

# Model 8502M3 / 8502M7

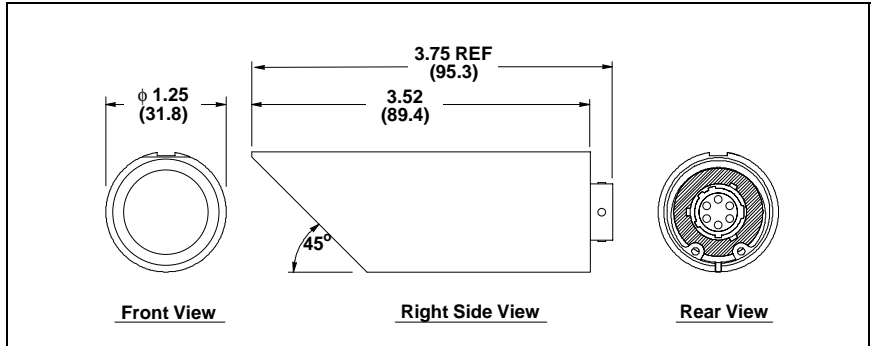
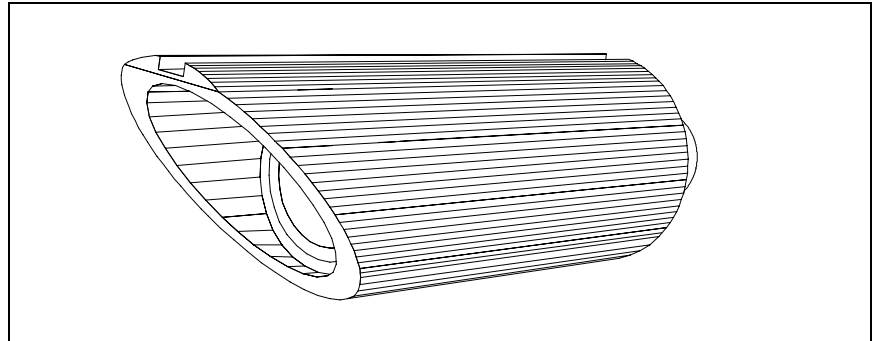


## IR-EYE™ Directional Miniature Passive Infrared Thermal Telescopes

Model 8502M3 and 8502M7 are indoor/outdoor miniature telescopes designed for passive non-contact motion sensing of people, objects or events.

Each consists of a small, all-weather housing containing a plano-convex lens which focuses IR radiation onto an ELTEC Model 422M4-25 two channel lithium tantalate pyroelectric detector with 100K Ohm internal source resistor. The housing has a hooded front end to protect the lens from the elements and direct sunlight.

Both Models have a 6 pin electrical receptacle at the rear. The difference between the Model 8502M3 and the Model 8502M7 are the internal tamper sense connections. The Model 8502M3 tamper sense connects to V+ through a 2 megohm resistor. The Model 8502M7 tamper sense is connected to ground.



### Features

- **Passive Non-Contact Monitoring**
- **Low Power Consumption**
- **High Environmental Noise Rejection**
- **Water Resistant**
- **No Interference Between Units**
- **Fast Response**
- **Indoor/Outdoor Operation**

### Applications

- **Border Surveillance**
- **Perimeter Protection**
- **Rapid Deployment**
- **Fire and Explosion Detection**
- **Motion Sensing (People, vehicles, boats, animals)**
- **Industrial Sensing**

### Model 8502M3 and 8502M7 Specifications

#### Mechanical

Weight .....	2.3 oz (65 g)
Enclosure .....	Painted CPVC, hermetically sealed
Color .....	O.D. Green (Other colors available as special order)

#### Optical

Nominal Range .....	195 ft (60m) with appropriate customer-supplied electronics
Optics .....	Refractive, Plano-Convex
Detectors .....	Two channel Lithium Tantalate Pyroelectric

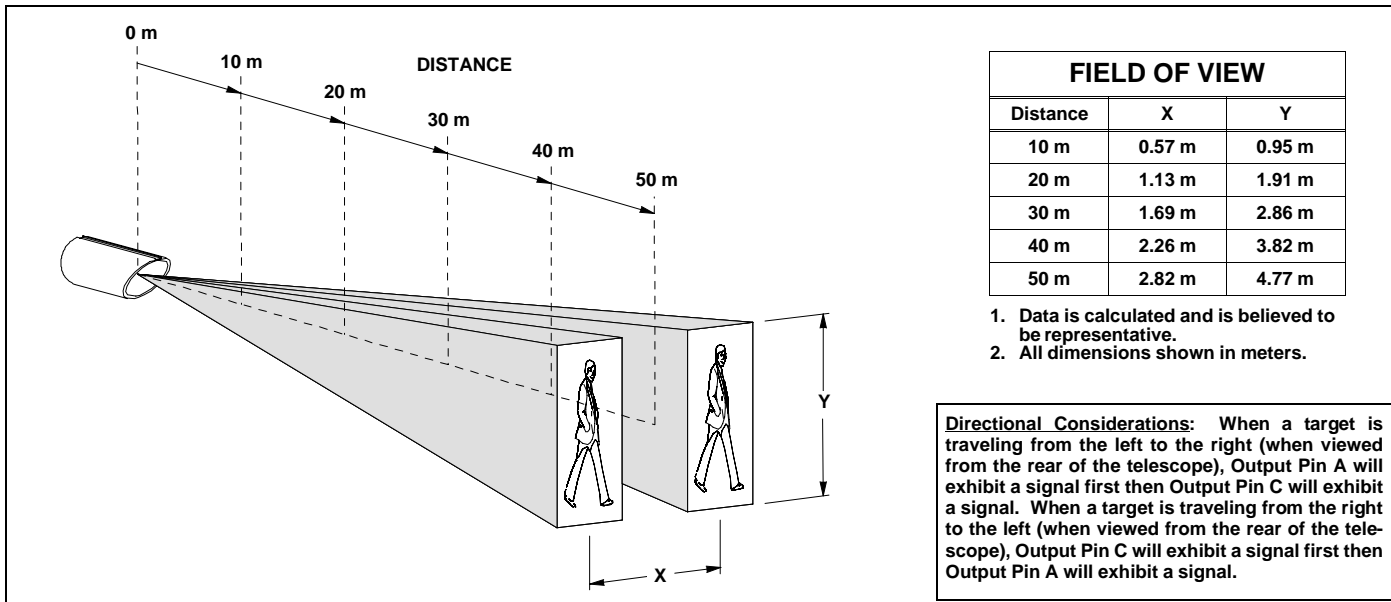
#### Electrical

Supply Voltage .....	3 to 15 VDC
Supply Current .....	25µA max
Output .....	Analog

#### Environmental

Operating Temperature Range .....	-40°C to +65°C
Storage Temperature Range .....	-40°C to +65°C
Sealing .....	Waterproof to a depth of 1 meter

**Note: Housing is hermetically sealed and nitrogen backfilled to prevent condensation of moisture on the optics at low temperatures. Any disassembly of this unit will break the seal and void the warranty**



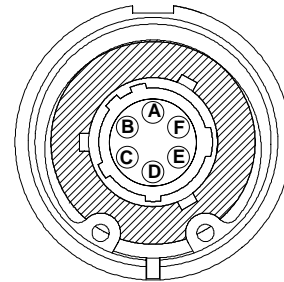
**Detectability Considerations:** This system produces a signal when the telescope senses a change in incident infrared radiation within its field of view. The limiting factor of detectability is not the system's sensitivity, but the extent to which the thermal contrast between the target and background is greater than normal background fluctuations. Certain atmospheric conditions (humidity, precipitation, wind) must be taken into consideration when determining detectability range.

**Transmission Characteristics of the -25 Filter:** ELTEC's -25 filter is closely tailored to follow the "atmospheric window" of from 8 to 14 micrometers, a region where the normal constituents of the atmosphere least affect the transmission of infrared radiation. The -25 filter has a semiconductor substrate and is electrically connected to the detector for RF shielding. For more information on ELTEC's filter, please refer to ELTECdata # 101, "Choosing and Using Pyroelectric Detectors".

**Ordering Information:** Both telescope models contain an ELTEC Model 422M4 two channel detector with a -25 filter. Information on other detector models including thermally compensated, parallel opposed dual or single element detectors is available on request.

**Specifications subject to change without notice.**

## Rear Connector Definition



PIN	DESIGNATION	PIN	DESIGNATION
A	Output	D	V+
B	Ground	E	N/C
C	Output	F	Tamper Sense

The Model 8502M7 typically has a red retaining ring for model number identification.

The connector (receptacle) is Bendix PT07E10-6SW or ITT-Cannon KPT07E10-6SW. Mating plugs are available in many different styles and options. Eltec recommends customers contact Bendix or ITT-Cannon directly.

**NOTICE:** The information provided herein is believed to be reliable. However, ELTEC Instruments, Inc. assumes no responsibility for inaccuracies or omissions. Due to industry components being incorporated into ELTEC's devices and ELTEC continually striving for product improvement, specifications may change without notice.



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