

MRDB Series LED Color-mixing Optic Barrel

The **MRDB Series LED Color-mixing Optic Barrel** is a high-performance optical product designed based on the principle of mirror reflection. Its internal surface features a specially optimized high-reflectivity coating for visible light, achieving a reflection rate of up to 99%. LED light undergoes multiple reflections and passes through a micron-level double-layer diffuser and high-precision coated glass lens, resulting in exceptionally uniform color mixing.

This product is specifically tailored for colored COB-type LED light sources, effectively collecting and converging light, narrowing the beam angle, and enhancing brightness. It ensures that the output light achieves perfect color mixing, free from the color fringing typically associated with transmissive color-mixing methods. This ensures professional-grade performance suitable for film and television applications. The COB light source board supports various LED configurations, including white, cold-warm white, RGBW, RGBALC, and more.

LED modules utilizing the MRDB Series LED Color-mixing Optic Barrel deliver outstanding color uniformity, high efficiency, and narrow beam angles. They are easy to maintain, upgrade, and represent an ideal solution for LED color-mixing light sources. This product is widely used in professional-grade lighting equipment, such as film spotlights, photography lighting, long-distance floodlights, zoom wash lights, and projection imaging lights.

Product Family Appearance Diagram:

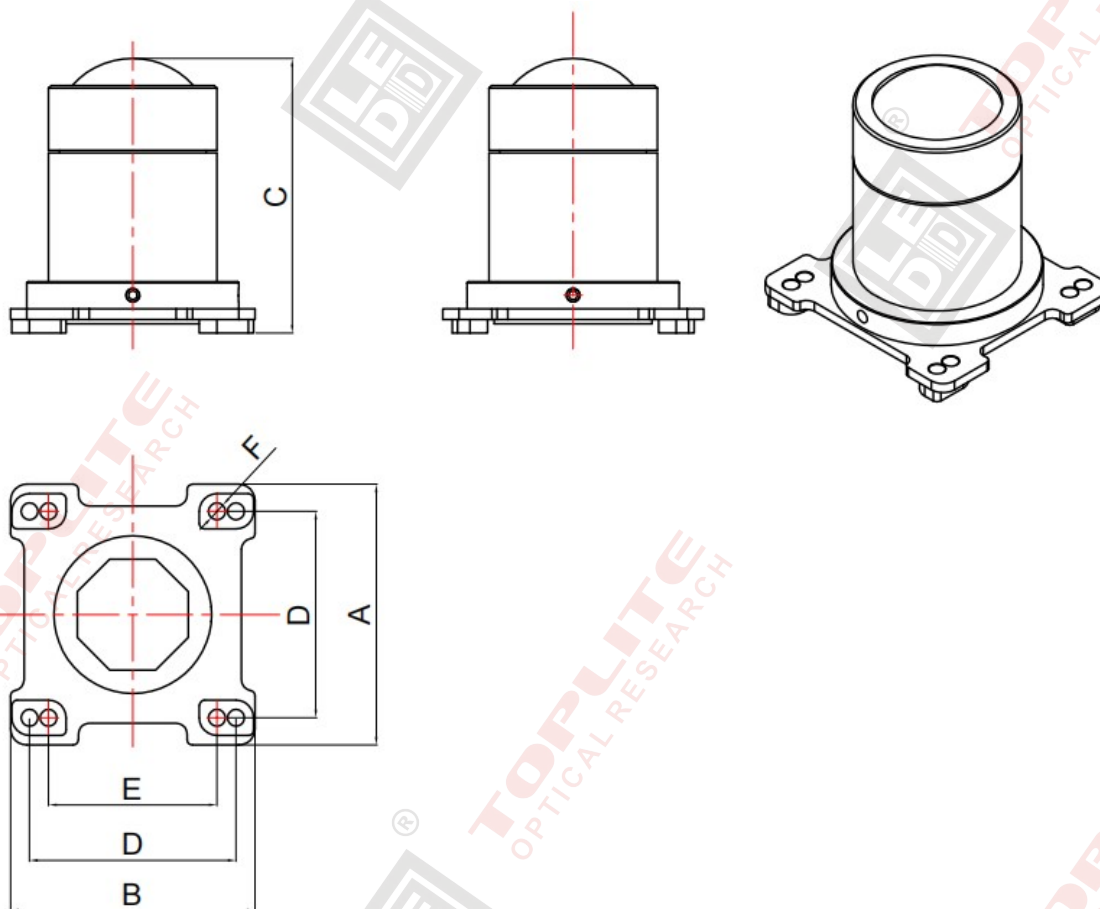


Product Specifications and Models:

- LED support: LES range $\Phi 8 \sim \Phi 30 \text{mm}$, other sizes can be customized
- Installation structure: customizable
- Power range: 60W~1,200 Watts, other powers can be customized
- Color support: White, cold-warm white, RGBW, RGBACL and other colors in one
- Optical barrel light emitting surface: $\Phi 24 \text{ mm} \sim \Phi 63 \text{ mm}$
- Optical barrel housing material: Aluminum
- Selection list:

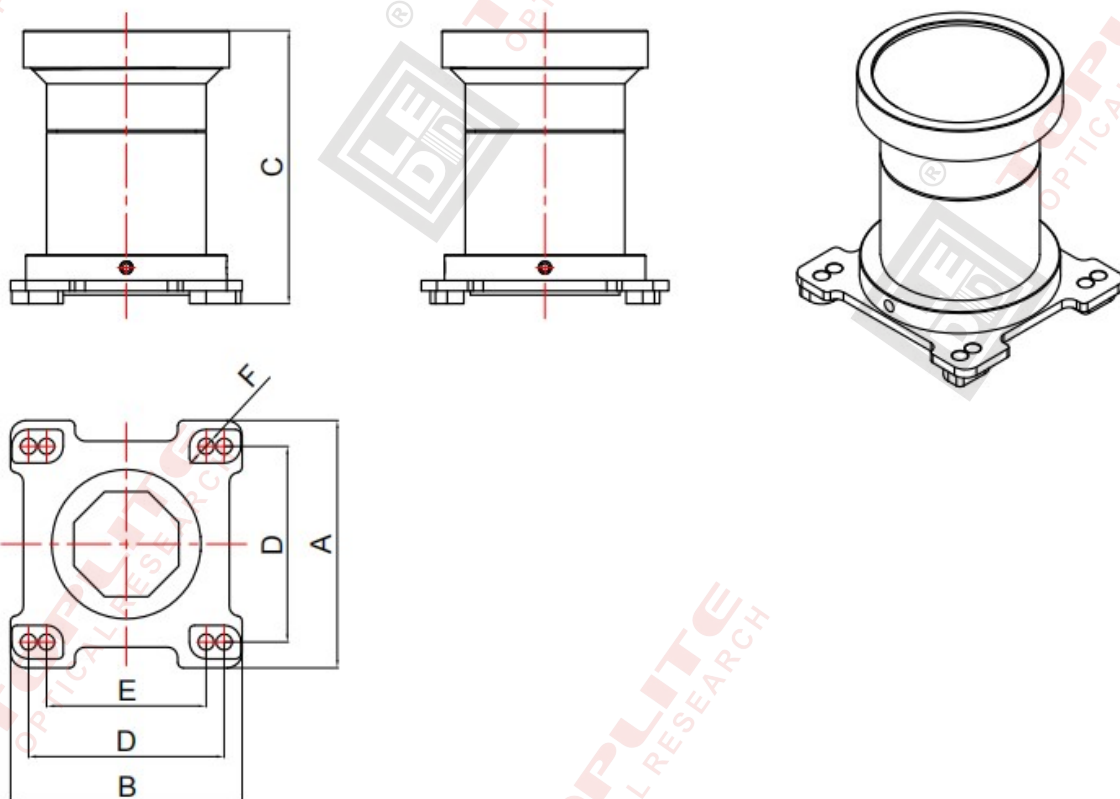
Model No.	LES of the LED (Φ)	LES of the Optical barrel (Φ)	Beam angle @ 10% light intensity	Beam angle @ 50% light intensity
MRDB35-130B	8~13mm	33mm	85°	50°
MRDB40-183A	13~18mm	24mm	88°	54°
MRDB60-183A	13~18mm			
MRDB40-183B	13~18mm	34mm	88°	50°
MRDB60-183B	13~18mm			
MRDB45-240B	18~24mm	50mm	88°	50°
MRDB50-300B	24~30mm	63mm	80°	45°

- A-type optical barrel appearance dimension:



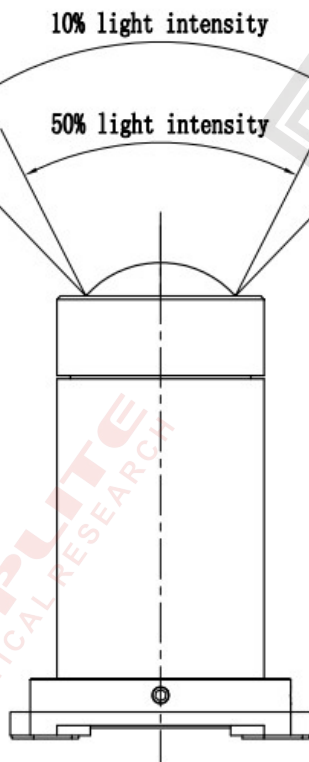
Model No.	A×B×C	D×E	F
MRDB40-183A	48 × 45 × 51	38 × 31	Φ3.1
MRDB60-183A	48 × 45 × 71	38 × 31	Φ3.1
Unit: mm			
For more details, please contact us.			

- B-type optical barrel appearance dimension:

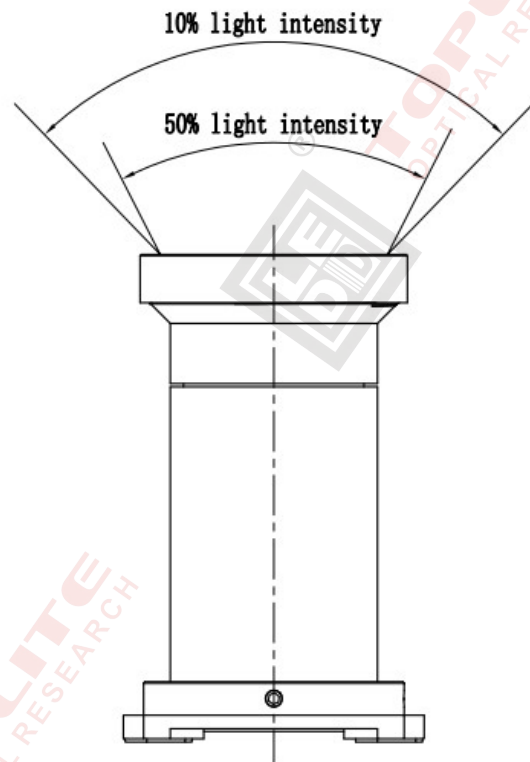


Model No.	A×B×C	D×E	F
MRDB40-183B	48 × 45 × 54	38mm × 31	Φ3.1
MRDB60-183B	48 × 45 × 74	38mm × 31	Φ3.1
MRDB35-130B	48 × 45.5 × 47.9	38mm × 31	Φ3.1
MRDB45-240B	50 × 50 × 61.2	40mm × 31	Φ3.2
MRDB50-300B	70 × 58 × 79.6	62mm × 40.5	Φ3.2
Unit: mm			
For more details, please contact us.			

● Light Pattern:



A-type

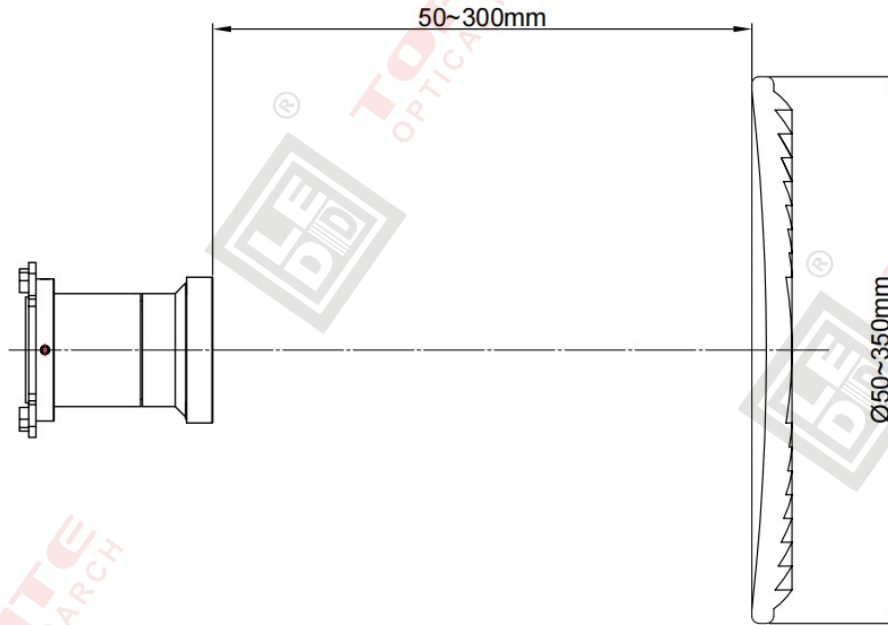


B-type

Application Introduction

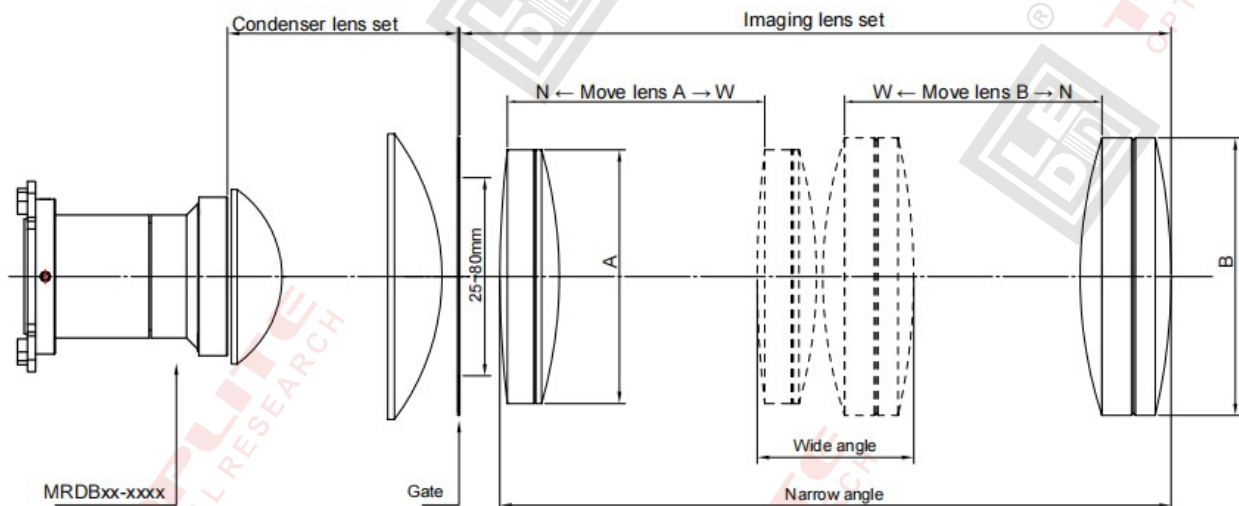
I.

The MRDB Series Color-mixing Optical Components can be paired with the **TOP-GF Series Glass Fresnel Lenses** to create color-mixing spotlights with zoom or fixed focus functionality. The TOP-GF Series lenses are available in various diameters and angles, with diameters ranging from $\Phi 50$ to $\Phi 350$ mm and angles from 2° to 80° . They deliver smooth and uniform light spots, making the combination ideal for diverse professional lighting applications, especially those requiring precise beam control and high-quality color mixing.



II.

The MRDB Series Color-mixing Optical Components can be combined with the IMM Series Lens Assemblies or Lenses to create color-mixing imaging lights with zoom or fixed focus functionality. The IMM Series lenses are available in various diameters ranging from $\Phi 44$ to $\Phi 140$ mm, delivering uniform light spots and sharp imaging. This combination is ideal for applications requiring high-precision optical imaging and excellent spot quality in professional settings.



For more optical applications, please contact us!