

# Infrared detector module with preamp Metal dewar type

High sensitivity modules of easy-to-use



These devices combine a dewar type detector with a compatible preamplifier, and easily operate to detect infrared radiation just by connecting to a DC power supply. InGaAs, InSb and MCT (HgCdTe) detectors are provided as standard devices (liquid nitrogen cooling). Custom-designed devices with different active areas, FOV or amplifier gain, etc. are also available to meet your specific needs.

### Features

- Compact integral detector unit
- Optimum connections between the detector element and pre-amplifier allow amplified signals to be easily obtained.

### Applications

- Infrared detection

### Accessories (Optional)

- Power supply for preamplifier ( $\pm 15$  V) C3871

### Accessories (Supplied)

- 4-conductor cable (for DC power supply):  
2 m (connector installed at one end) A4372-02
- BNC-BNC coaxial cable (for signal output): 2 m E2573
- Instruction manual

### Specifications / Absolute maximum ratings

Type No.	Detector element	Active area (mm)	External input voltage (V)	Absolute maximum ratings		
				External input voltage (V)	Operating temperature $T_{opr}$ (°C)	Storage temperature $T_{stg}$ (°C)
G7754-01	InGaAs	$\phi 1$	$\pm V_s$ *1	$\pm 18$	0 to +40	-20 to +50
G7754-03		$\phi 3$				
P7751-01	InSb	$\phi 0.6$				
P7751-02		$\phi 2$				
P7752-10	MCT	1 × 1				

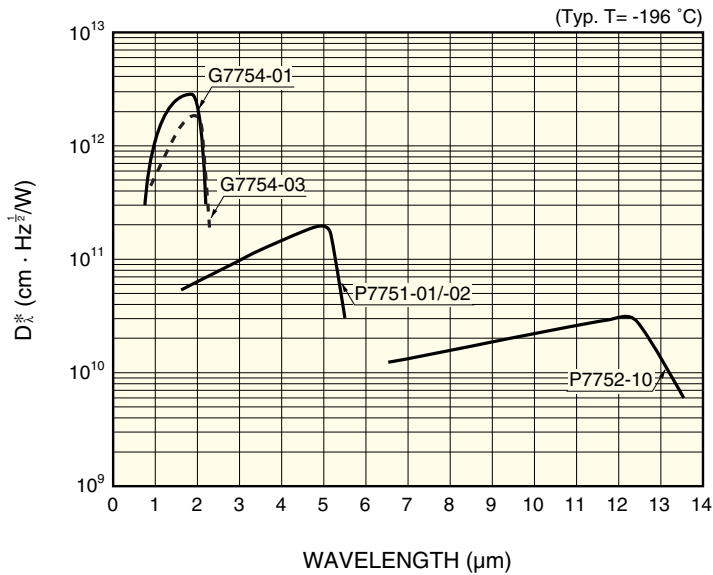
\*1:  $V_s = 12$  to  $15$  V

### Electrical and optical characteristics (Typ.)

Type No.	Measurement condition	Peak sensitivity wavelength $\lambda_p$ ( $\mu\text{m}$ )	Cut-off wavelength $\lambda_c$ ( $\mu\text{m}$ )	Photo sensitivity S $\lambda = \lambda_p$ (V/W)	NEP ( $\text{W}/\text{Hz}^{1/2}$ )	Frequency response -3 dB (Hz)	Output impedance ( $\Omega$ )	Maximum output voltage $R_L = 1$ k $\Omega$ (V)	Maximum current consumption *2 (mA)
	Element temperature $T$ (°C)								
G7754-01	-196	2.0	2.4	$2 \times 10^9$	$3 \times 10^{-14}$	2 to 500	50	$\pm 10$	$\pm 15$
G7754-03				$5 \times 10^8$	$1.5 \times 10^{-13}$	2 to 500		$\pm 10$	$\pm 15$
P7751-01		5.3	5.5	$3 \times 10^8$	$3 \times 10^{-13}$	5 to 10000		$\pm 10$	$\pm 20$
P7751-02				$1.5 \times 10^8$	$1 \times 10^{-12}$	5 to 12000		$\pm 10$	$\pm 20$
P7752-10		12	14	$2 \times 10^6$	$3 \times 10^{-12}$	5 to 140000		$\pm 3$	+60, -10

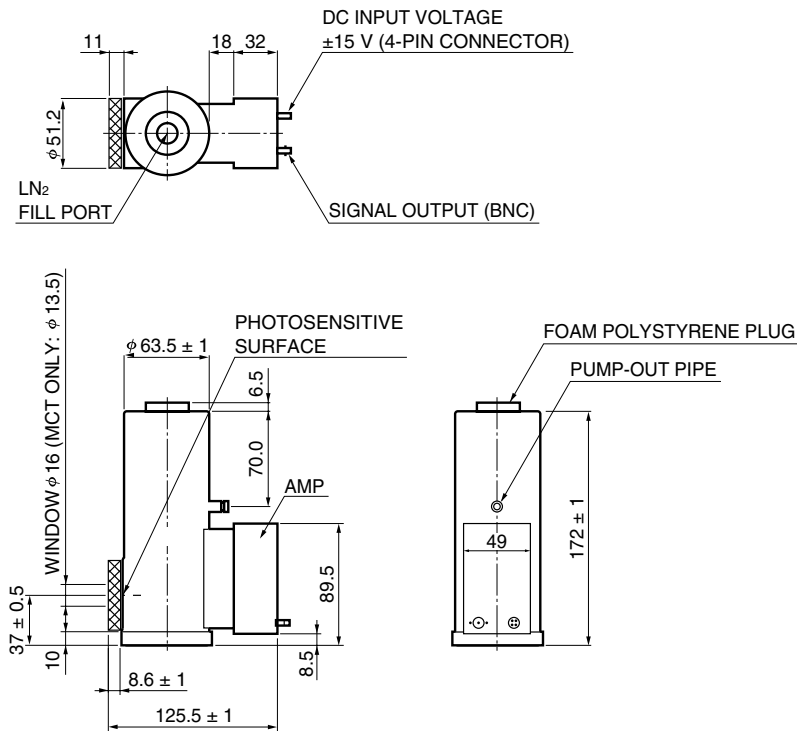
\*2:  $V_s = 15$  V

## ■ Spectral response



KIRDB0076EC

## ■ Dimensional outline (unit: mm)



KIRDA0010EB

## ■ Precaution for use

- The detector should not be placed horizontally during use.
- Using these detectors in an environment subjected to vibration may cause microphonic noise. Take measures to prevent vibration as needed.

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