in One" lidar single photon counting acquisition system.

It is based on a metal-channel-dynode photomultiplier, a very fast single photon counting system, on board signal summation, trigger logic and Ethernet interface. The high voltage supply, an adjustable discriminator and fast signal avera-

ging are integrated on the module. It allows on the fly signal averaging up to the 1/tracelength limit.

The Ethernet interface is used together with LabView software to control the measurement and readout the acquired data.

Specifications

Single photon counting system:

Pulse pair resolution: 625 ps, 1/1.6 GHz
Max. sustained photon count rate: (limited by detector): 230 MHz
Bin width, select by software: 625 ps to 1 μ s
No. of range bins: 32000 with 625 ps bins
16000 with 1.25 ns bins
8000 with 2.5 ns bins
4000 with 5 ns bins
16000 with 10 ns-1 μ s bins
Max. signal range: 3 km @625 ps binwidth
2400km @1 μ s binwidth
Max. fast mode trigger summation memory:
255 shots (625 ps binwidth), 4095 shots (10 ns binwidth)
Max. acquisition rate in
fast summation mode: 1/(tracelength + 5 bins)
Max. summation memory: 10⁶ shots

Power and dimensions:

Acquisition module size: 100 x 70 x 60 mm
Power supply size: 91 x 128 x 220 mm, 3 HU cassette

Connectors:

Trigger input: +2.5V into 1 kOhm
Computer Interface: 100/1000 Ethernet, RJ45
AC Power supply: 100/110/230V 50/60 Hz
DC Power: Lemo 1B307, Lemo 1B304
Trigger input: Lemo Camac

Detector spectral sensitivity:

Bialkali & UV window (-113): 185-700 nm
Bialkali (-100): 300-700nm
Multialkali (-20): 300-920nm
Cathode size: 8mm
max. anode current: 100 μ A (30 sec)
HV supply: 0... -1200 V



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