

## LD11/21 Series Single Channel Current Mode Differential Pyroelectric Detectors

### Features

- Revolutionary differential amplification scheme
- 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 Op-Amp
- 9 Standard window options
- 17 standard filter options (including small and large apertures)



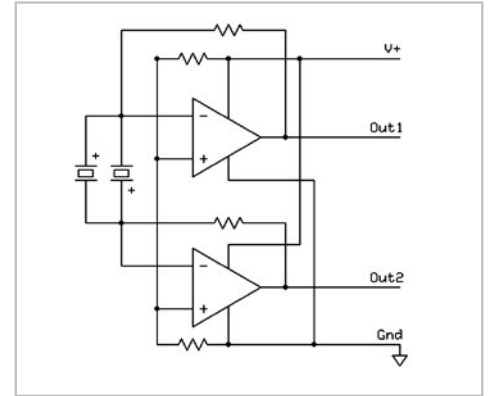
LD2100X2020

- Single channel Pyroelectric detector
- True differential
- Current mode
- Single supply
- TFC

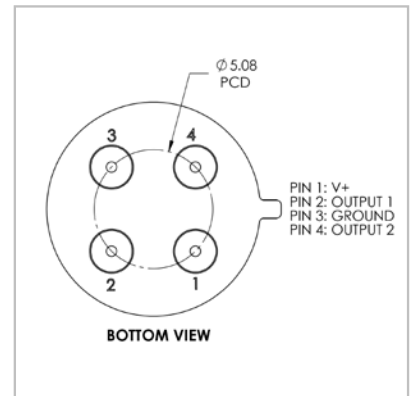
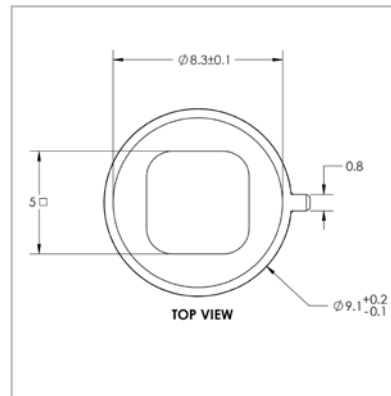
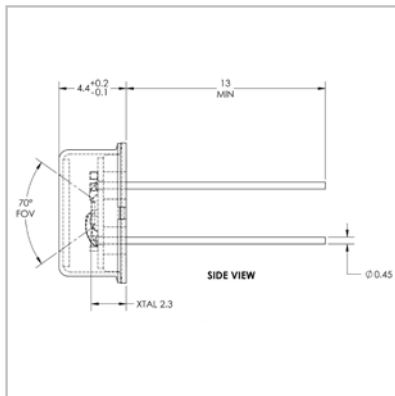
Isometric Drawing (with cutaway)



Circuit Diagram



Technical Drawing



Element Size	Aperture Size*	Package	Absorber	
2 mm x 2 mm	5.0 mm Sq. 3.5 mm Sq.	TO-39 4-pin	Organic Black	
Feedback Resistor	Amplifier	-3dB Freq [Hz]	Supply Voltage [V]	
100 GOhm	Op-Amp 5	TBD	2.7 – 10 V (3 V recommended)	
Responsivity [V/W]	D* (Jones) @ 10 Hz	Noise Density [ $\mu\text{V}/\sqrt{\text{Hz}}$ ]	NEP [W/ $\sqrt{\text{Hz}}$ ]	Polarity
Min: 240,000 Typ: 280,000	Min: $8 \times 10^8$ Typ: $1 \times 10^9$	Max: 70	TBD	Negative

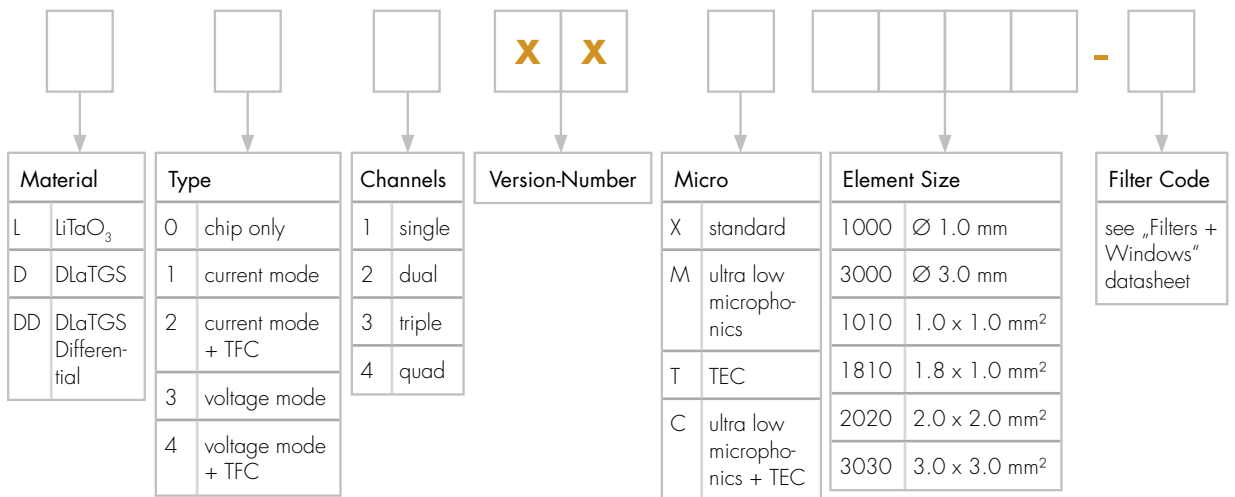
\* Please refer "Filters and Windows" datasheet for all available options (aperture size depends on filter/window option chosen)

### 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](http://www.lasercomponents.com)