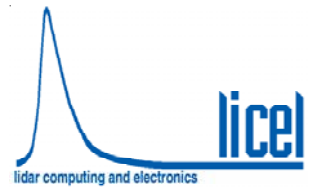


Gated Photomultiplier module



Specifications

Detector:

cathode diameter:	8 mm
spectral sensitivity:	
Bialkali cathode-06:	160-650 nm
Bialkali cathode-03:	185-650 nm
Multialkali cathode-01:	300-850 nm
Multialkali cathode-04:	185-850 nm
Multialkali cathode-02:	300-880nm
Multialkali cathode-20:	300-900nm
max. av. anode current:	0.1 mA (5mV into 50Ω)
gain:	10 ⁵ -10 ⁶

Signal specs:

Single photon rise time:	<1.3 ns
Single photon width (FWHM)	<2.2 ns
Pulse load stability, HV=850V, 100mV signal / 60μs	<0.15%

Gating:

Active ON type	
Gate Pulse Input	>2.5V into 50Ω
Suppression, Gate OFF	< 10 ⁻³
Rise time:	<10 ns
Settling time (99%)	<200 ns
Settling time (99.9%)	<5 μs
Max. ON time:	1 ms
Max. duty cycle (ON/OFF)	100
Switching noise	<10mV for <200 ns
High voltage range:	750-850V

HV supply:

Voltage range:	-70...-1kV
Max. current:	2 mA
Voltage ripple:	<1mV (DC to 20 MHz)
Remote HV control voltage	0..+1V

Mechanics:

PMT module size:	70 x 25mm
PMT module weight:	50 g
Optical interface:	O-ring sealed mount or adapter for 1" Thorlabs lens tube system
High voltage supply:	50.5x128.4x103mm 3 height units, 10 width units standard cassette

Connectors:

Gating Input:	Minax/BNC
Signal out:	Minax/BNC
HV to PMT:	Lemo Camac
HV power supply:	H11 connector

Power supply:

15V DC, 250mA

Environmental conditions:

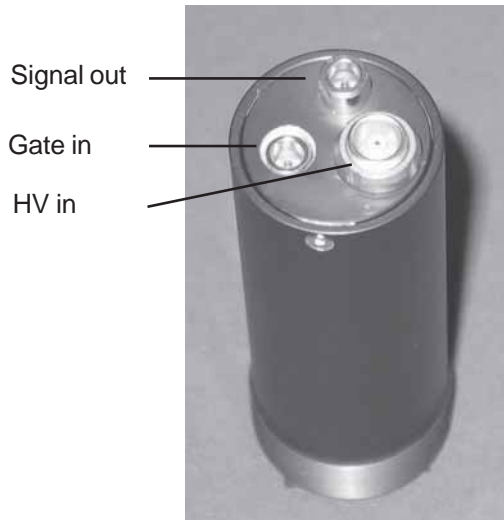
Operating temperature:	0°C to 30°C (non condensing)
Storage temperature:	-40°C to 70°C

System integration:

Mating parts of Thorlabs Lens tube system
SM1L03, SM1L05,...1" stackable lens tubes
SM1NT Locking Nut
and other components of the SM1 series

Mechanical Specifications and Pinout

Connectors:



H11 connector on HV power supply, rear side:

Pin	Description
2	+13...+15V in (max. 280mA)
5	Gnd
8	+5V Reference out
11	Gnd
14	HV Inhibit (high = off)
17	+12V Reference out
20	Gnd
23	Remote HV Control, 0..+1V into 100kOhm
26	Voltage Monitor (-5mV/V)
29	Current Monitor (2mA/V)
32	Protective Gnd (Case)

Mechanical dimensions and location of photocathode:

