

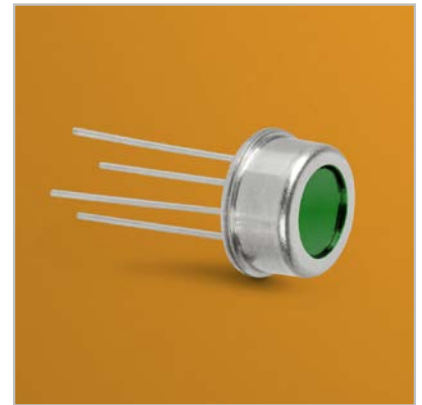
D31 Series Single Channel Voltage Mode Pyroelectric Detectors

Description

Our D31 series of pyroelectric detectors are a collection of single channel DLATGS devices operating in voltage mode with an integrated JFET.

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
- Typ. higher D^* than LTO



Applications

- FTIR spectroscopy
- Non-dispersive infrared spectroscopy
- THz detection

Versions

- Low and high speed devices available
- 9 standard window options

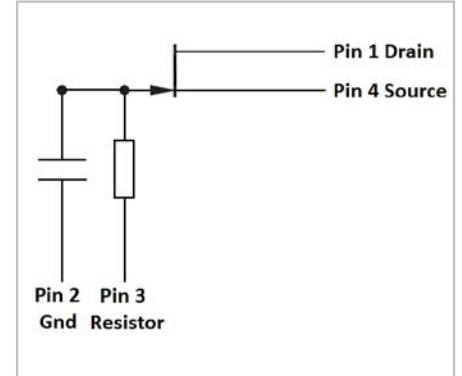
D3110X

- Single channel pyroelectric detector
- Voltage mode
- Without TFC
- Low frequencies

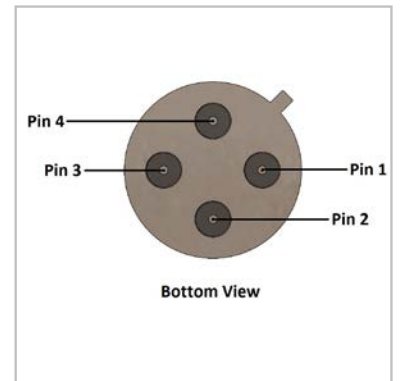
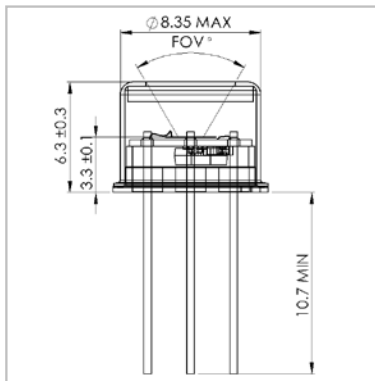
Isometric Drawing (with cutaway)



Circuit Diagram



Technical Drawing



Part	Element Size	Aperture Size*	Package	Absorber
D3110X2000	Dia. 2.0 mm	Dia. 5.3 mm	TO-39 4-pin	Metal black
D3110X2010	Dim. 2.0 x 1.0 mm ²			

Load Resistor	Amplifier	-3dB Freq [Hz]	Supply Voltage [V]	Polarity
100 GOhm	JFET 1	TBD	+9 V (recommended) (max. 25 V)	Negative

Part	Responsivity [V/W]	D* (Jones) @ 10 Hz		FOV [°]	NEP [W/√Hz]
		Min.	Typ.		Typ.
D3110X2000	2000	9.5E+08	1.5E+09	75	3.0E-10
D3110X2010	3200	9.0E+08	1.0E+09	-	2.7E-10

! Similar Model: Selex 106/MWA-51xx

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

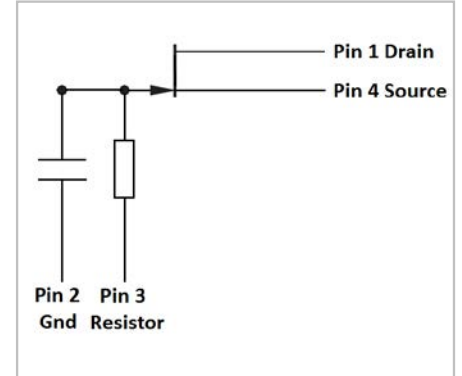
D3150X

- Single channel pyroelectric detector
- Voltage mode
- Without TFC
- Medium speed

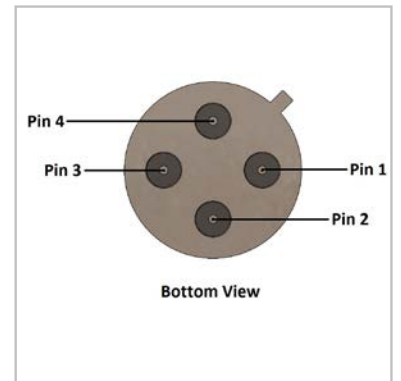
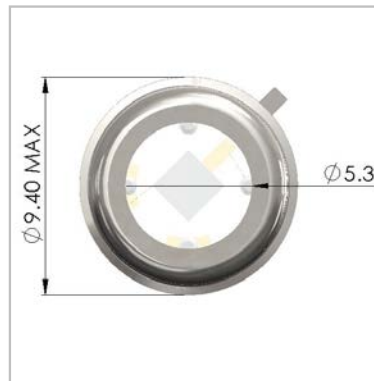
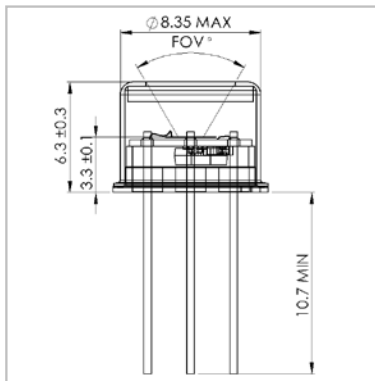
Isometric Drawing (with cutaway)



Circuit Diagram



Technical Drawing



Part	Element Size	Aperture Size*	Package	Absorber
D3150X1000	Dia. 1.0 mm	Dia. 5.3 mm	TO-39 4-pin	Metal black
D3150X1300	Dia. 1.3 mm			
D3150X2000	Dia. 2.0 mm			

Load Resistor	Amplifier	-3dB Freq [Hz]	Supply Voltage [V]	Polarity
27 GOhm	JFET 2	TBD	+9 V (recommended) (max. 25 V)	Negative

Part	Responsivity [V/W]	D* (Jones) @ 1 kHz		FOV [°]	NEP [W/√Hz]
		Min.	Typ.		Typ.
D3150X1000	90	1.8E+08	2.5E+08	80	4.0E-10
D3150X1300	60	2.0E+08	2.7E+08	75	4.5E-10
D3150X2000	30	2.1E+08	2.8E+08	70	6.5E-10

! Similar Model: Selex 99/MWA-53xx

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

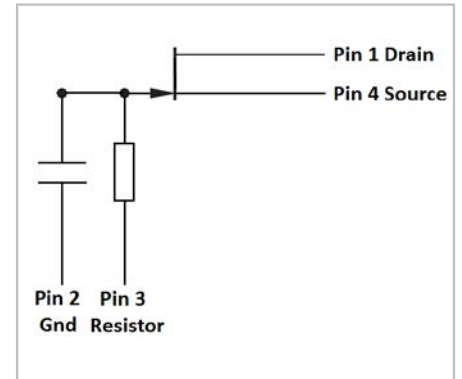
D3151X

- Single channel pyroelectric detector
- Voltage mode
- Without TFC
- For FTIR, TDLS

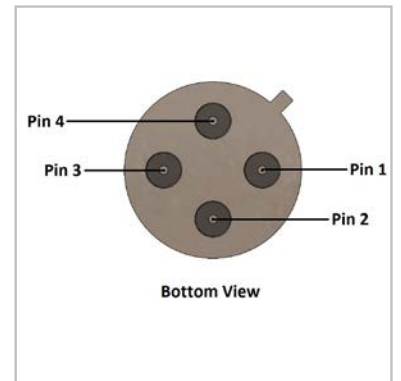
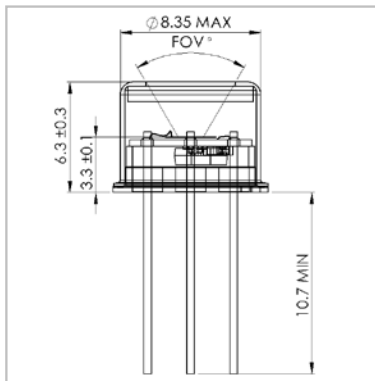
Isometric Drawing (with cutaway)



Circuit Diagram



Technical Drawing



Part	Element Size	Aperture Size*	Package	Absorber
D3151X1000	Dia. 1.0 mm	Dia. 5.3 mm	TO-39 4-pin	Metal black
D3151X1300	Dia. 1.3 mm			
D3151X2000	Dia. 2.0 mm			

Load Resistor	Amplifier	-3dB Freq [Hz]	Supply Voltage [V]	Polarity
10 GOhm	JFET 2	TBD	+9 V (recommended) (max. 25 V)	Negative

Part	Responsivity [V/W]	D* (Jones) @ 1 kHz		FOV [°]	NEP [W/√Hz]
		Min.	Typ.		Typ.
D3151X1000	90	1.8E+08	2.5E+08	80	4.0E-10
D3151X1300	60	2.0E+08	2.7E+08	75	4.5E-10
D3151X2000	30	2.1E+08	2.8E+08	70	6.5E-10

! Similar Model: Selex 99/MWA 55xx

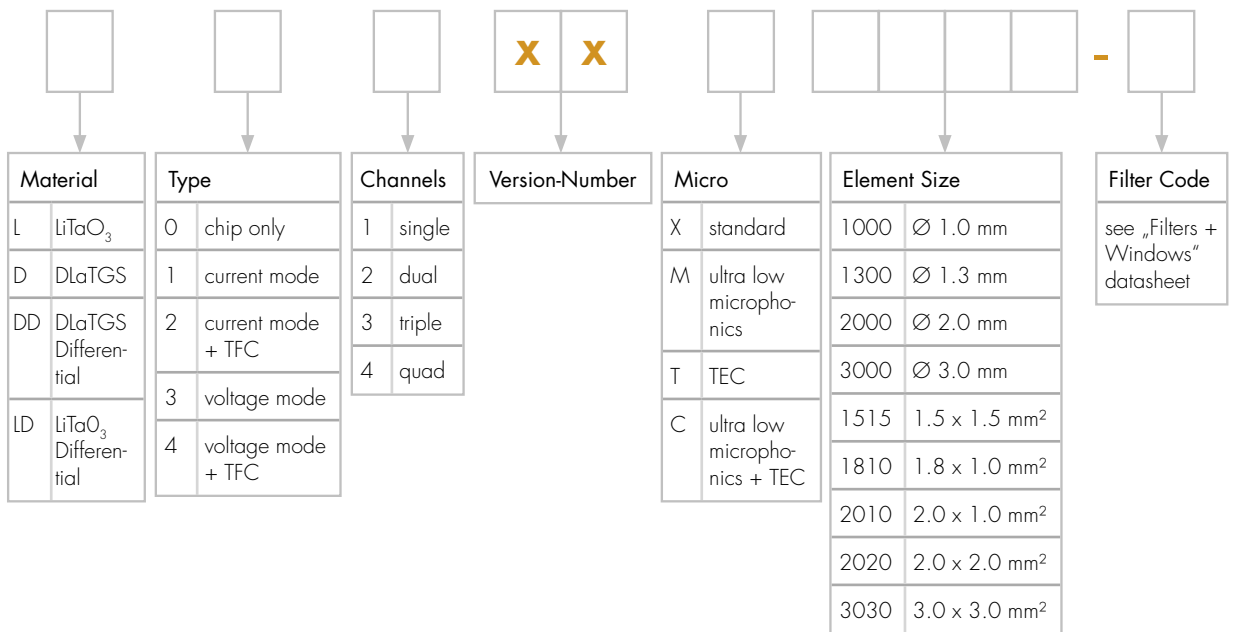
* Please refer "Filters and Windows" datasheet for all available options (aperture size depends on filter/window option chosen)

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]	0	<250

* 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

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