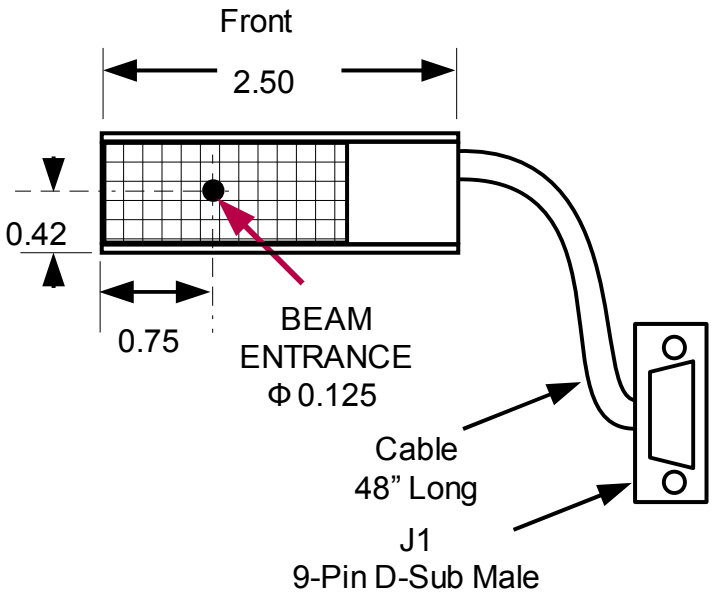
SDA200-02A LWIR Detector

The SDA200-02A LWIR detector is designed to detect the presence of IR signals in the 6um to 20um spectral range, including the emissions from industrial 10.6um CO2 laser systems. Typical applications include CO2 laser beam detection in cutting, drilling,and engraving tools as well as non-contact temperature measurement (SDA200-02T models). An internal comparator circuit provides a digital detection signal when a preset measurement threshold has been reached.

Features:

- Thermopile sensor with 6um to 20um spectral response.
- 10mW to 60W laser optical power input range. (100mJ max pulse energy)
- 0 to 5V analog and TTL digital outputs.
- Adjustable detection threshold, set by potentiometer or control voltage.
- DC to 50Hz frequency response.
- 1.5ms response time for large amplitude signals
- Detection threshold indicator.
- Temperature measurement range -20ºC to +150ºC (SDA200-02T models)
- Power requirement: 5VDC, 0.1A.
- Detector field of view: +/-5º, (+/-10º for SDA200-02T models). Custom FOV available.
- -20ºC to +85ºC ambient operating temperature range.
- Low cost: $695 in single piece quantity.
- Custom configurations available to accommodate packaging and electrical interface requirements.

Outline and mounting dimensions



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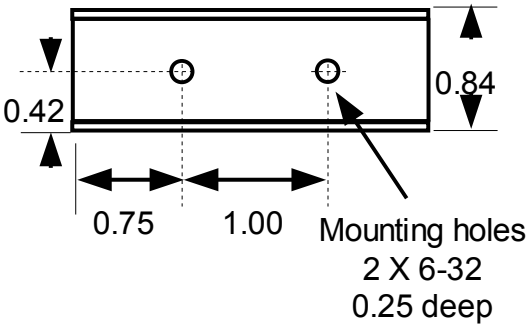

Connector Pin Designations

J1 CONNECTIONS	J1 PIN #	WIRE COLOR	NOTES
+5V Power Input	1	RED	0.1A Typ.
Case Ground	2	GREEN/BARE	Cable Shield
Remote Threshold Adj.	3	ORANGE	Detection Threshold Adj. (0-5V)
Sensor Temperature	4	VIOLET	17.25mV/°C, 1.5V = 22°C
Digital Output	5	BLUE	Logic LOW = Beam Present
Power Return	6	BLACK	5V Return
Analog Output Signal	7	YELLOW	Beam Intensity (0 - 5V)
Analog Return	8	BROWN	Signal Ground
Digital Return	9	GRAY	Digital Ground

Typical Large Signal Response