Hawkeye Detectors

Features

- Compatible with the Global Premier, Acculase and Gated Cameo and our range of non-modulated lasers
- High level of immunity to ambient light.
- High acceptance angle 160 deg.
- Good signal to noise> 70dB.
- Independent outputs for a.c. & d.c. components.
- Wide bandwidth.
- Excellent signal integrity.
- Calibrated d.c. output (average power meter).
- Low power 5V operation.
- 50Ω outputs to drive coaxial cables.
- Screwthread for easy mounting and additional optics.

Applications

- Condition monitoring including fog and smoke, particle detection, and densitometry.
- Event Monitoring beam break including edge sensing, counting, telemetry, safety barriers, interlocks.
- Detectors for Lock in Amplifiers.
- Telemetry

The new series of Hawkeye detectors is designed as a companion to the Global Laser Premier, Acculase, and Gated Cameo, as well as lasers from our non-modulated range.

The modular design of the Hawkeye Detector incorporates a novel amplification system, which ensures excellent performance particularly in high ambient light conditions. Therefore, the Hawkeye is ideal not only for conventional indoor applications, but in addition for a wide variety of outdoor applications.

The integrated optics produce a wide acceptance angle which further increases this detector's extensive capabilities.

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Hawkeye Detector Technical Characteristics

Electrical Characteristics

	Min	Typ	Max	Units	
Supply Voltage	4	5	6	V	Note 1
Supply Current	1	6		mA	Note 2

Note 1. a.c. output is d.c. coupled - sits at mid rail at o ambient light, ideal for DAC cards.
Note 2. Minimum supply current with no input signal - Typical with input signal.

Operating Characteristics

	1520-01	1520-02	1520-03	Units	
Output a.c. Signal (@ 650nm)	1	10	1	V/mW	Note 3
Output d.c. signal (@ 650nm)	1	1	1	V/mW	Note 4
a.c. Output Frequency Response	750	>100	750	kHz	Note 5
d.c. Output Frequency Response	1	1	10	Hz	Note 5
Relative Ambient Light Rejection	20	10	20	dB	Note 6
Total Ambient Light Immunity	1000			W/m^2	
Linearity	5			%	
S/N ratio	70	70	64	dB	
Input Acceptance Angle	160				°

Note 3. a.c. output is d.c. coupled, non-inverting and sits at mid rail.
Note 4. d.c output is measured relative to 0V (ground).
Note 5. f_{reject} is the frequency at which the d.c. and a.c. outputs are –3dB
Note 6. Measured using two 650nm lasers not exceeding the total light immunity.

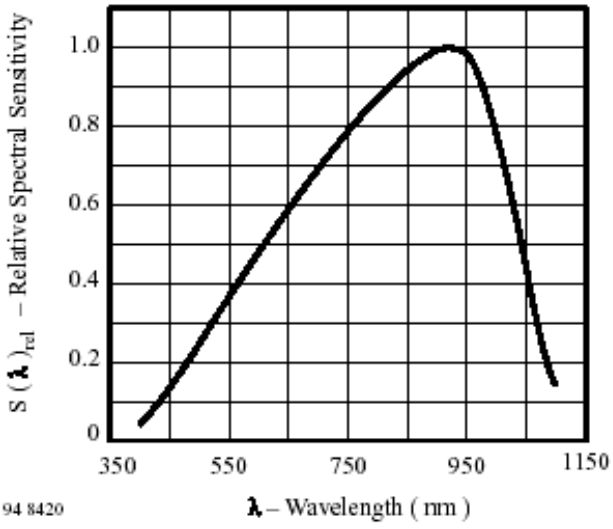
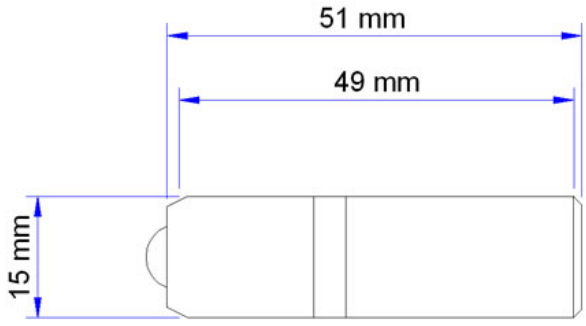


Figure 7. Relative Spectral Sensitivity vs. Wavelength



Front section can be removed to reveille M12 thread

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