



# PASSIVE INFRARED DETECTOR

# **CX-502AM/502**

(Anti-Masking Model) (Standard Model)



**Disturbance-Free Performance!**

## Optex's Multi Anti-Masking Technology prevents any detector disturbance.

- Multi Anti-Masking Technology with Highly-Sensitive Self-Checking Function
- Double Conductive Shielding of Pyroelectric Element for accurate detection
- Quad Zone Logic prevents false alarms caused from spot temperature changes
- Low Current Draw, Anti-Magnet and Silent Relays thanks to the Photoelectric MOS Relay



# Powerful Anti-Masking PIR Detector

## CX-502AM/502

Anti-Masking Model

Standard Model

### CX-502AM's IMPROVED RELIABILITY

#### Multi Anti-Masking Technology (Patent Pending)

Optex has developed the world's first Multi Anti-Masking Technology. By employing multiple technologies, CX-502's Anti-Masking Technology will detect virtually any attempt to mask the detector. Whether invisible spray, black spray, transparent tape, or even black paper is used, the Multi Anti-Masking Tech will detect the attempt. Our unique design of integrated technologies provides the widest range of protection against masking techniques and produces a sensor with the highest degree of reliability ever offered.



#### Invisible spray detection

Never worry about whether the sensor is covered with infrared beam impairing invisible sprays. The unit can also recognize black sprays.



#### Detection of pasting disturbances

The CX-502AM can recognize masking objects (e.g. invisible seals and stickers) pasted onto the PIR lens.



#### Detection of disturbances in front of the unit

The CX-502AM can also detect black paper, which tends to absorb infrared rays, when put in front of the detector from 12 inches away.

#### Self-Checking

The Self-Check function is an onboard circuit which checks the operation of the detector at regular 5 hour intervals. This ensures that the unit is always working correctly.

#### Initial Alarm Memory

This function indicates by a flickering LED which detector is activated first when several detectors are connected in one alarm loop.

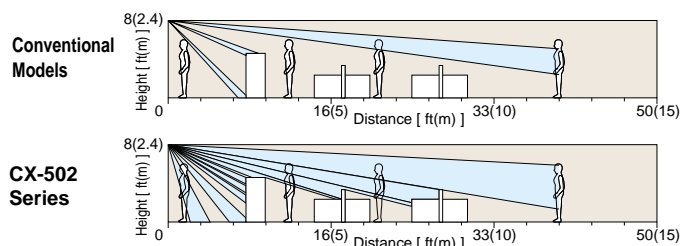
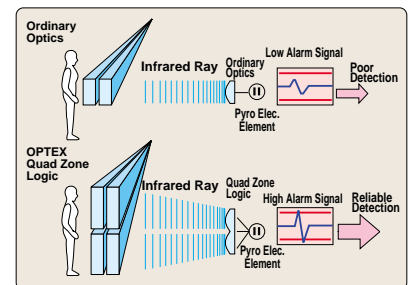
#### LED Remote Control Terminal (CX-502AM and CX-502V only)



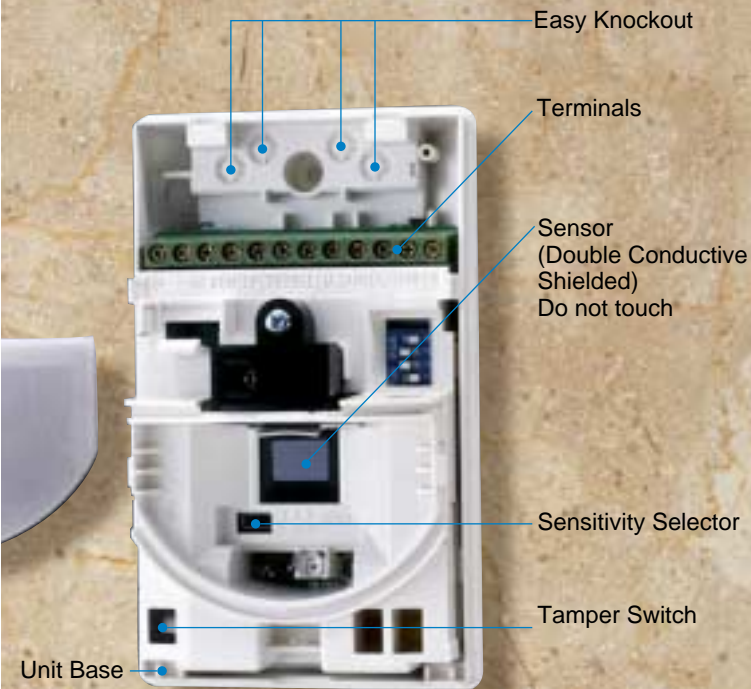
### CX-502 SERIES STABLE DETECTION PERFORMANCE

#### Quad Zone Logic (Patent Listed)

The highly accurate and reliable detection pattern will maintain its sensitivity through the entire detection area even in high temperature or low contrast environments. Quad Zone Logic creates an extremely high vertical zone density, two or three times the size of conventional PIRs. These taller zones capture the entire body mass and enable detection of even the smallest temperature contrast against the temperature of the background. In addition, the vertical detection density has been improved to take into account dead zones created by furniture or partitions.



# Detector Eliminates False Alarms



## ● Versions

CX-502AM - Anti-Masking  
Self-Checking  
Initial Alarm  
Memory  
CX-502 - Standard  
CX-502V - Alarm Memory

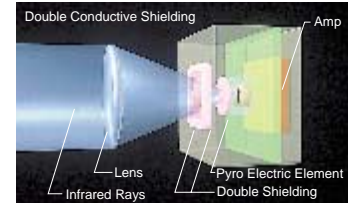
## ● Options

EA-1W : Wall Mount Bracket  
FA-1W : Multi-Angle Wall Bracket  
FA-2C : Multi-Angle Ceiling  
Bracket  
CL-80N : Long Range Lens  
80ft x 7.7ft (24m x 2.3m)

## FALSE ALARM PROTECTION

### ● Double Conductive Shielding of the Pyroelectric Element (Patent Listed)

Double filtering and conductive metal shielding of the Pyro block out visible light and RFI, allowing only infrared energy to reach the pyroelectric elements.



### ● RFI Protection

No alarm from a field strength of 30V/m within the range of 144 to 1,200MHz.

### ● Temperature Protection

No alarm in high, low and changing temperatures from -4°F to +122°F (-20°C to +50°C)

### ● Visible Light Protection

## OTHER OUTSTANDING FEATURES

### ● Easy Installation

Easy Wiring Knockout and the Easy-to-View LED help you to install the unit more simply.

### ● Low Current Draw

Drastic energy consumption reduction compared with conventional models.

CX-502AM : 7mA (CX-502AMVds: 6mA)  
CX-502 and CX-502V : 5mA

### ● Anti-Magnet

By employing the Photoelectric MOS Relay, the CX-502 series is not affected by magnetized materials.

### ● Silent-Relay

## PERFORMANCE

### ● Advanced Temperature Compensation

Temperature Compensation will increase detection capability under high temperature conditions where the background temperature is similar to that of the human body. It maintains a high level of false alarm protection while providing accurate detection by automatically adjusting its sensitivity according to the environmental temperature.

### ● Sealed Optics

Prevents drafts and small insects from getting onto the Pyroelectric Element. This practically eliminates the chance of false alarm due to these causes since the Pyro is sealed with the inside molding of the housing cover.

### ● Selectable Sensitivity (High, Medium, Low)

### ● Selectable Pulse Count (Standard or Special)

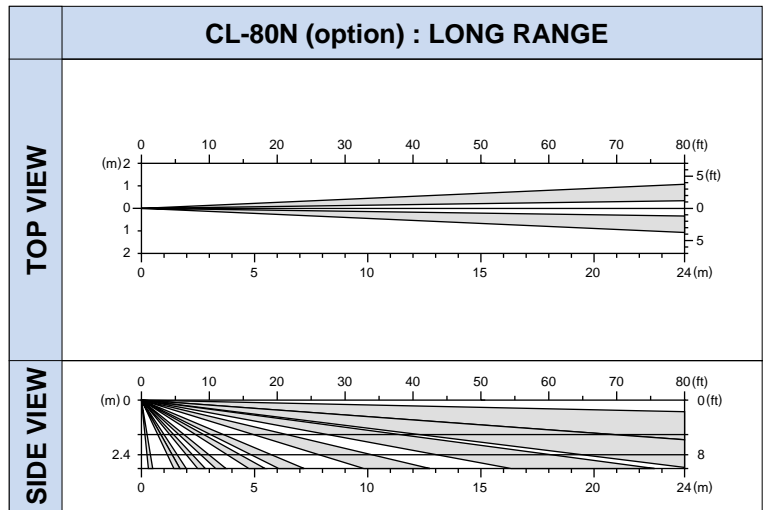
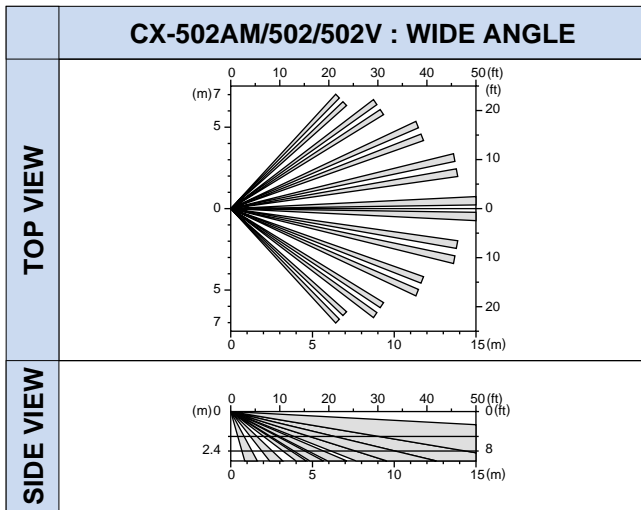
### ● LED On/Off Switch

### ● Stream Lined Offset Spherical Lens

### ● Durable & Additional PCB Protection Cover



## DETECTION PATTERNS



## SPECIFICATIONS

### CX-502

Detection method	Passive infrared
Coverage	Wide angle 85° wide 50ft x 50ft (15m x 15m)
Detection zones	82 zones
Mounting height	6 ~ 10ft (1.8 ~ 3.0m)
Sensitivity	3°F (1.6°C) at 2ft/sec. (0.6m/sec.)
Detectable speed	1 ~ 5ft/sec. (0.3 ~ 1.5m/sec.)
Power input	9 ~ 18VDC
Current draw	5mA (normal) / 12mA (max.)
Alarm period	2.0 ± 0.5sec.
Alarm output	N.C 28VDC 0.2A max.
Tamper switch	N.C. Opens when cover removed
Warm-up period	Approx. 1 min. (LED blinks)
LED indicator	LED is blinking during warm-up period. Alarm condition
RF interference	No alarm 30V/m
Operating temperature	-4 ~ +122°F (-20 ~ +50°C)
Environment humidity	95% max.
Weight	4.2oz (120g)

### CX-502AM

Current draw	7mA (normal) / 19mA (max.)
Alarm memory	Selectable positive or negative control
Initial alarm memory	Selectable positive or negative control
LED indicator	Red and yellow LED is blinking during warm-up period. Red LED: Alarm, Alarm Memory and Initial Alarm Memory indicator Yellow LED: Anti-Masking and Self-Checking indicator
D.L. terminal	Selectable positive or negative control
Weight	4.8oz (135g)

### CX-502V

Current draw	5mA (normal) / 13mA (max.)
Alarm memory	Selectable positive or negative control
D.L. terminal	Selectable positive or negative control
Weight	4.2oz (120g)

### CL-80N (Optional lens for long range curtain pattern)

Coverage	80ft x 7.7ft (24m x 2.3m)
Detection Zones	22 zones

\*Specifications and design are subject to change without prior notice.

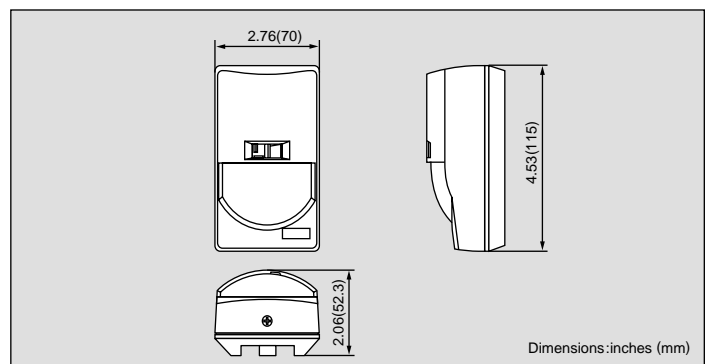
## OTHER CX SERIES DETECTORS

The CX series represents superior detection performance where high security is required, while eliminating false alarms, even in the most severe environments.



**CX-70M**  
70ft x 70ft (21m x 21m)  
150ft x 8ft (45m x 2.4m)

## DIMENSIONS



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