

Thermopile detectors



T11262 series

High sensitivity, for gas density measurement (T11262-01), for flame detection (T11262-06)

The T11262-01 is a high-sensitivity thermopile detector suitable for gas density measurement or the like. It uses a TO-18 package with a window having high transmittance in the 3 to 5 μm spectral band. By attaching an external band-pass filter to the thermopile detector, customers can apply it to various types of gas density measurements. The T11262-06 employs a 4.45 μm band-pass filter and is suitable for flame detection applications.

Features

- Spectral response: 3 to 5 μm (T11262-01), 4.45 μm (T11262-06)
- TO-18 package
- High sensitivity

Applications

- Gas density measurement and the like (T11262-01)
- Flame detection (CO₂ resonance radiation; T11262-06)

Absolute maximum ratings

Parameter	Symbol	T11262-01	T11262-06	Unit
Operating temperature	Topr	-30 to +85	-10 to +80	°C
Storage temperature	Tstg	-40 to +100	-20 to +85	°C

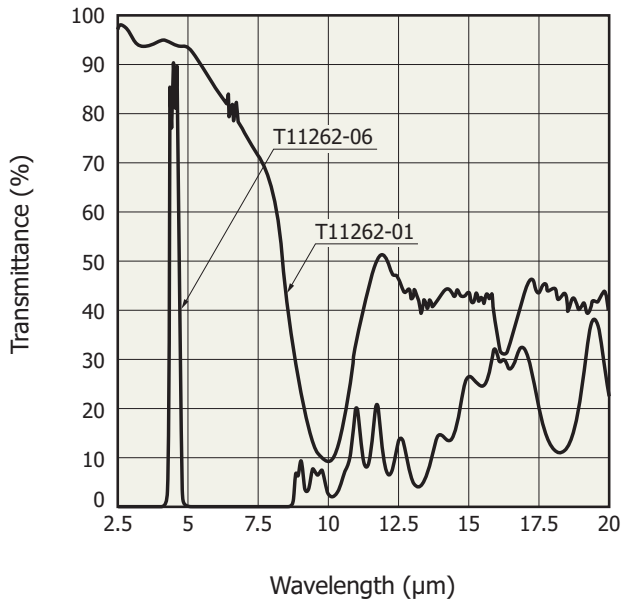
Structure

Parameter	Symbol	T11262-01	T11262-06	Unit
Photosensitive area	A	1.2 × 1.2		mm
Package	-	TO-18		-
Window material	-	AR coating Si with 3 to 5 μm high-transmittance	4.45 μm band-pass filter	-

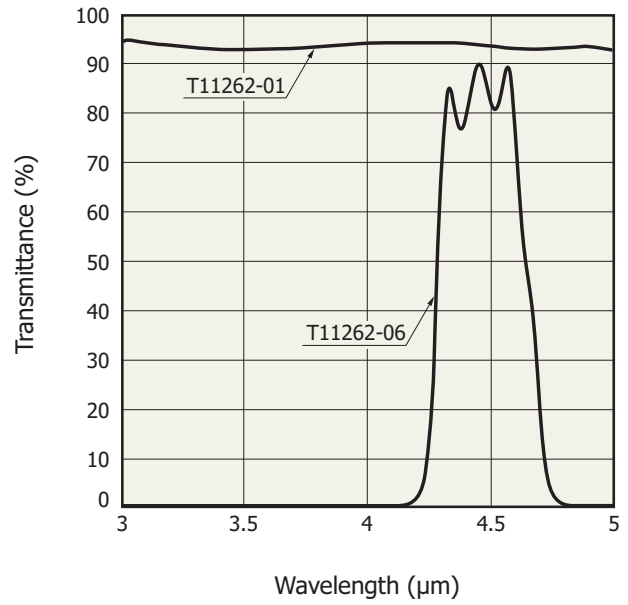
Electrical and optical characteristics (Ta=25 °C)

Parameter	Symbol	Condition	T11262-01			T11262-06			Unit
			Min.	Typ.	Max.	Min.	Typ.	Max.	
Spectral response	λ		-	3 to 5	-	-	4.45	-	μm
Photosensitivity	S	1 Hz, 500 K	40	50	60	40	50	60	V/W
Element resistance	Re		100	125	150	100	125	150	k Ω
Noise voltage	Vn	Johnson noise	-	45	50	-	45	50	nV/Hz ^{1/2}
Noise equivalent power	NEP		-	0.9	1.3	-	0.9	1.3	nW/Hz ^{1/2}
Detectivity	D*		0.9×10^8	1.3×10^8	-	0.9×10^8	1.3×10^8	-	cm·Hz ^{1/2} /W
Rise time	tr	0 to 63%	-	20	30	-	20	30	ms
Temperature coefficient of element resistance	TCR		-	±0.1	-	-	±0.1	-	%/°C
Field of view	FOV	Photosensitivity 50%	-	90	-	-	90	-	degrees

Spectral transmittance of window material (typical example)

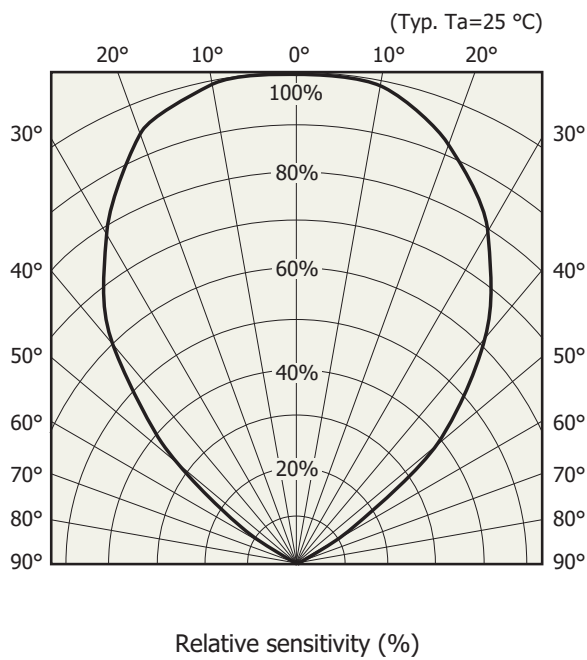


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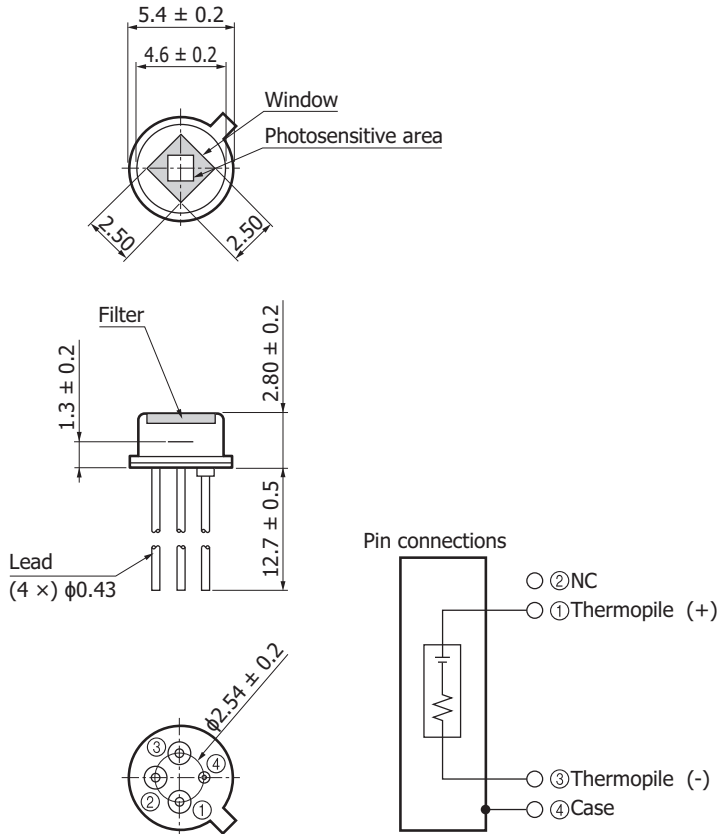
KIRD80450EC

Directivity



KIRD80451EA

Dimensional outline (unit: mm)



KIRDA0211EA

Precautions (T11262-06)

The T11262-06 band-pass filter has a second order transmission at $8 \mu\text{m}$ or higher. If this causes an unwanted effect, install a sapphire glass or the like in front of the light input window to cut the long wavelengths.

Related information

www.hamamatsu.com/sp/ssd/doc_en.html

■ Precautions

- Disclaimer
- Metal, ceramic, plastic package products

Information described in this material is current as of March 2017.

Product specifications are subject to change without prior notice due to improvements or other reasons. This document has been carefully prepared and the information contained is believed to be accurate. In rare cases, however, there may be inaccuracies such as text errors. Before using these products, always contact us for the delivery specification sheet to check the latest specifications.

The product warranty is valid for one year after delivery and is limited to product repair or replacement for defects discovered and reported to us within that one year period. However, even if within the warranty period we accept absolutely no liability for any loss caused by natural disasters or improper product use. Copying or reprinting the contents described in this material in whole or in part is prohibited without our prior permission.

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