Mid Infrared Detector 2 – 5 µm

(Lead Selenide, TEC Cooler, Build-in Chopper)

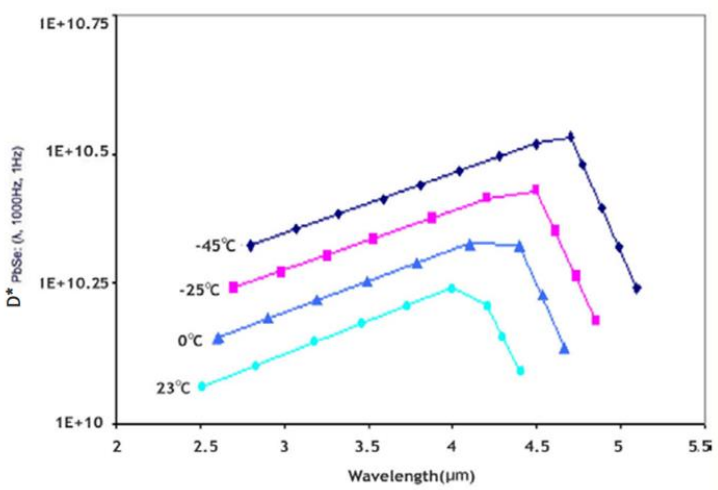
DATASHEET

BUY NOW

The CPOD serials lead selenide detectors (PbSs) provide enhanced sensitivity for detecting mid-infrared light in the 2-5 µm range. These detectors are hermetically sealed to ensure low leakage. Within the detector package, a thermoelectric cooler and a MEMS chopper are integrated, significantly reducing background noise while maintaining a compact format. Additionally, a driving PCB with an amplifier is available for convenient use.

All stock detectors undergo a minimum four-week aging period. Experience with detectors manufactured through our proprietary process, which includes the aforementioned aging period, has shown the electrical characteristics to remain stable to within 10% for over a year. The typical response for PbSe detectors operates in the 0.5 to 3 micron spectral region with time constants below 400 µsec. TE-cooled packages are also available with a response in the 2 to 5 micron region, featuring increased D*.

A typical spectral response of a standard PbSe detector is depicted below.



Features

- 2 - 5 µm
- Low Noise
- Long Life
- Hermetic Sealed Detector
- MEMS Chopper Integration

Applications

- OEM
- Lab user
- Instruments
- Fire Detections

Specifications

Parameter	Min	Typical	Max	Unit
Resistance	0.5		2.0	MΩ
Time Constant	200		400	µ sec
D* (λ, 200, 1) x 10^{11}	0.5		0.6	cm•Hz^{½}•W^{-1}
Cooling	-40		-5	°C

Rev 05/27/24

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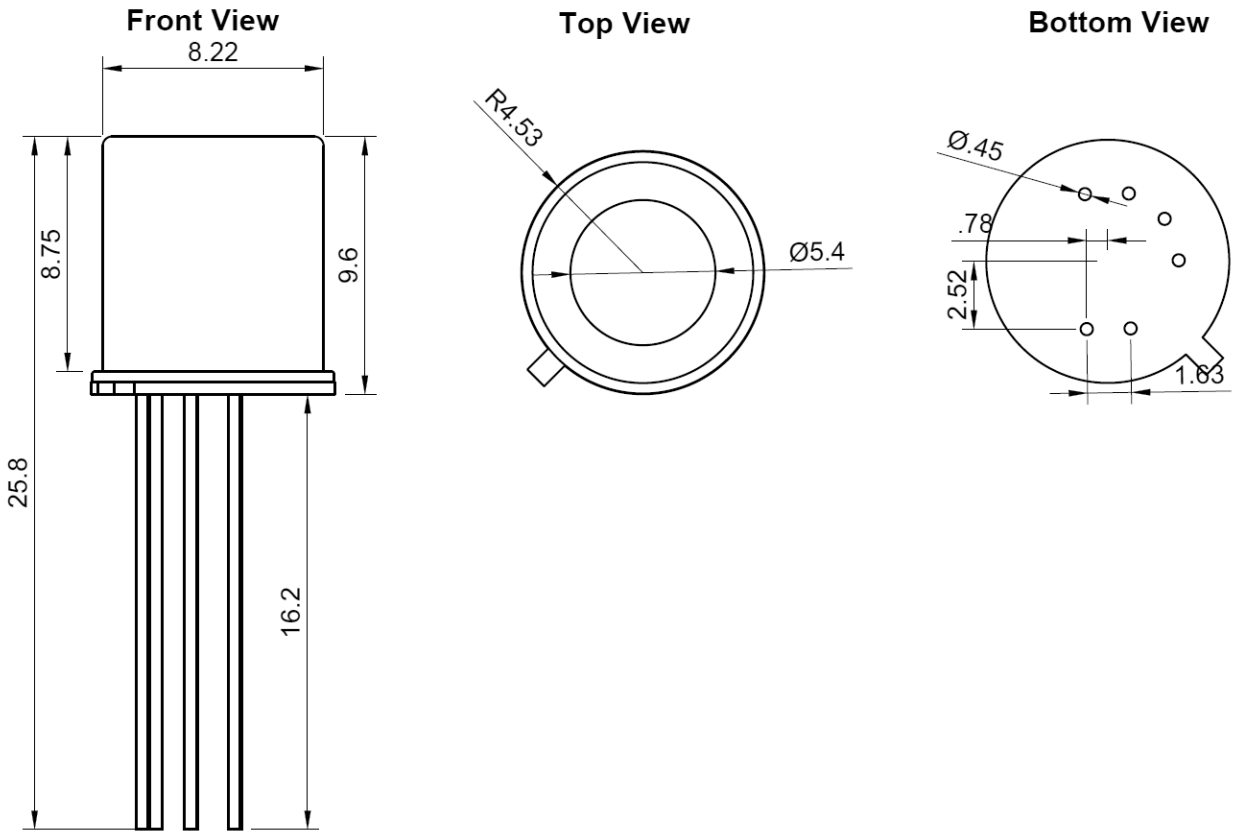
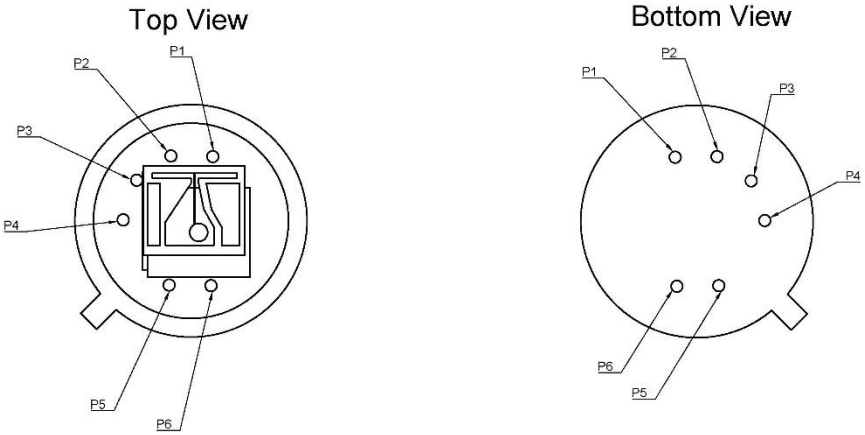
Mechanical Dimensions (mm)



*Product dimensions may change without notice. This is sometimes required for non-standard specifications.

Contacts Assignment



PIN NUMBER	ASSIGNMENT
P1	VOA ; Thermistor
P2	VOA ; Thermistor
P3	TEC (-)
P4	TEC (+)
P5	PbS
P6	PbS

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Ordering Information

	5	☐	☐	1	☐	☐	☐☐
Prefix	**Material Type**	**TEC Type**	**Integrated Chopper**	**Element Size**	**Window**	**AR Coated**	**Driver**
CPOD-	PbSe =5	1 stage 0°C = 1 2 stage -20°C = 2 3 stage -40°C = 3	None =1 Yes =2	1x1mm = 1	Quartz = 1 Spectral Filter = S Sapphire = 2	No = 0 Yes = 1	No = 00 Yes = 11

Application Notes