

Infrared detector module with preamp Non-cooled Type

Easy-to-use detector module with built-in preamp

These Infrared detector modules with preamp are designed to operate at room temperatures by just connecting to a DC power supply. The detector element is selectable from among InGaAs, PbSe and Ge. B7506-01 detector is especially suited for CO₂ laser detection. We welcome requests for custom devices that suit your application.

Features

- Compact size
- Easy-to-use
Operates just by connecting to DC power supply
- Circuit design optimized for detector element characteristics

Applications

- Infrared detection
- CO₂ laser detection

Accessories (Optional)

- Power supply for non-cooled type (±15 V) C3871

Accessories (Supplied)

- 4-conductor cable for non-cooled type (for connection to DC power supply): 2 m (connector installed on one end) A4372-02
- Instruction manual

Specifications / Absolute maximum ratings

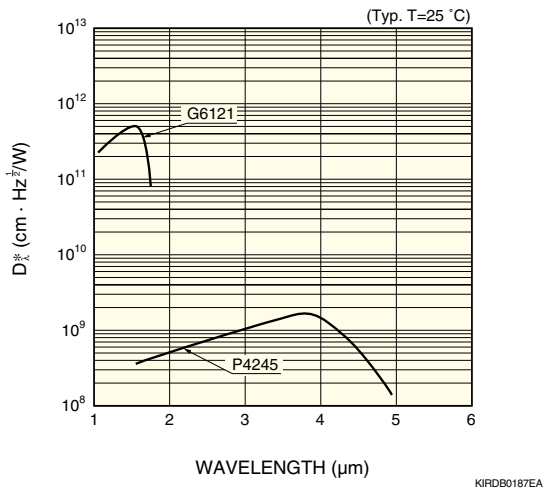
Type No.	Detector element	Active area (mm)	External input voltage (V)	Absolute maximum ratings				
				Current consumption (mA)	Incident light level *		Operating temperature T _{opr} (°C)	Storage temperature T _{stg} (°C)
					CW light (J/cm ²)	Pulse light (MW)		
G6121	InGaAs	φ5	±15	±15	-	-	0 to +40	-20 to +50
P4245	PbSe	3 × 3		±15				
B7506-01	Photon drag	φ4.6		+30, -10	1	1		

* Light level at which photon drag detector temperature does not exceed 60 °C

Electrical and optical characteristics (Typ.)

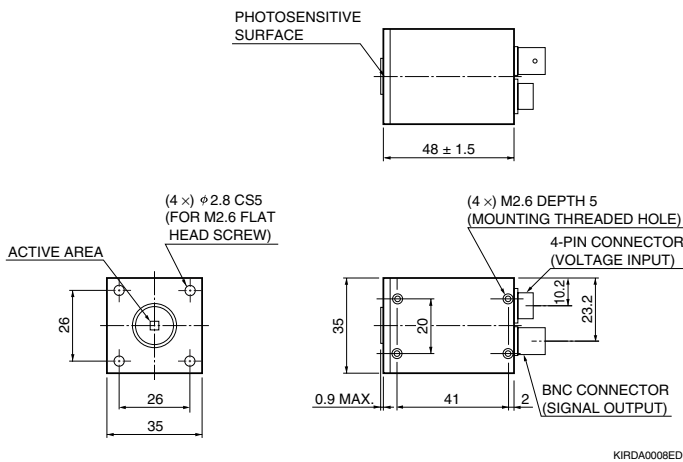
Type No.	Measurement condition	Peak sensitivity wavelength λ _p (μm)	Cut-off wavelength λ _c (μm)	Photo sensitivity S λ=λ _p (V/W)	NEP (W/Hz ^{1/2})	Frequency response -3 dB (Hz)	Output impedance (Ω)	Output voltage R _L =1 kΩ (V)
	Element temperature T (°C)							
G6121	25	1.55	1.7	1 × 10 ⁶	5 × 10 ⁻¹³	DC to 8 k	50	+10
P4245		4.0	4.8	5 × 10 ⁴	2 × 10 ⁻¹⁰	0.2 to 10 k		±10
B7506-01		10.6	-	0.013	3 × 10 ⁻²	50 to 500 k		±10

■ Spectral response

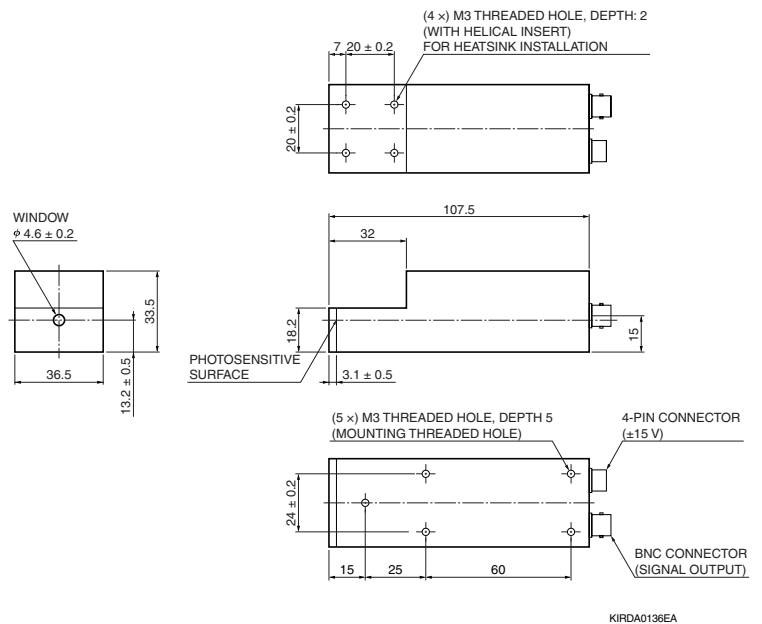


■ Dimensional outlines (unit: mm)

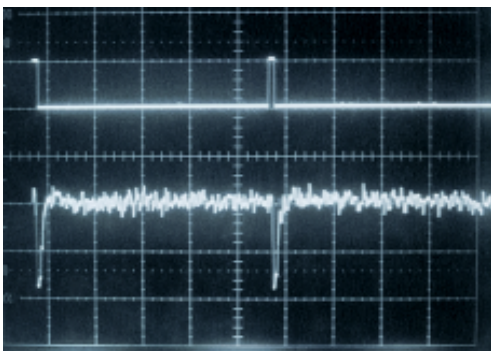
G6121, P4245



B7506-01



■ Output waveform example (B7506-01)



Input beam	CO ₂ laser
Peak power	45 W
Repetition rate	100 Hz
Pulse width	200 μs

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