2) NaPiOn series

a) Digital output

Items	Symbol	Specified value	Measuring conditions
Rated consumption current (Stand by) Note)	Iw	170μA ave.	Ambient temperature = 25°C 77°F Operating voltage = 5V Iout = 0
Rated operating voltage	Vdd	3.0VDC min. 6.0VDC max.	
Output current (When detecting)	Iout	100uA	Ambient temperature = 25°C 77°F Operating voltage = 5V Vout ≧ Vdd-0.5V
Output voltage (When detecting)	Vout	Vdd-0.5V	Ambient temperature = 25°C 77°F Operating voltage = 5V Open when not detecting
Circuit stability time	Twu	30s max.	Ambient temperature = 25°C 77°F Operating voltage = 5V

Note: The current which is consumed during detection consists of the standby consumed current plus the output current.

b) Analog output

Items	Symbol	Specified value	Measuring conditions
Consumption current	Iw	170μA ave.	Ambient temperature = 25°C 77°F Operating voltage = 5V Iout = 0
Operating voltage	Vdd	4.5VDC min. 5.5VDC max.	
Output current	Iout	50μA	Ambient temperature = 25°C 77°F Operating voltage = 5V
Output voltage range	Vout	0V min. VDD max.	Ambient temperature = 25°C 77°F Operating voltage = 5V
Output offset average voltage	Voff	2.3V min. 2.5V ave. 2.7V max.	Ambient temperature = 25°C 77°F Operating voltage = 5V Steady-state output voltage when not detecting
Steady-state noise	Vn	155mVpp ave. 300mVpp max.	Ambient temperature = 25°C 77°F Operating voltage = 5V
Detection sensitivity	Vh or Vl	0.45V	Ambient temperature = 25°C 77°F Operating voltage = 5V Temperature difference with background: 4°C 39.2°F
Circuit stability time	Twu	45s	Ambient temperature = 25°C 77°F Operating voltage = 5V

Note: To set the same detection performance as the digital output type, set the output voltage (2.5V) ±0.45V.

3. Detection performance

1) WL series VZ series

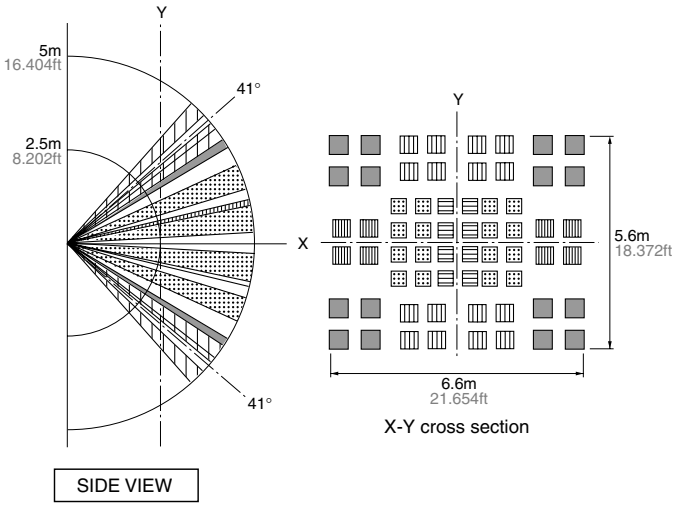
Items	Standard type	Long distance detection type	Measuring conditions
Detection distance	5m 16.404ft	12m 39.3696ft	1. Detectable difference in temperature between the target and background is more than 4°C 7.2°F. 2. Movement speed 1.0m/s 3. Detection object: human body (size is 700mm × 250mm 27.559inch × 9.843inch)
Detection range (Horizontal × Vertical)	94° × 82°	102° × 92°	
Detection zone	64 zones	92 zones	

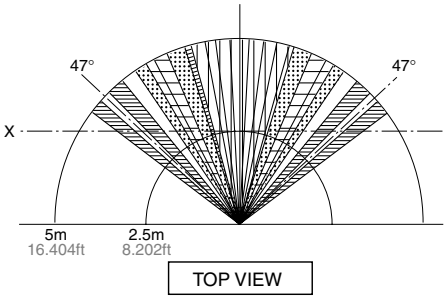
2) NaPiOn series

Items	Standard type	Slight motion detection type	Spot detection type	10m detection type	Measuring conditions
Detection distance	5m 16.404ft	2m 6.562ft	5m 16.404ft	10m 32.808ft	1. Detectable difference in temperature between the target and background is more than 4°C 7.2°F. 2. Movement speed 1) Digital output type Standard type/Spot type/10m detection type: 0.8 to 1.2m/s Slight motion detection type: 0.5m/s 2) Analog output type Standard type/Spot type/10m detection type: 0.5 to 1.5m/s Slight motion detection type: 0.3 to 1.0m/s 3. Detection object: human body (size is 700mm × 250mm 27.559inch × 9.843inch) (for the slight motion detection type, 200mm × 200mm 7.874inch × 7.874inch)
Detection range (Horizontal × Vertical)	100° × 82°	91° × 91°	38° × 22°	110° × 93°	
Detection zone	64 zones	104 zones	24 zones	80 zones	

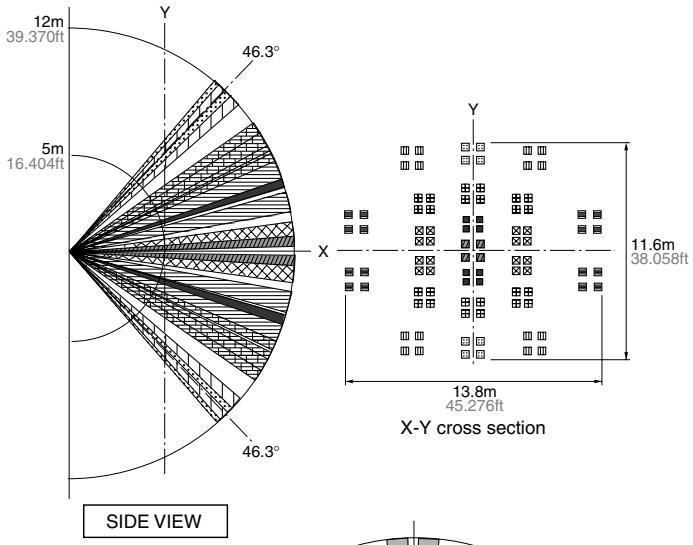
DETECTION PERFORMANCE

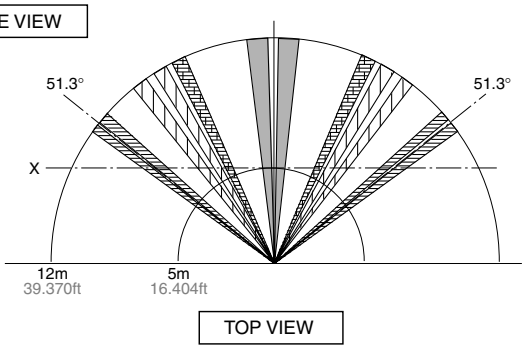
1. WLseries VZ series
Standard type



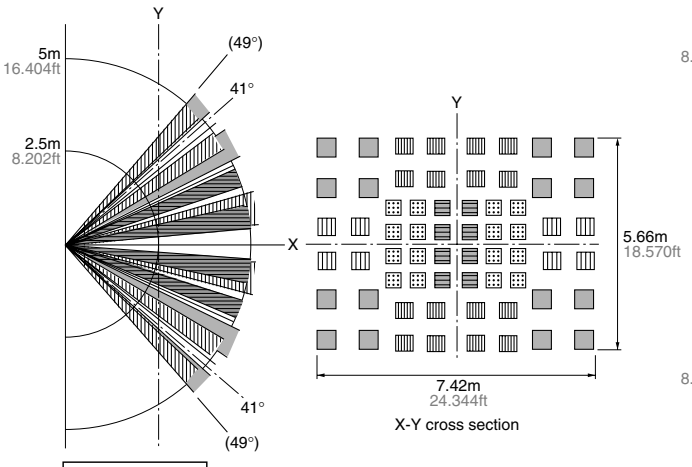


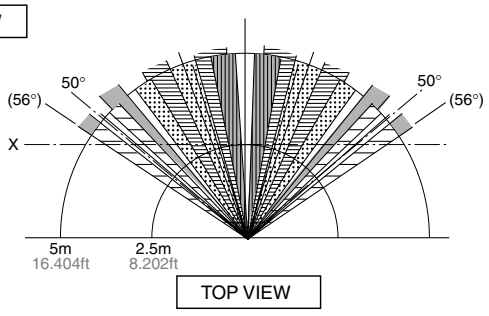
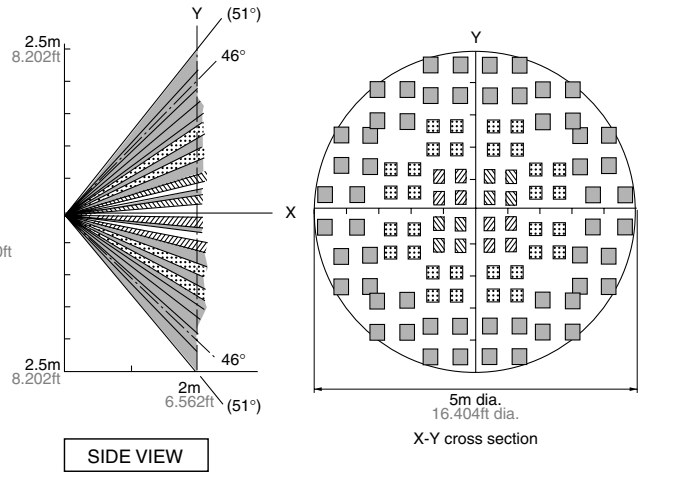
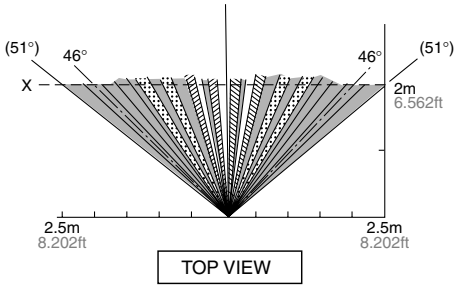
2. WL series VZ series
Long distance 12m detection type





3. NaPiOn series
Standard type





4. NaPiOn series
Slight motion detection type