

POL Part No.533 High Bay Lens

Drawing Number: A3-10533 rev2

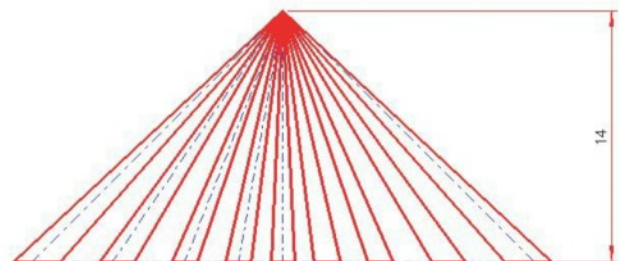
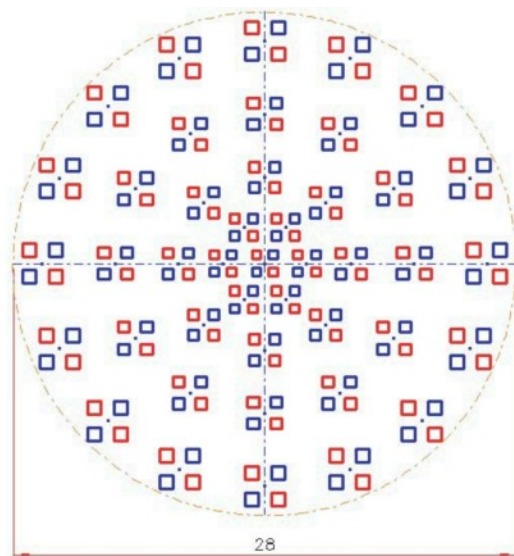
The High-Bay lens is designed for indoor passive infra-red (PIR) detection in applications where the detector is mounted relatively high on the ceiling, typically warehouses, workshops, retail and atrium areas.

The lens has a 1:1 aspect ratio, therefore when mounted at 12m height, the lens projects 43 zones into a 24m diameter floorspace. Maximum recommended mounting height 14m.



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Diagram shows theoretical zone plot for detector mounted 14m above floor. Mounting height can be reduced as required



Applications

- PIR detection for warehouses, shops,
- Offices, workshops and home
- Lighting control
- Alarm control
- Fan control

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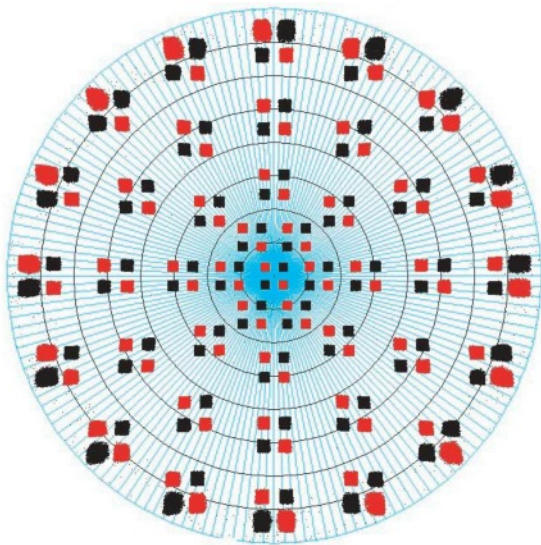
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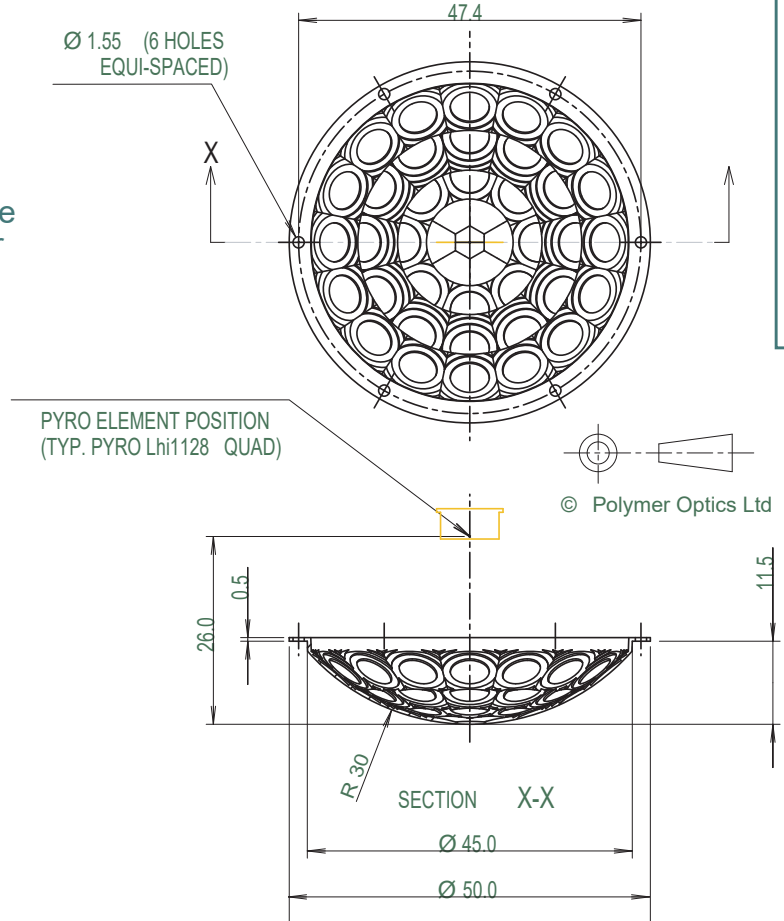
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All of our lenses are designed using 3D ray-tracing software where we can optimise the performance and minimise optical distortion. For the simulation on the left we have traced rays from the detector to the room and this allows us to analyse the zone shape. It is important to ensure there is minimal zone distortion and zero zone overlap.

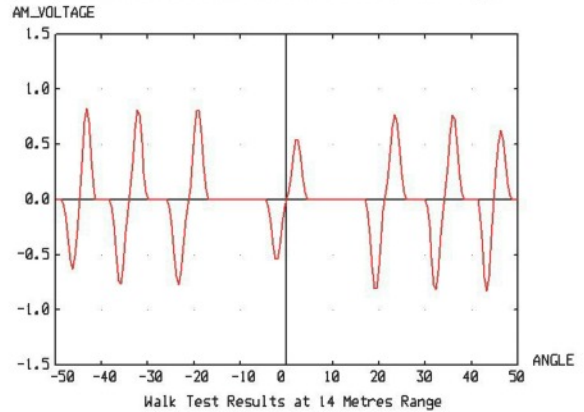
For the simulation on the right we have traced rays from the room to the detector so that we can analyse the signal response. Here it is important to ensure that the signal is reasonably uniform across all the zones.



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High Bay - Walk test simulation for Facet Row 1 (501x501 rays)



Note: Field of view (FOV) diagrams are idealised. Exact zones may depend on mounting conditions, detector type etc. FOV diagrams have been raytraced in reverse, i.e. from detector to the floor.



Making PIR Work

Leading design and manufacture of PIR Lenses