

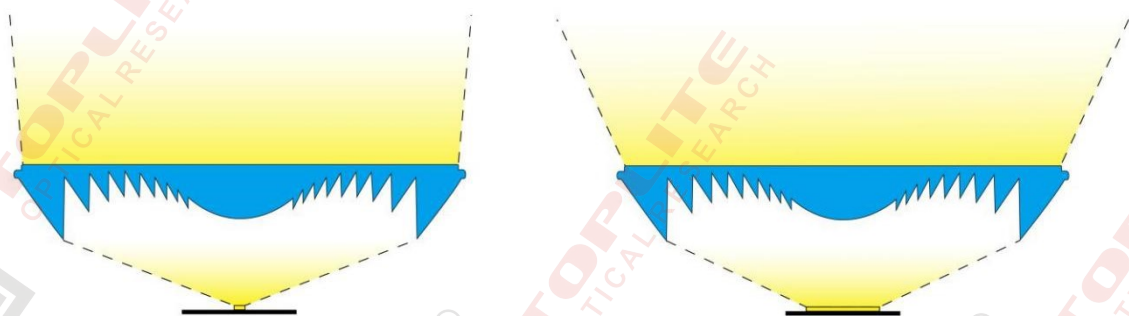
Total Internal Reflection Fresnel Lens

KULLEN-GLASS Series

Total Internal Reflection Fresnel lens (T.I.R Fresnel lens in short) has the characteristics of ultra-short focal length, high transmittance, high efficiency concentrating, uniform output, and good spot transition. The KULLEN-GLASS models are made by glass, molded with high temperature and high precision and optimized for use in harsher environments.

Usage: Place the LED at the focus position of the centerline of the lens, and the position of the light source and the lens is fixed. The beam angle will widen and narrow with the LES of LED. Multiple light sources and lens units can be used to form a high-power matrix, and the beam angle is almost the same as that output by a single group.

Applications: flood lights, stadium lights, exhibition lights, audience lights, spotlights, downlights, high bay lights, beam lights, outdoor searchlights, flashlights, etc.



Light beam angles and the LEDs with different luminous surfaces.

Product Selection List:

Lens Model	Size (mm)	LED, different luminous surfaces (mm)	Beam angle (50% intensity) (°)	Field angle (10% intensity) (°)
KULLEN-Glass45	Ø45 × 10	Ø4.2	14	27.2
		Ø6.0	16.5	34.4
		Ø8.5	20.1	43.6
KULLEN-Glass72	Ø72 × 16.3	Ø4.2	4.9	14.1
		Ø6.0	6.1	19.2
		Ø8.5	8.9	25.3
KULLEN-Glass90	Ø90 × 17.1	Ø4.2	6.8	16.7
		Ø6.0	7.6	20.1
		Ø8.5	10.9	25.8

Light Path Diagram:

