

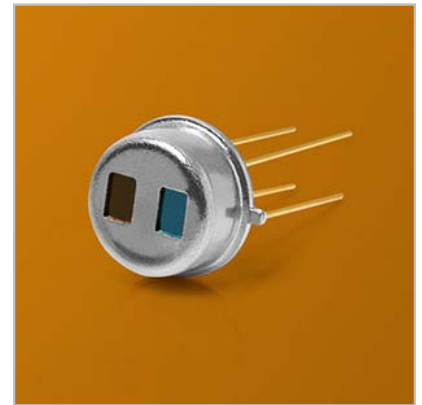
L3X/4X Series Multi-Channel Voltage Mode Pyroelectric Detectors

Description

Our L31/41 series of pyroelectric detectors are a collection of multi-channel LiTaO_3 devices operating in voltage mode with an integrated JFET.

Please Note: Voltage mode detectors are recommended for experienced users of pyroelectric detectors, due to their relatively low signal compared to current mode detectors and a strong temperature dependence. Most new users will find current mode much more flexible and easy to use for development.

TFC (Temperature Fluxuation Compensation) is incorporated into all of our L4X- series detectors via. the use of a optically blind element.



Features

- Thermal based detector, any radiation absorbed produces a signal
- Wide Spectral Coverage from the UV to LWIR
- Modular design principle
- Assembled in an ISO:9001 facility
- Microphonics reduction as standard

Applications

- Non-dispersive infrared gas analysis
- Flame and fire detection
- Non-contact temperature measurement
- Flame control
- Moisture monitoring

Versions

- Integrated JFET
- Low and high speed devices available
- 9 Standard window options
- 17 standard filter options (including small and large apertures)

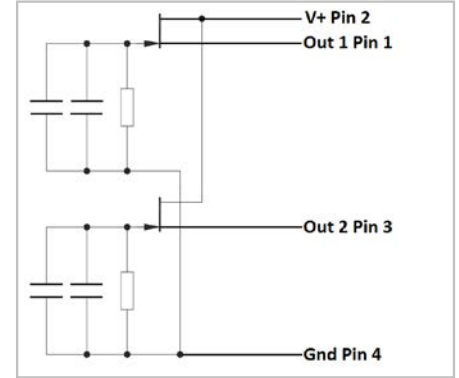
L4200X1810

- Dual channel Pyroelectric detector
- Voltage mode
- JFET
- With TFC

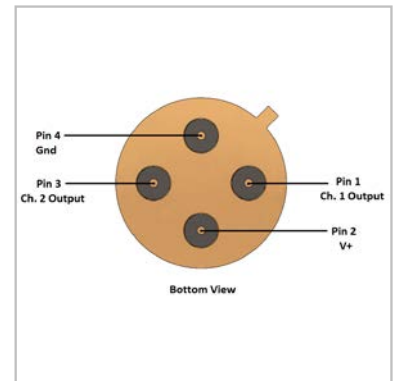
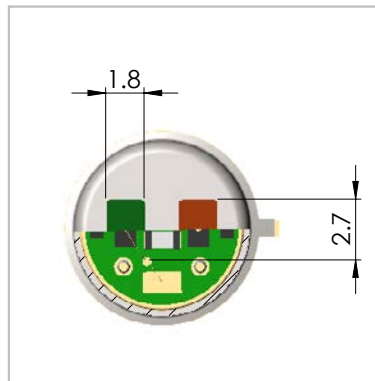
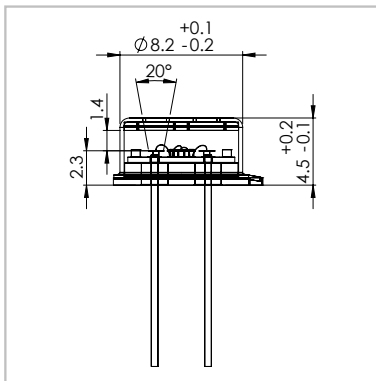
Isometric Drawing (with cutaway)



Circuit Diagram



Technical Drawing



Element Size	Aperture Size	Package	Absorber		
1.8 mm x 1.0 mm	2.7 mm x 1.8 mm	TO-39 4-pin	Organic Black		
Load Resistor	Amplifier	-3dB Freq (Hz)	Supply Voltage [V]	Drain Voltage [V]	
100 GOhm	JFET 3	TBD	+9 V Max: 30 V	+30 V	
Responsivity (V/W)	D* (Jones) @ 10 Hz	Noise Density (µV/sqrt(Hz))	NEP [W/√Hz]	Polarity	
Min: 320 Typ: 360	Min: 4.5x10 ⁸ Typ: 5x10 ⁸	Typ: 120 Max: 90	Max: 4.05x10 ⁻¹⁰	Positive	

! Similar Model: LIM-222

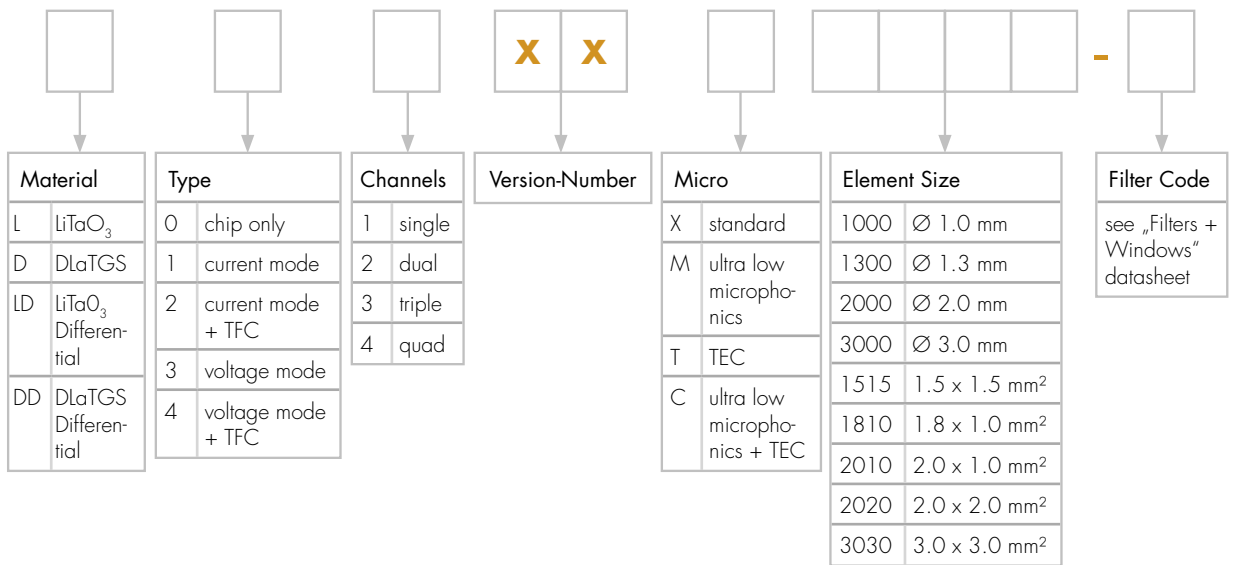
Please refer "Filters and Windows" datasheet for all available options

Absolute Maximum Ratings

	Min	Max
Storage Temperature [°C]	- 25	+ 85
Operating Temperature [°C]	- 20	+ 55
Soldering Temperature, 5 sec [°C]	+ 280	+ 300
ESD Damage Threshold, Human Body Model Class* [V]		TBD

* ANSI/ESD STN5. 1-2007

Part Number Designation



Product Changes

LASER COMPONENTS reserves the right to make changes to the product(s) or information contained herein without notice. No liability is assumed as a result of their use or application.

Ordering Information

Products can be ordered directly from LASER COMPONENTS or its representatives. For a complete listing of representatives, visit our website at www.lasercomponents.com