

# APD module

## C5460 series

APD module integrated with peripheral circuits



### Features

- Uses high sensitivity APD  
Two types of APDs with different active areas ( $\phi 1.5$  mm,  $\phi 3.0$  mm) are provided.
- On-board high sensitivity circuit optimized for APD evaluation  
An APD and a low-noise current-to-voltage amplifier circuit are mounted on a compact PC board. The current-to-voltage amplifier circuit features a low-noise configuration allowing low-light-level detection.
- Detects optical signals from fixed light (DC light)  
C5460 detects optical signals from fixed light (DC light) to 10 MHz pulsed light making it well suited for bar code readers and film scanners. C5460-01 covers a narrower bandwidth from fixed light (DC light) to 100 kHz pulsed light, but provides an excellent NEP of  $20 \text{ fW/Hz}^{1/2}$  in the room temperature, making it suitable for fluorescence measurement and particle counters where low-light-level detection is essential.
- Built-in temperature-compensated bias power supply  
The bias power supply is controlled with a thermosensor to keep the APD gain constant. Gain variations are typically held within  $\pm 2.5\%$  at an ambient temperature of  $25 \pm 10^\circ\text{C}$ . Ripple noise usually inherent to high-voltage power supplies is also minimized.
- Compact and lightweight  
The board is no larger than a typical business card.
- Low price
- Custom models with different dimensions and specifications are available

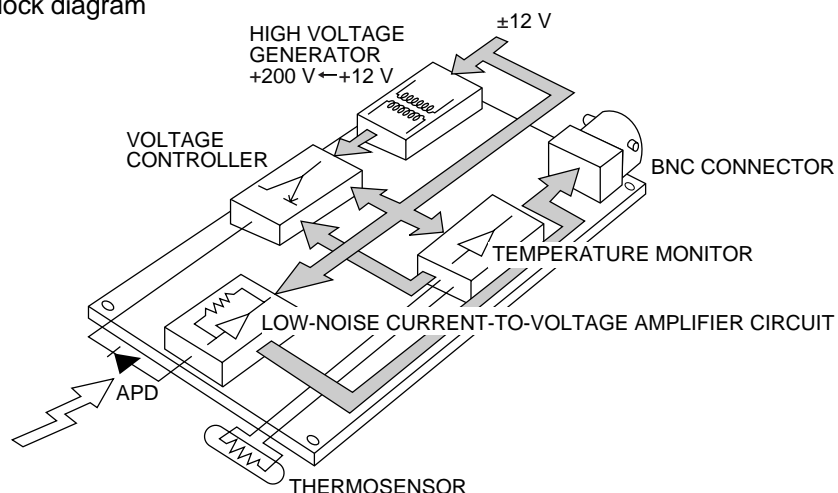
### Applications

- Evaluation of APD
- Fluorescence measurement
- Bar code readers
- Particle counters
- Film scanners

### Selection guide

Parameter	C5460	C5460-01	Unit
Active area	$\phi 1.5$	$\phi 3.0$	mm
Photo sensitivity	$1.5 \times 10^6$	$-1.5 \times 10^8$	V/W
Frequency bandwidth	DC to 10 M	DC to 100 k	Hz

### Block diagram



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