

# BEAM ANGLE CONTROL



CONVERGING OPTICAL LENS MAXIMISING LOR

ELR X-BEAM converging optics maintains the performance of providing accurate light distribution and chromatic consistency, reducing internal light loss and maximises luminous efficiency further within luminaires, giving near perfect light output ratio (LOR). Hence less luminaires are required to illuminate the vicinity, subsequently resulting lower electricity consumption and higher cost savings.

## COVERING ALL ANGLES

A range of beam angles are available to provide suitable illumination for a wide variety of applications, from variations of narrow to wide beam with excellent uniformity and rotationally symmetrical light distribution, to asymmetrical wall-washing applications.

## OPTICS

High quality optical systems are essential to provide accurate light distribution, consistent chromatic performance and maximising luminous efficacy. Optics used in all ELR LED modules are manufactured from premium grade PMMA or polycarbonate polymers that offer exceptional performance without degradation over the life of the component.

### Lens Comparison



By using a converging lens, the focal point of the light output is being shifted away from the optics itself, therefore reducing the cut-off by the lighting fixture hence maximising the LOR.

### BRAND X CONVENTIONAL TIR LENS

Although the Total Internal Reflection technique produces excellent controlled light output, there is bound to be loss of light due to the cut-off by lighting fixtures, especially in pinhole type fixtures in particular.

### Beam Pattern

Smooth & even beam pattern

Patches beam pattern



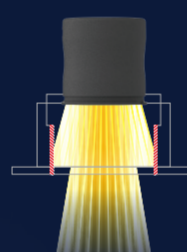
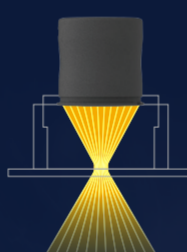
### Light Output Ratio (LOR)

Wide beam on small pinhole

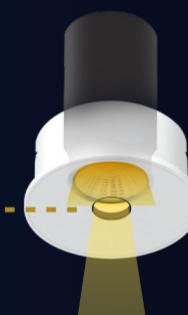
Loss of Light on small pinhole



Maximising LOR  
with more than 90% light output



Light Blockage  
with less than 50% light output



up to 60°

less than 40°

8pcs x 8W = 64W  
Beam Angle: 60°

10pcs x 10W = 100W  
Beam Angle: 60° - Light Blockage = 35°

- less luminaires required
- reducing cost
- energy consumption

- MORE luminaires required
- MORE cost
- MORE energy consumption

Find Out More on X-Beam Products



## MINUSCULE AND VERSATILE WITH X-BEAM

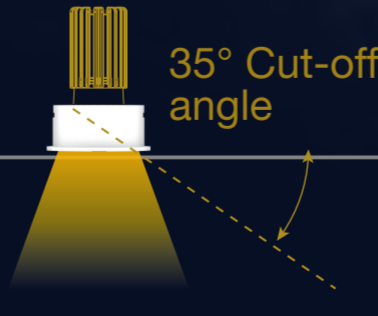
### Orion 2 Downlight Series



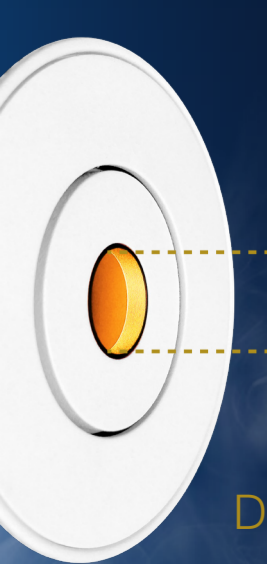
Lumen Output  
up to 748lm



LED Power  
6.2W / 8W



A series of minuscule pinhole downlight designed with extremely small aperture yet maintaining high light output ratio. Incorporating ELR's signature modular concept design, LED modules are fully interchangeable with various choices to provide optimal illumination for all kinds of spaces.



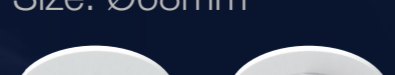
Ø15 mm

Dark Silent Ring

#### Fixture options

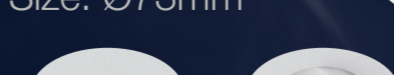
**Trim**

Size: Ø68mm



**Flush Mount**

Size: Ø73mm



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