XX 0.9 GO VX

The lens arrays of Fresnel Technologies' XX 0.9 GO VX series are intended to be used in passive infrared motion detector devices. They are optimized for dual-element pyroelectric detectors. They are normally used with the grooved side facing away from the pyroelectric detector, and curved at a 0.9 inch (22.9 mm) radius about the sensitive area of the detector (see Figure 1). The detector position should be 0.547" (13.9 mm) below the upper edge, and centered left-right (see Figure 2).

The overall dimensions of the arrays are 1.929" ± 0.010" (49 mm ± 0.3 mm) high by 2.512" ± 0.010" (63.8 mm ± 0.3 mm) wide by 0.015" ± 0.004" (0.38 mm ± 0.1 mm) thick. Border width is approximately 0.078"" (2 mm). Centering is held to 0.015" (0.38 mm) in both directions.

Fresnel Technologies, Inc. is the premier manufacturer of Fresnel lens arrays. We have led the industry in the development of new lenses and materials to advance the state of the art of passive infrared motion detection. Our lenses and lens arrays have been incorporated into most passive infrared devices using refractive optics since 1976. Our quality standards are the highest in the industry. Surface finish and inclusions are such that no defect is visible at a distance of 3 feet (1 meter) under ordinary light. There are no functional flaws in our products whatsoever. Our POLY IR® infrared-transmitting materials are the best available in stiffness and in transmittance in the 8 to 14 µm region. Active lens segments are made from our acclaimed and patented LODIFF® lens patterns. The LODIFF® lens is covered under U.S. pat. Re. 35,534.

The members of the series are as follows:

WIDE ANGLE ARRAY
WA 0.9 GO V1

LONG RANGE ARRAY
LR 0.9 GO V1

ANIMAL ALLEY ARRAY
AA 0.9 GO V1

HALLWAY ARRAY
HW 0.9 GO V1

VERTICAL BARRIER TYPE
VB 0.9 GO V1

Figures 3-7 illustrate the zone patterns for the arrays. The figures postulate a dual-element detector with 110° coverage both up-down and left-right, amplifier gain of about 5,000, and a mounting height of 3.3 feet (1 meter) for the animal alley lens array and 6.8 feet (2.1 meters) for the others. Other configurations (grooved side toward the detector, curved at other radii, tilted at other angles, etc.) can be used as well, but the zone patterns illustrated in Figures 3-7 will not apply.

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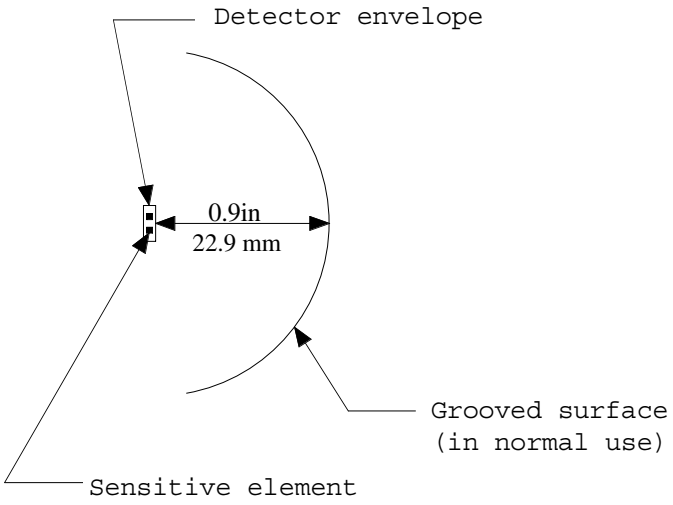
www.fresneltech.com

TOP VIEW:



FRONT VIEW:

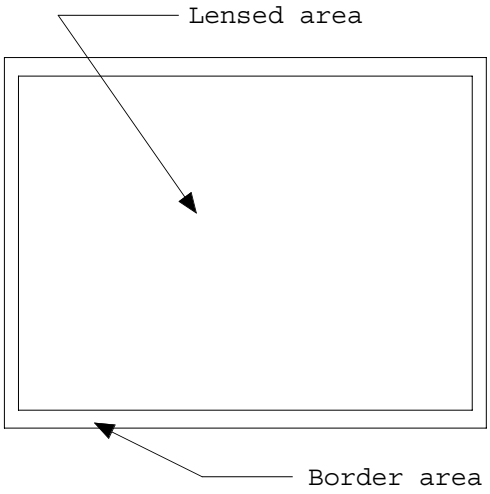


FIGURE 1

SIDE VIEW:

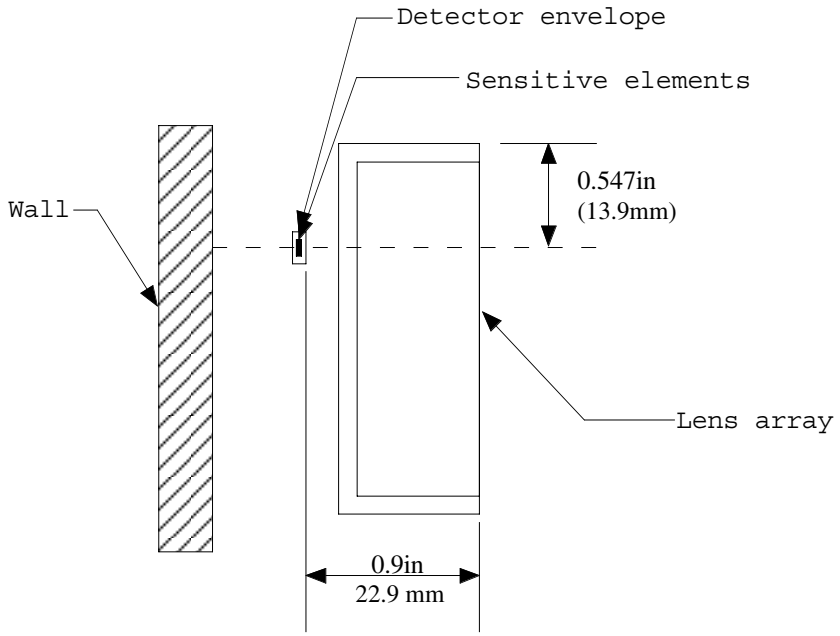
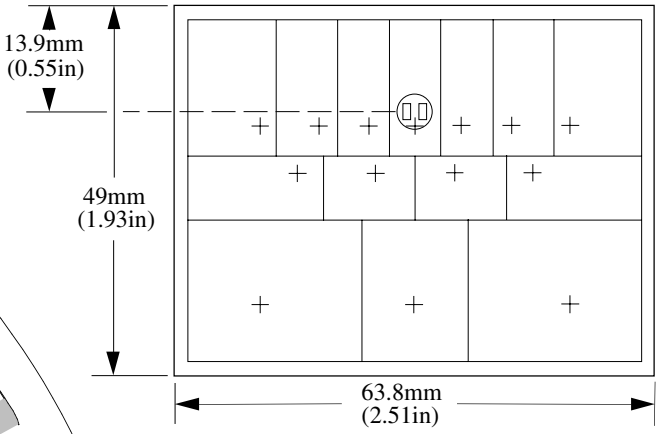


FIGURE 2

WIDE ANGLE ARRAY

WA 0.9 GO V1

FRONT VIEW:



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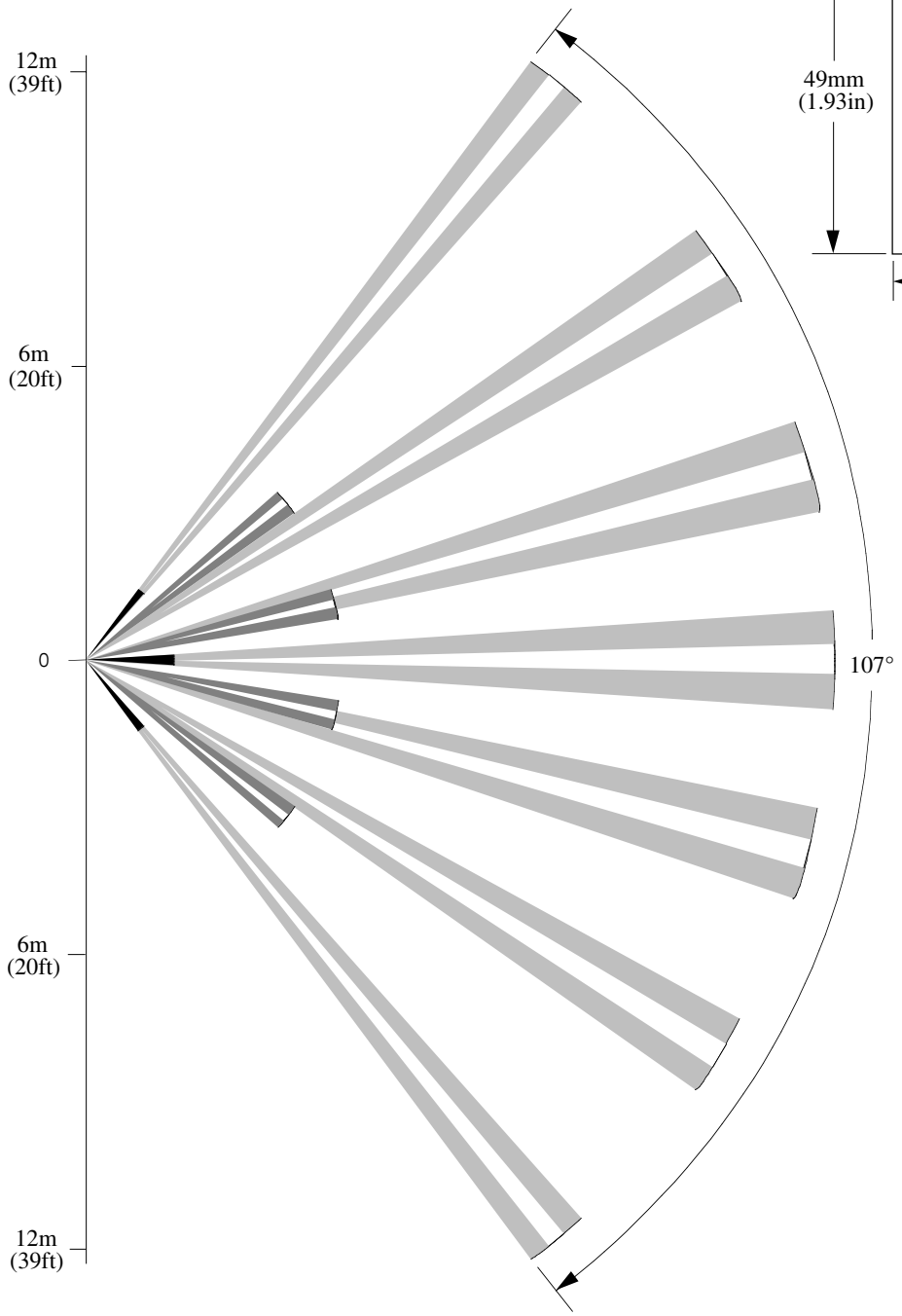

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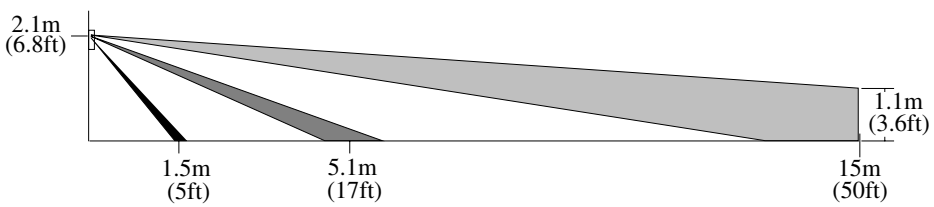

Figure 3

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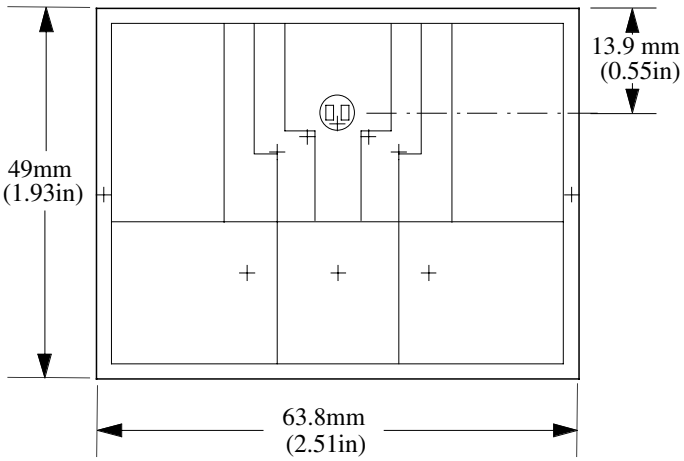
LONG RANGE ARRAY

LR 0.9 GO V1

FRONT VIEW:



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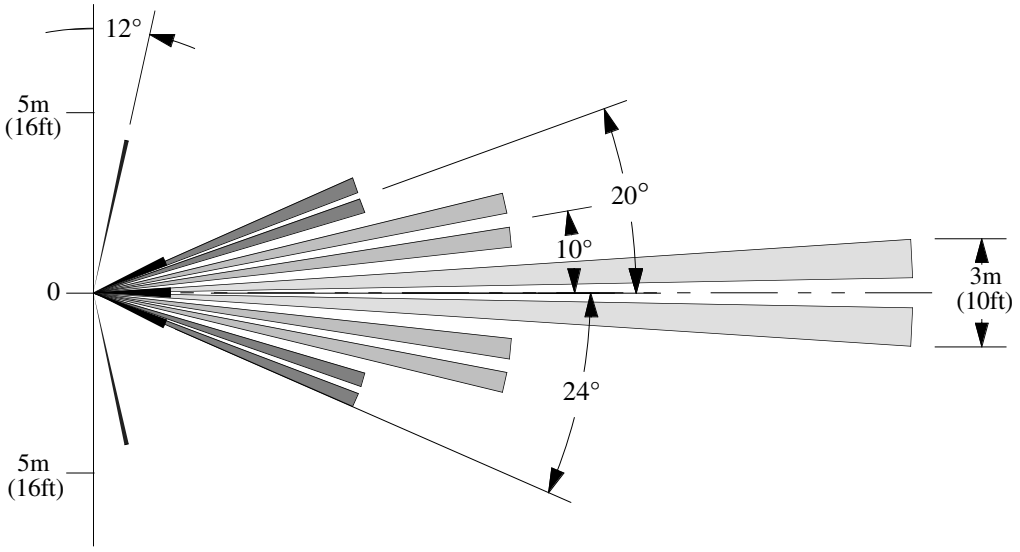

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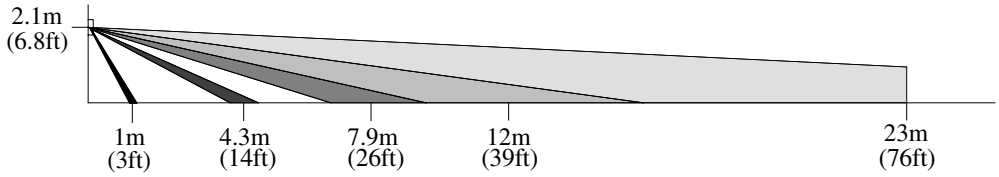

Figure 4

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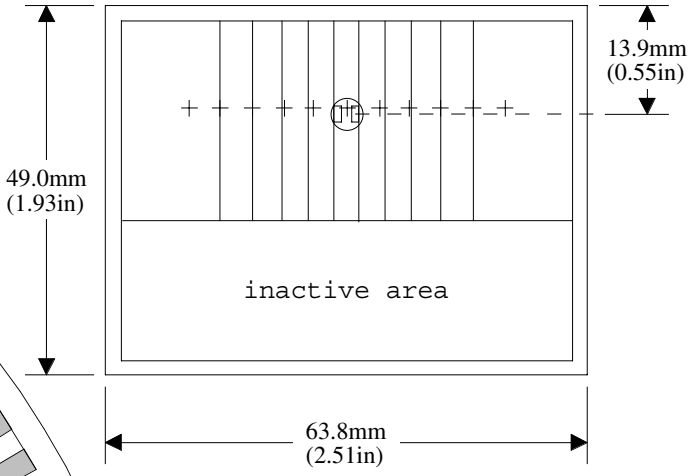
ANIMAL ALLEY ARRAY

AA 0.9 GO V1

FRONT VIEW:



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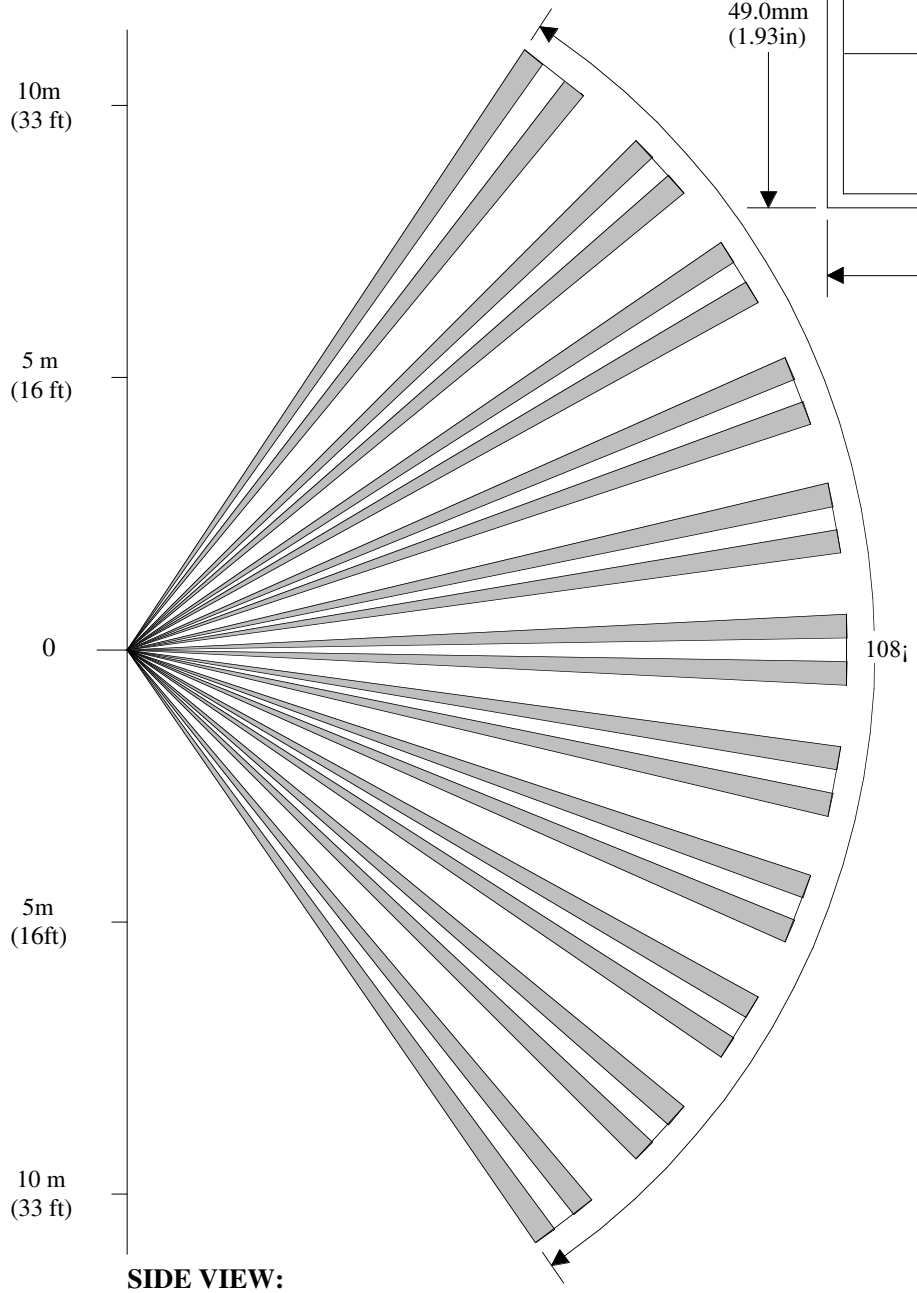

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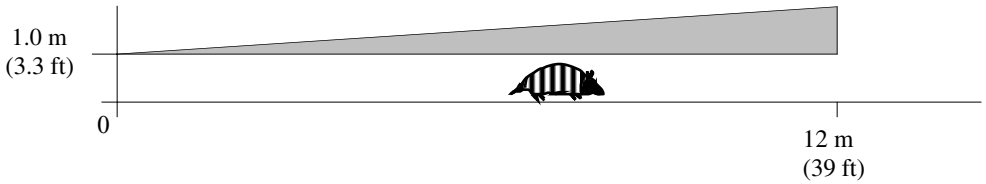

Figure 5

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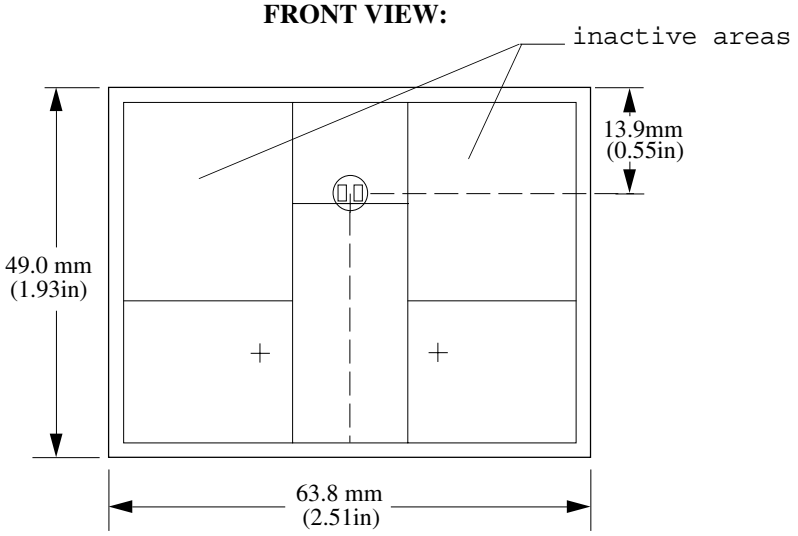
HALLWAY ARRAY

HW 0.9 GO V1

FRONT VIEW:



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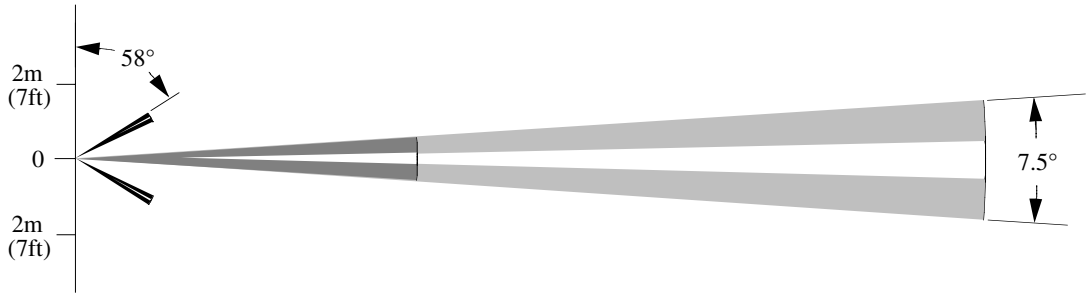

SIDE VIEW:

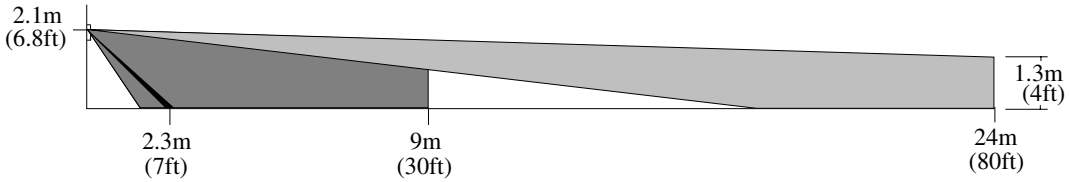

Figure 6

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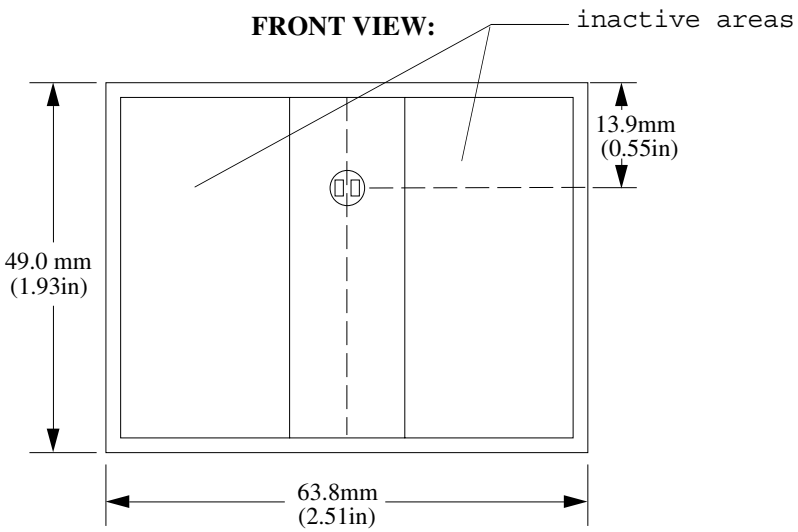
VERTICAL BARRIER ARRAY

VB 0.9 GO V1

FRONT VIEW:



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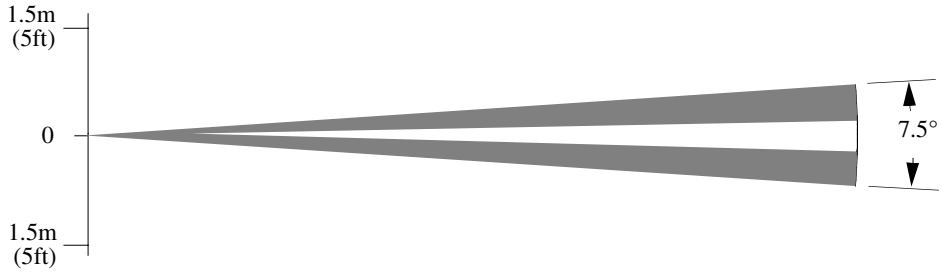

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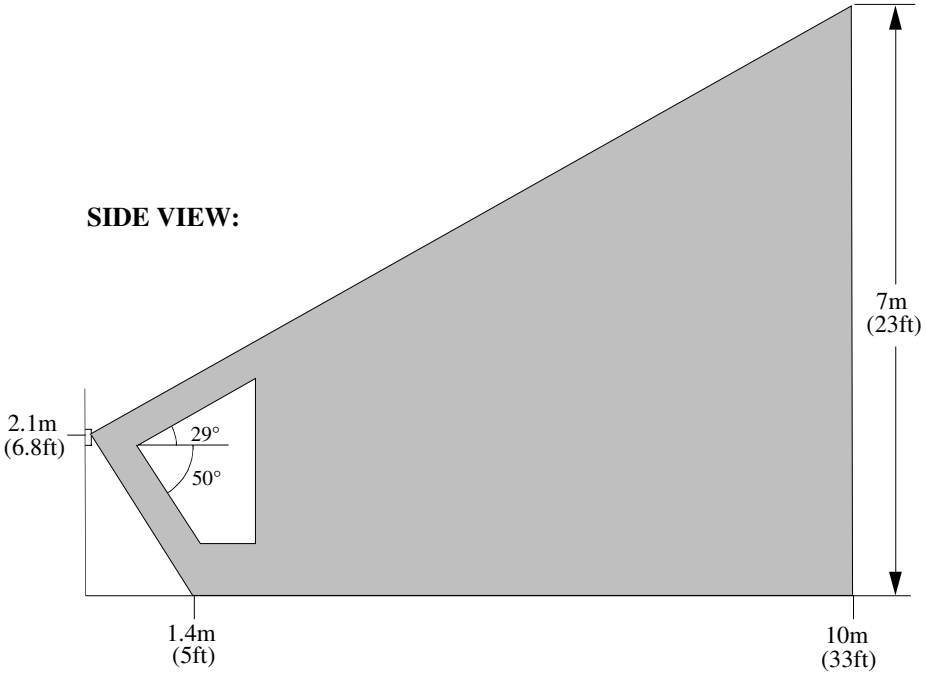

Figure 7

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