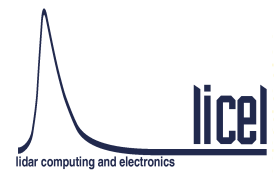
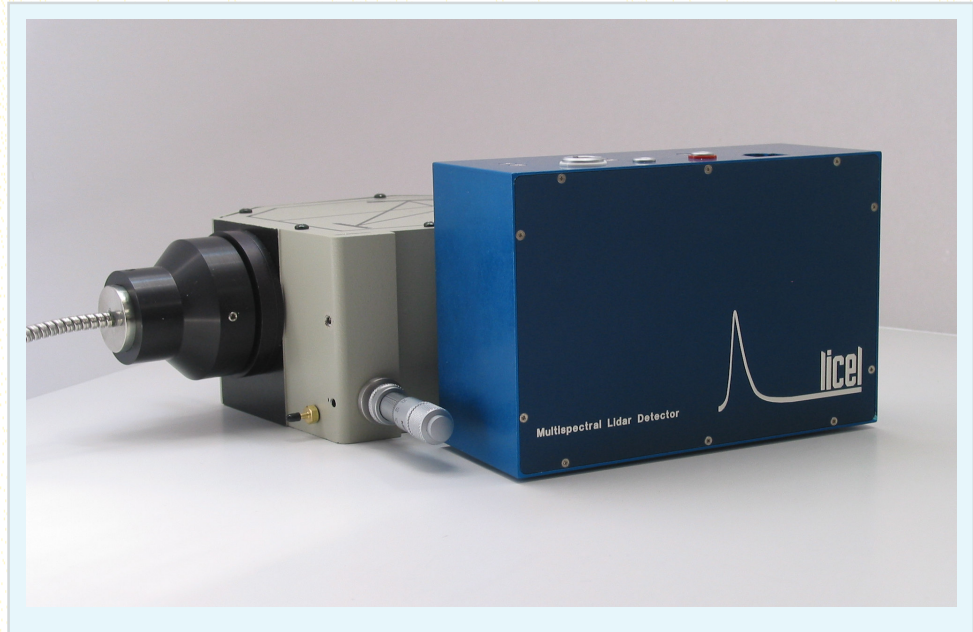


Multispectral Lidar Detector



32-channel simultaneous photon counting acquisition



Applications:

Range resolved spectral data for

- Raman Lidar
- Fluorescence Lidar
- Temperature Lidar

System Overview:

The Licel multispectral lidar detector allows simultaneous detection of multiple spectrometer wavelengths. It is based on a multianode, metal-channel-dynode photomultiplier. 32 photocathode elements together with 32 single photon counting systems provide 2-dimensional, spectral and range resolved data.

Features:

- Multi -Anode PMT detector
- 32 channel single photon counting system
- 100 MHz max. count rate
- on board averaging
- integrated HV supply

The high voltage supply, an adjustable discriminator and the trigger logic is integrated on the module. The Ethernet interface is used together with LabView software to control the measurement and readout the acquired data. The Licel Multispectral Lidar Detector can be used with various flat field spectrographs.

Specifications

Detector:

Spectral sensitivity:	
Bialkali:	300-600nm -K
Bialkali:	300-880nm, -01
Multialkali	185-650nm, -03
Multialkali:	185-880nm, -04
Multialkali:	300-920nm, -20
detector geometry	
total detector area:	31.8 x 7mm
single cathode area:	0.8 x 7mm (32 channels)
inactive area	
between cathodes:	0.2 x 7mm
Anode uniformity:	1:1.5 typ., 1:2 max. (-K, -01) 1:1.7 typ., 1:2.5 max. (03,04,20)
Cross-talk:	3% to neighbouring channel 0.6% to channel n+2 0.2% to channel n+3 0.1% to channel n+4

Spectral data:

with Oriel spectrometer MS125 and 1200 grooves/mm grating	
spectral range:	317 -484 nm
spectral resolution:	6.2 nm/channel
optical interface:	quartz/quartz fiber bundle 1.15mm dia., n.a.=0.22

Single photon counting system

Max. photon count rate:	100 MHz
Bin width:	50 ns
No. of range bins:	1024
No. of shots to average:	1 - 4096
Max. acquisition rate:	110 Hz
HV supply:	0..-1000 V
max. total average anode current:	100µA (30 seconds)
max. average anode current per channel:	6 µA (30 seconds)

Power and dimensions:

Power supply :	+5V/2A, -5V/1A, +15V/0.5A
(Compatible to Licel transient recorder supply).	
Separate power supply available.	
Trigger input:	+2.5V into 50 Ohm
Interface:	Ethernet
Connectors:	
Power supply:	Lemo 1B304
Trigger input:	Lemo Camac
Ethernet:	RJ45
Dimensions	
Electronics:	150 x 100 x 60mm
Spectrometer Oriel	160 x 200 x 60 mm
Separate power supply:	91 x 128 x 220 mm

Environmental conditions:

Operating temperature:	0°C to 30°C (non condensing)
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International distribution:

USA:

Boston Electronics Corp.
91 Boylson Street
Brookline MA 02445

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fax (617)731-0935
e-mail: boselec@world.std.com
www.boselec.com

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