TRANS OS·NET

PIR Occupancy Sensor LENS DATASHEET

IR-TEC's TRANS and OS-NET PIR based Occupancy Sensors feature with interchangeable lens options. Each lens provides different sensing coverage which varies with the actual mounting height.

The specified detection coverage and mounting height of each lens are based on the test result of human motion walking across the detection zones. The actual coverage may be reduced if the motion is moving toward or away the sensor. High ambient temperature (above 28°C/82°F) could reduce the coverage of PIR sensor. If ambient temperature at the covered area are expected to be high sometimes, consider adding more sensors or reduce the mounting height, if possible.

The followings are all available lens options and their respective detection patterns at printing time. For details of latest lens options available, please visit www.irtec.com.
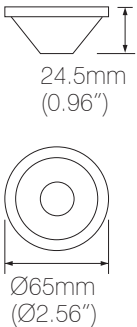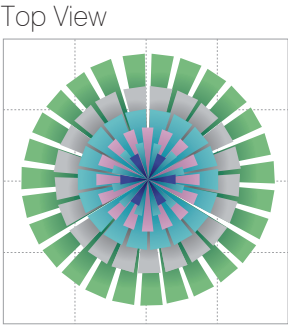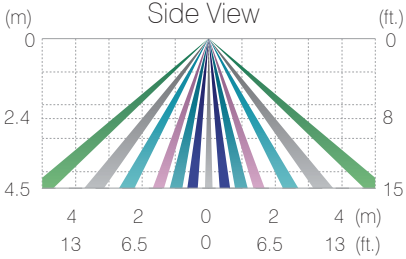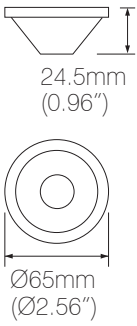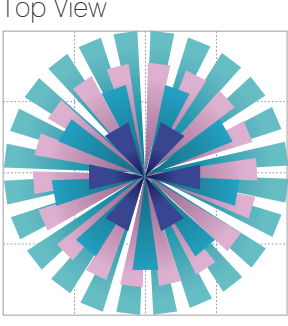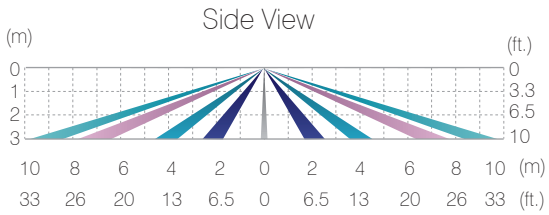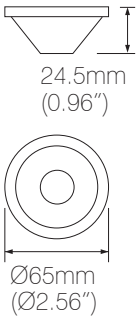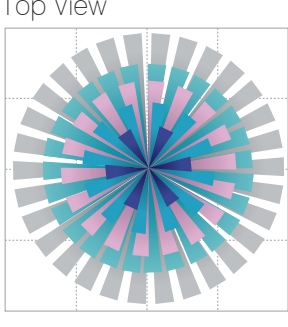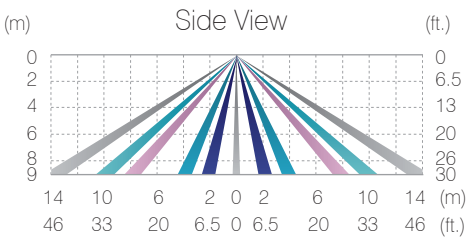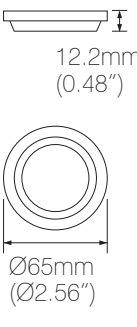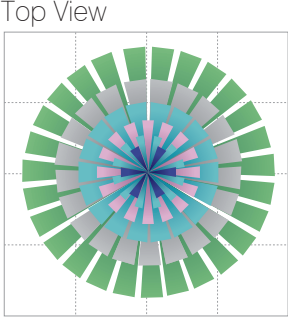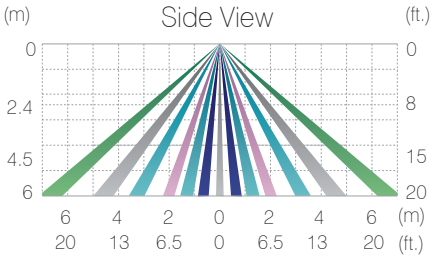
LENS OPTIONS

Lens			Shape	Recommended Mounting Height		Coverage
A		Standard	Cone	2.4~4.5m	8~15 ft.	2X height
B		Extra wide	Cone	2.4~3.0m	8~10 ft.	6X height
C		High bay	Cone	4.5~9.0m	15~30 ft.	3X height
D		Standard	Round flat	2.4~6.0m	8~20 ft.	2X height
F		Extra wide	Dome	2.4~6.0m	8~20 ft.	4X height
G		Aisle way	Arch	2.4~12.0m	8~40 ft.	3X height
H		High bay	Dome	9.0~15.0m	30~50 ft.	1X height
L		Long aisle	Arch	2.4~3.0 m	8~10 ft.	6X height
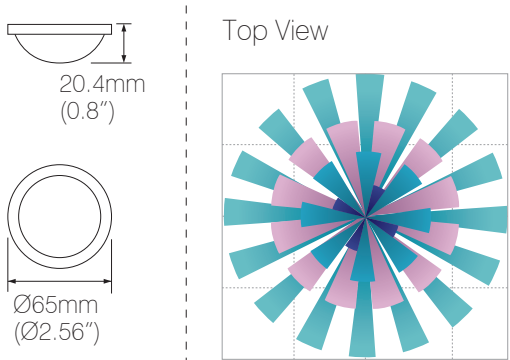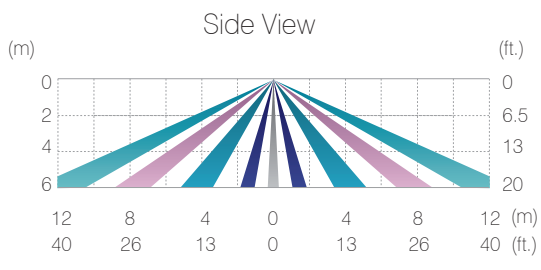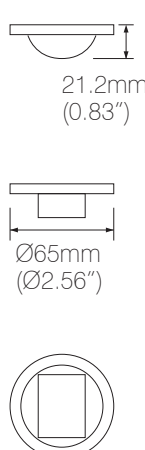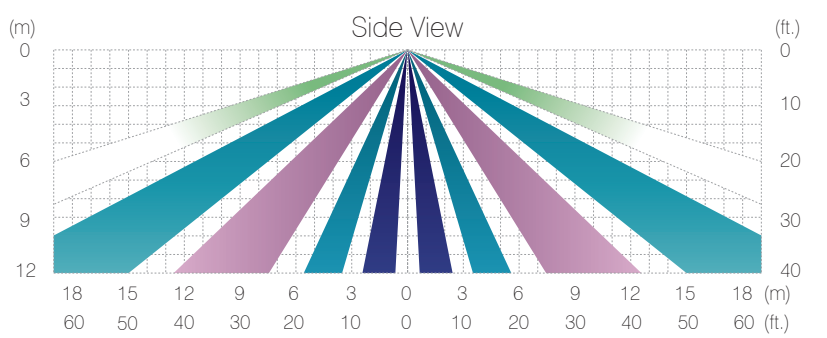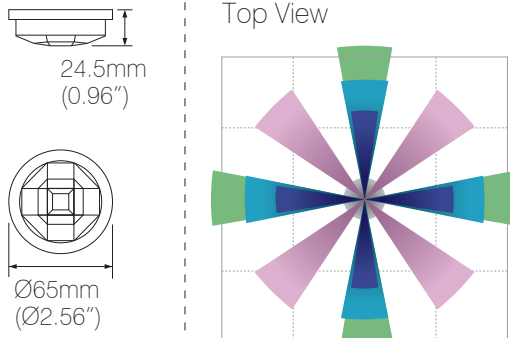
NOTE:

- Lens G/L can be rotated to change the direction of coverage. Its 3X/6X height coverage refers only to the total length, the width of coverage will vary with the mounting height (see table of Lens G/L section). This lens is not IP-66 rated.

- Lens C/G may be mounted up to 40/50 ft. (12/15m) or higher at the area, providing with large moving object such as forklift trucks. Before installing all sensors, please ensure that the sensor can have optimal detection at desired height.

- All dimensions are for reference only.

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LENS DATASHEET

LENS A — 2X Standard

24.5mm (0.96")

Ø65mm (Ø2.56")

Top View

Mounting Height	m (ft.)	2.4 (8)	3.0 (10)	3.6 (12)	4.5 (15)
Max. Coverage Ø	m (ft.)	4.8 (16)	6.0 (20)	7.2 (24)	9.0 (30)
Minor Motion Ø	m (ft.)	3.0 (10)	1.8 (6)	1.8 (6)	--

Side View

(m) 0 / 2.4 / 4.5   (ft.) 0 / 8 / 15

4 (13) 2 (6.5) 0 (0) 2 (6.5) 4 (13) (m)(ft.)

LENS B — 6X Extra wide

24.5mm (0.96")

Ø65mm (Ø2.56")

Top View

Mounting Height	m (ft.)	2.4 (8)	2.6 (8.5)	2.8 (9)	3.0 (10)
Max. Coverage Ø	m (ft.)	14.4 (48)	15.6 (51)	16.8 (54)	18.0 (60)

Side View

(m) 0 / 1 / 2 / 3   (ft.) 0 / 3.3 / 6.5 / 10

10 (33) 8 (26) 6 (20) 4 (13) 2 (6.5) 0 (0) 2 (6.5) 4 (13) 6 (20) 8 (26) 10 (33) (m)(ft.)

LENS C — 3X High bay

24.5mm (0.96")

Ø65mm (Ø2.56")

Top View

Mounting Height	m (ft.)	4.5 (15)	6.0 (20)	8.0 (26)	9.0 (30)
Max. Coverage Ø	m (ft.)	13.5 (45)	18.0 (60)	24.0 (78)	27.0 (90)

Side View

(m) 0 / 2 / 4 / 6 / 8 / 9   (ft.) 0 / 6.5 / 13 / 20 / 26 / 30

14 (46) 10 (33) 6 (20) 2 (6.5) 0 (0) 2 (6.5) 6 (20) 10 (33) 14 (46) (m)(ft.)

LENS D — 2X Standard

12.2mm (0.48")

Ø65mm (Ø2.56")

Top View

Mounting Height	m (ft.)	2.4 (8)	3.0 (10)	4.5 (15)	6.0 (20)
Max. Coverage Ø	m (ft.)	4.8 (16)	6.0 (20)	9.0 (30)	12.0 (40)
Minor Motion Ø	m (ft.)	1.8 (6)	3.0 (10)	--	--

Side View

(m) 0 / 2.4 / 4.5 / 6   (ft.) 0 / 8 / 15 / 20

6 (20) 4 (13) 2 (6.5) 0 (0) 2 (6.5) 4 (13) 6 (20) (m)(ft.)

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LENS DATASHEET

LENS F — 4X Extra wide

Mounting Height	m (ft.)	2.4 (8)	3.0 (10)	4.5 (15)	6.0 (20)
Max. Coverage Ø	m (ft.)	9.6 (32)	12.0 (40)	18.0 (60)	24.0 (80)
Minor Motion Ø	m (ft.)	1.8 (6)	4.0 (13)	--	--

20.4mm (0.8″)

Ø65mm (Ø2.56″)

Top View

Side View

LENS G — 3X Aisle way

For indoor use only.

Mounting Height	m (ft.)	3.0 (10)	6.0 (20)	9.0 (30)	12.0 (40)
Max. Coverage Ø	m (ft.)	9.0 x 4 (30 x 13)	18.0 x 4 (60 x 13)	27.0 x 4 (90 x 13)	36.0 x 4 (120 x 13)

21.2mm (0.83″)

Ø65mm (Ø2.56″)

Top View

Length

Width

Side View

LENS H — 1X High bay

Mounting Height	m (ft.)	9.0 (30)	11.0 (36)	13.0 (43)	15.0 (49)
Max. Coverage Ø	m (ft.)	9.0 (20)	11.0 (36)	13.0 (43)	15.0 (49)

24.5mm (0.96″)

Ø65mm (Ø2.56″)

Top View

Side View

LENS DATASHEET

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LENS L — 6X Long aisle

For indoor use only.

Mounting Height	m (ft.)	2.4 (8)	2.6 (8.5)	2.8 (9)	3.0 (10)
Max. Coverage Ø	m (ft.)	14.4 x 2 (48 x 6.5)	15.6 x 2 (51 x 6.5)	16.8 x 2 (54 x 6.5)	18.0 x 2 (60 x 6.5)

21.2mm (0.83")

Ø65mm (Ø2.56")

Top View

Width
Length

Side View

(m) — 0, 1, 2, 3 — (ft.) 0, 3.3, 6.5, 10

10 8 6 4 2 0 2 4 6 8 10 (m)
33 26 20 13 6.5 0 6.5 13 20 26 33 (ft.)

ACCESSORIES

LENS HOOD
Lens hood is designed to prevent the ambient light sensor from being saturated by excessive lighting nearby.

2

LH-110	LH-068
23mm (0.91") Ø110mm(4.33")	17mm (0.67") Ø68mm(2.68") Coverage may be affected when applied with lens B/G/L.

Click!   Click!

LENS MASK

1

① Push the mask onto the installed lens

LM-12C For Lens A/B/C	LM-12D For Lens F
26mm (1.02") Ø69.5mm (Ø2.74")	20mm (0.79") Ø69.5mm (Ø2.74")

Click!

② Masked area can be changed by rotating the mask

Example: Lens F with LM-12D

Top View

If necessary, the masked area can be altered by cutting off the respective grooved segments with a wire cutter or knife.
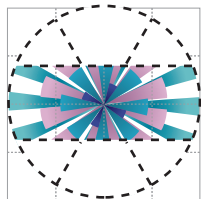
Coverage Area with Lens F and Mask

Mounting Height	m (ft.)	2.4 (8)	3.0 (10)	4.5 (15)	6.0 (20)
Max. Coverage Length x Width	m (ft.)	9.6 x 2 (32 x 6.5)	12.0 x 2 (40 x 6.5)	18.0 x 2 (60 x 6.5)	24.0 x 2 (80 x 6.5)

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