■ Detection Patterns

WIDE ANGLE	LONG RANGE

TOP VIEW (Wide Angle)

TOP VIEW (Long Range)

SIDE VIEW (Wide Angle)

SIDE VIEW (Long Range)

■ Specfications

CX-702 (UL) LISTED

Detection method	Passive infrared	
Coverage	Wide angle 85°wide 21m x 21m (70ft. x 70ft.)	Long range 45m x 2.4m (150ft. x 8ft.)
Detection zones	68 zones	22 zones
Mounting height	1.5m - 3.6m (5 - 12ft.)	
Sensitivity	1.6°C at 0.6m/sec. (2.4m mounting height) 3°F at 2ft./sec. (8ft. mounting height)	
Detectable speed	0.3 - 1.5m/sec. (1 - 5ft./sec.)	
Power input	9.5 - 16V DC	
Current draw	8mA (normal) /11mA (max.) at 12V DC	
Alarm period	Approx. 2.5 sec.	
Alarm output	N.C. 28V DC 0.2A max.	
Tamper switch	N.C. Opens when cover is removed. 28V DC 0.1A max.	
Pulse count	Approx. 20 sec. 2 or 4	
Warm-up period	Approx. 60 sec.	
LED indicator	Alarm condition	
RF interference	No alarm 30V/m	
Operating temperature	−20°C - ＋50°C (−4°F - ＋122°F)	
Environmental humidity	95% max.	
Weight	200g (7.0 oz.)	

CX-702RS (Battery Operated Version)

Power input	3 - 9V DC alkaline battery or lithium battery
Current draw	5 μA (In standby) 10mA (In walktest, LED on)
Alarm output	Form C 10V DC 0.01A max.
Alarm interval	Succeeding signals are not output even though detection occurs within 2min. after the first alarm.
Tamper switch	Form C 28V DC 0.1A max.
Warm-up period	Approx. 90 sec.
RF interference	No alarm 20V/m
Operating temperature	−10°C - ＋50°C (−14°F - ＋122°F)
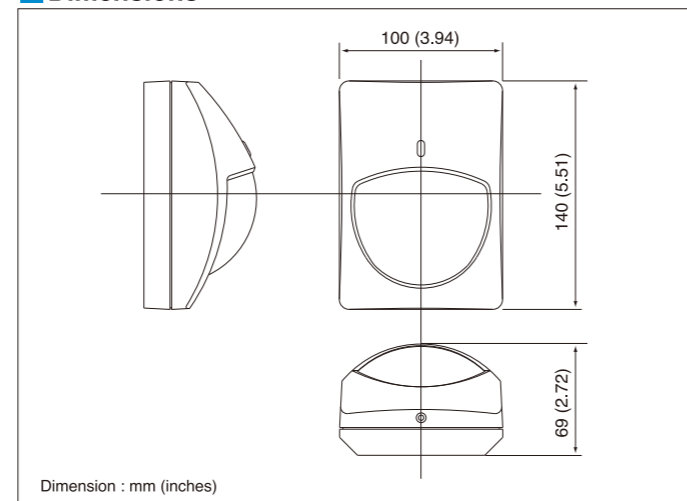
■ Other CX Detector

CX-502 / 502AM (Anti-Masking Model)

15 x 15m (50 x 50ft.) 85˚ Wide,
24 x 2.3m (80 x 7.7ft.) Long

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

NOTE: This unit is designed to detect movement of an intruder and activate an alarm control panel. Being only a part of a complete system, we cannot accept responsibility for any damages or other consequences resulting from an intrusion. This product conforms to the EMC Directive 89/336 EEC.

■ Dimensions

100 (3.94)
140 (5.51)
69 (2.72)

Dimension : mm (inches)

PASSIVE INFRARED DETECTOR
CX-702

Double the Basic Performance and Easy Installation! Optex Ensures Reliability Even for Protecting Large Indoor Venues.

◉ 21m (70ft.) Wide-Angle, 45m (150ft.) Long-Range Detection Ideal for Commercial and Industrial Applications
◉ Completely Sealed Optics with Dual Structure
◉ Double Conductive Shielding of Pyro Electric Element
◉ Dual Purpose Lens
◉ Double Easy Knockout
◉ Easy-to-View LED
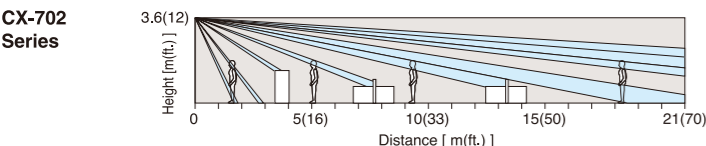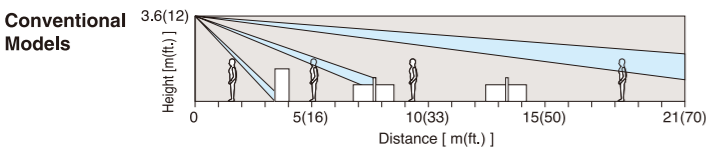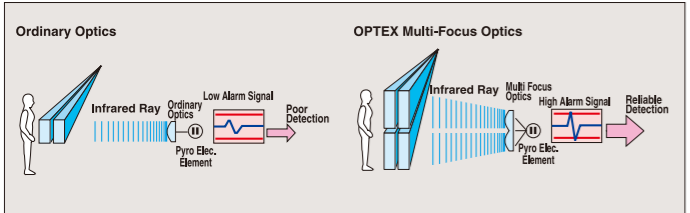◉ Sufficient Space for Wiring

The Optex CX-702 Delivers Reliable Detection in Large Commercial Buildings

# CX-702

High Reliability Performance

■ Multi-Focus Optics (Patent Listed)

The highly accurate and reliable detection pattern will maintain its sensitivity throughout the entire detection area, even in high temperature or low contrast environments. Multi-Focus Optics create 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.

Ordinary Optics — OPTEX Multi-Focus Optics

Ordinary Optics: Infrared Ray / Ordinary Optics / Pyro Elec. Element / Low Alarm Signal / Poor Detection

OPTEX Multi-Focus Optics: Infrared Ray / Multi Focus Optics / Pyro Elec. Element / High Alarm Signal / Reliable Detection

Conventional Models
Height [m(ft.)] 3.6(12)
Distance [m(ft.)]: 0 5(16) 10(33) 15(50) 21(70)

CX-702 Series
Height [m(ft.)] 3.6(12)
Distance [m(ft.)]: 0 5(16) 10(33) 15(50) 21(70)

■ Patented Double Conductive Shielding

The Double Shielding lets infrared energy pass through, but blocks out light sources since it features a special conductive filter that covers the element window.

Double Conductive Shielding: Amp / Lens / Infrared Rays / Pyro Electric Element / Double Shielding
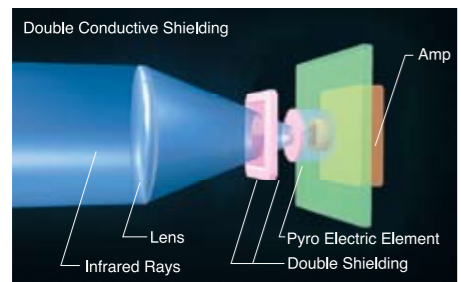
### ■ Sealed Optics—Complete Shielding with Dual Structure

The pyro electric element is completely sealed with the dual-structured internal molding of the housing cover, thus preventing false alarms caused by drafts and small insects from getting inside.

CX-702

Conventional Structure — CX-702's Dual Structure
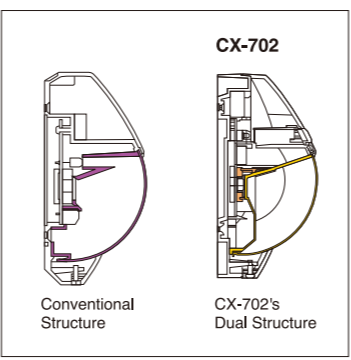
■ Spherical Lens Design

Conventional flat lenses inevitably create sensitivity distortion problems when they are bent to fit a curved housing. OPTEX's spherically designed lens will obtain sharp detection because no bending is required.

The Optex lens is designed to collect IR energy from the detection area, and focus it directly onto the pyro.
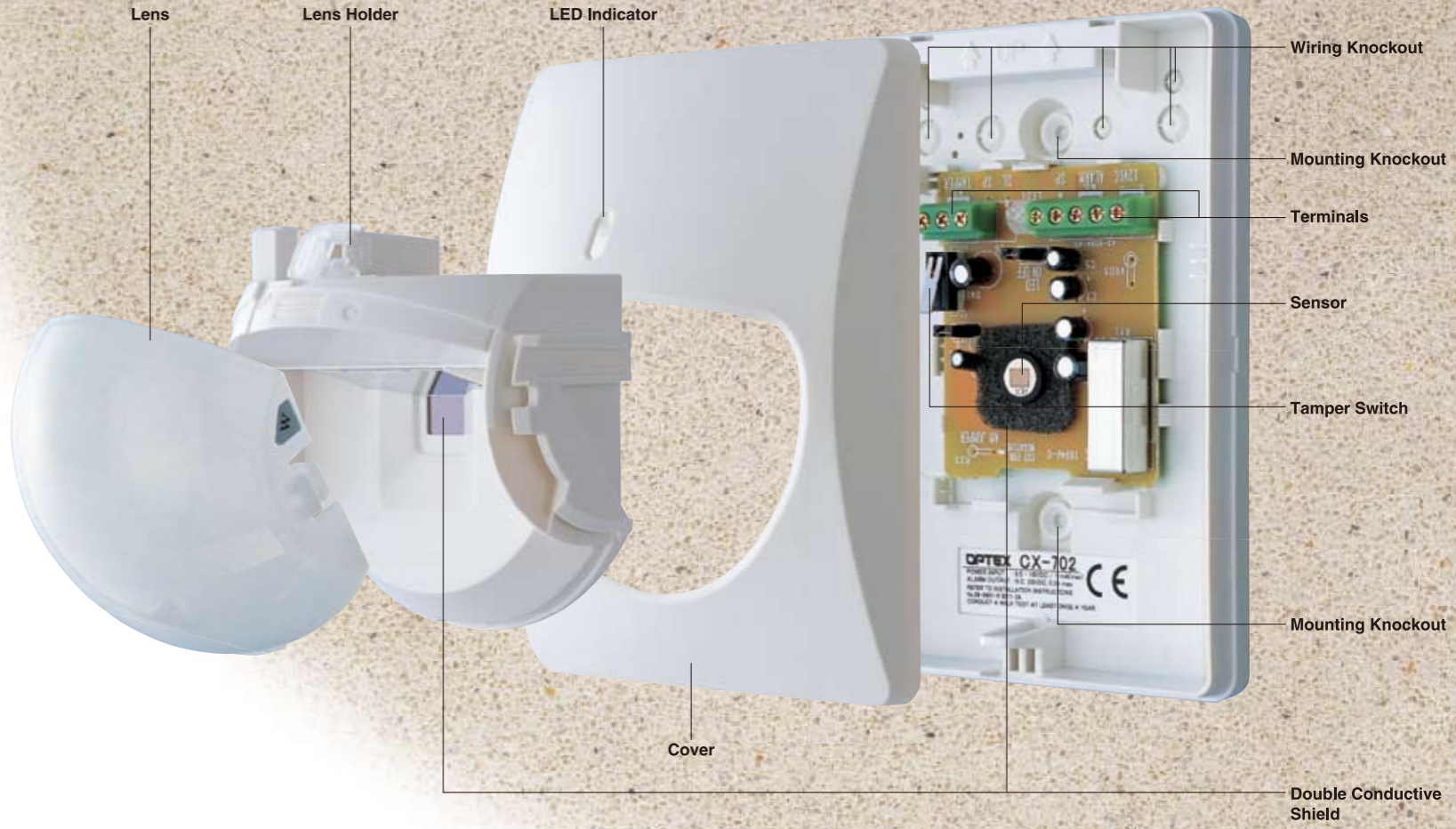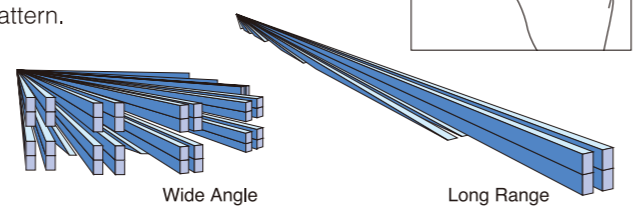
PYRO — Optex Lens
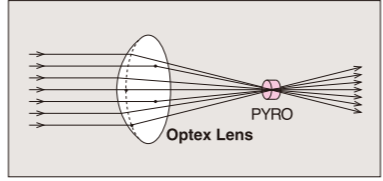
Since a flat lens is "bent," sensitivity distortion occurs at both sides of the lens (the lens surface is not directing IR energy correctly), resulting in poor sensitivity for long distance detection applications.
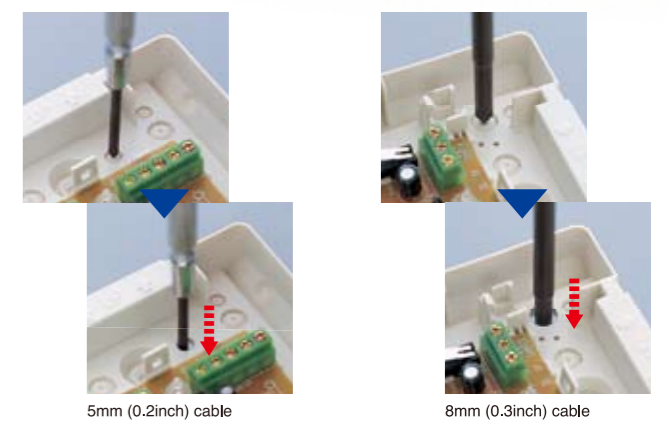
PYRO — Conventional Lens
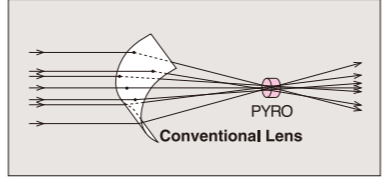
■ Dual Purpose Lens

By simply rotating the spherical lens, you can select between Wide Angle and Long Range patterns. The CX-702 will instantly provide reliable and precisely accurate detection for each pattern.

Wide Angle — Long Range

Lens — Lens Holder — LED Indicator — Wiring Knockout — Mounting Knockout — Terminals — Sensor — Tamper Switch — Mounting Knockout — Cover — Double Conductive Shield

■ Temperature Compensation Circuit

The Temperature Compensation Circuit will bring stable 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.

■ False Alarm Protection

● **RFI Protection**
Built-in noise reduction chip blocks out RFI noise with field strength of 30V/m.

● **Temperature Protection (CX-702 only)**
No alarm in high, low and changing temperatures from $-20°C$ to $+50°C$ ($-4°F$ to $+122°F$).

■ Disturbance-Free Tamper Switch

Completely sealed housing structure greatly eliminates disturbances to Tamper Switch.

Installation Reliability

■ Double Easy-Knockout

Compatible with two types of cables: a thick, 8mm (0.3inch) diameter cable and a thin, 5mm (0.2inch) diameter cable.

5mm (0.2inch) cable — 8mm (0.3inch) cable

■ Sufficient Space for Wiring

■ 3-Step Angle Adjustment

■ Easy-To-View LED

■ Selectable Pulse Count: 2 or 4

● **Versions**
- CX-702   Standard
- CX-702RS Battery Operated, Form C

● **Options**
- CA-1W   Wall Mount Multi-Angle Bracket
- CA-2C   Ceiling Mount Multi-Angle Bracket
- BA-70   Backbox for wireless transmitter