

The Spectrex Military optical UV/IR detector is the latest model being installed in military tactical and combat vehicles.

The detector is microcontroller based enabling adjustment of sensitivity and other features to a specific application. Detector includes continuous self-calibration to background radiation. A serial communication port provides outputs for maintenance and diagnostics.

Only simultaneous detection of radiation in the UV and IR ranges of the electro-magnetic spectrum (which are characteristic of fire) and above pre-set threshold will result in a detector output signal.



All other types of radiation sources, not identified as fires, will not be detected.

## MAIN FEATURES

- \* UV/IR Dual-Sensor
- \* High Speed Response - less than 3 msec
- \* Sensitivity to Slow Growth Fires
- \* High Reliability
- \* Immunity to False Alarm
- \* Discrimination – optional
- \* Automatic and Manual Built-In Test (BIT)
- \* RS-485 Modbus Compatible
- \* MTBF Minimum 100,000 Hours

## DETECTION SPECIFICATIONS

### Spectral Response Response Time

### UV/IR

Max. 3 msec. - when detector is exposed to vehicle penetration or explosive fire.

### Detection Threshold

At least one detection signal every 5 seconds when detector is aimed at the base of 5 inch (12.5 cm) gasoline pan fire at a distance of 35 inch (90 cm) from the center of the flame.

### Field of View

90° Horizontal, 90° Vertical

### Built-in-Test (BIT)

Automatic and Manual check of window cleanness, sensor and electrical circuitry.

### Discrimination (Option)

Disables detection signal when no fuel ignition/explosion/fire occurs following penetration  
-40°F (-40°C) to 160°F (70°C)

### Temperature Range

Up to 95%

### Humidity

**ELECTRICAL SPECIFICATIONS**

<b>Power Supply</b>	Operating Voltage: 16-32 VDC	
<b>Power consumption</b>	Max. 20mA	
<b>Electrical Connection / Pinout</b>	Model No.	765002-1
	Connector	DTM-146PA
	Power	1
	Return	2
	BIT / Output	3
	Spare	4
	RS-485-	5
	RS-485+	6
<b>Electrical Input Protection</b>	Per MIL-STD-1275B	
<b>Electromagnetic Compatibility</b>	EMI/RFI per MIL-STD-461E	

**MECHANICAL SPECIFICATIONS**

<b>Dimensions</b>	3.35" x 3.35" x 2.34" (85mm x 85mm x 58.5mm)
<b>Weight</b>	1.2 lb (0.55 kg)
<b>Enclosure</b>	Aluminum, white epoxy enamel finish.
<b>Environmental Standards</b>	Meets MIL-STD-810E for High Temp, Low Temp, Humidity, Vibration, Shock, Waterproof, Dust, Salt & Fog

**ACCESSORIES**

<b>Fire Simulator</b>	P/N 706905
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**FALSE ALARM SUSCEPTIBILITY**

The detector shall not provide a detection signal under any of the following conditions:

<b>RADIATION DESCRIPTION</b>	<b>IMMUNITY DISTANCE (IN.)</b>
Direct or reflected sunlight	IAD*
Incandescent frosted glass light, 100 W	IAD*
Incandescent clear glass light, rough service, 100 W	IAD*
Fluorescent light with white enamel reflector, 40W	IAD*
Ambient light extremes (darkness to bright light with snow, water, rain, desert glare and fog)	IAD*
Bright color clothing, including red and safety orange	IAD*
Electronic flash (180 watt-seconds minimum output)	IAD*
Movie light, 625W quartz DWY lamp (Sylvania S.G-55)	24
Red vehicular dome light	IAD*
Blue-green vehicular dome light 24V of direct current (dc)	IAD*
Flashlight	IAD*
Electric Arc 15/32 in. Gap at 4000 VAC	1
Arc Welding 5/32 in. rod 100A	24
Radiation heater, 1500W	IAD*
Radiation heater, 1000W with fan	IAD*
Muzzle flash from M16 rifle, 3 round burst	2
Lit cigar	IAD*
Lit cigarette	IAD*

\*IAD – Immune Any Distance