Variable Optical Imaging System

High-definition Imaging Lens Set

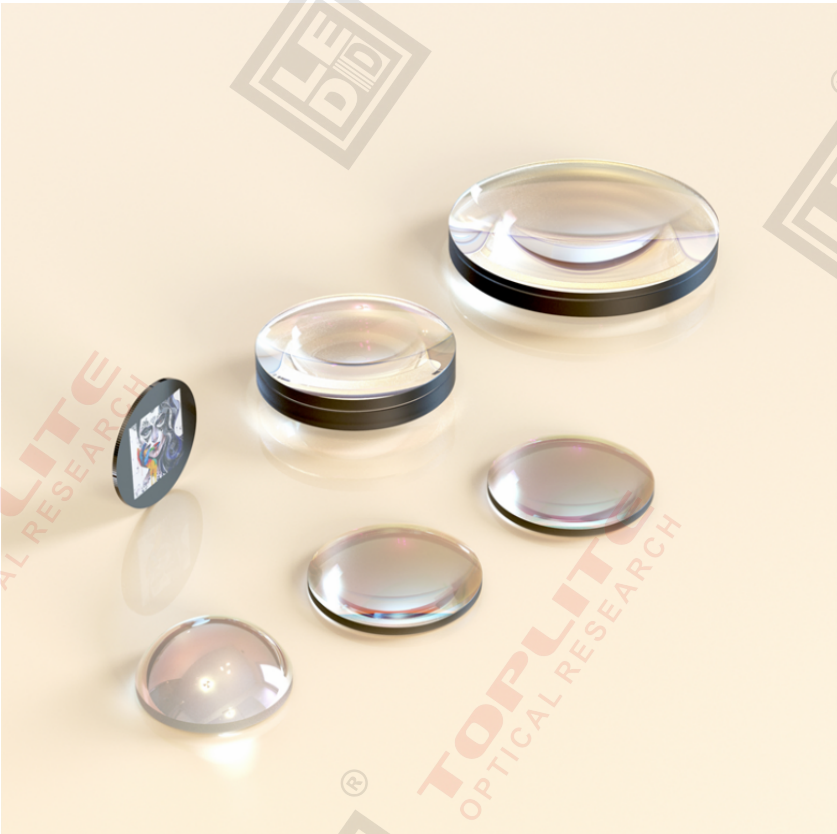
IMM25

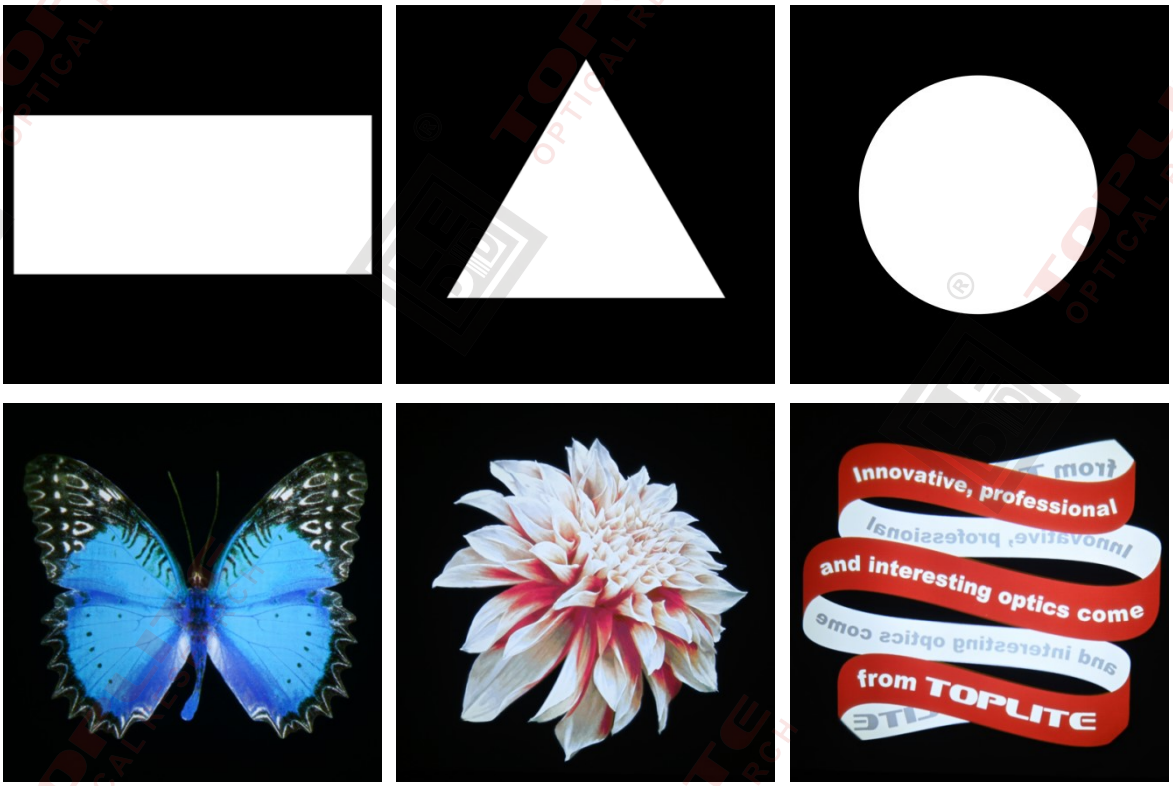
The "IMM25 Imaging Lens Set" includes four different imaging lenses with varying diameters and thicknesses, all are made of special glass materials using high-precision grinding and surface polishing processes. These lenses are coated with multiple layers of high-transmittance film and, through precise bonding, form a low-dispersion lens group with high resolution, offering high-quality imaging.

These lenses can be freely combined and, when used with specific LED light sources and condensing lens sets, can create special optical imaging systems of fixed or variable beam angles. The projected light spots exhibit high clarity, uniform, fullness, distortion less than 1%, and are free from color fringing(like blue, yellow). IMM25 imaging lens set is particularly well-suited for high-definition imaging, pattern projection, profile cutting, and other medium to low-power LED lighting applications.

Applications scope: High-definition LED imaging lights, pattern projection lights, cutting lights, profile spotlighting, and more.

Application Areas: Stage performances, cultural and tourism landscapes, film and video shooting, commercial photography, museums, art galleries, and more.





Main Parameters:

Product Model	IMM25		
Product Type	Optical Imaging Lens Set		
LED	High integrated LED or COB, LES ≤ Φ11mm, LED matrix module, e.g. STONEHENGE, MATBEAM, MATGOBO		
Condensing Lens Set	IMMDX3033, IMMDX3035, IMMDX253535, IMMDX303535 lens diameter: Φ20mm, Φ25mm, Φ30mm, Φ33mm, Φ35mm Used to adapt to single LED, like COB		
Gate (Effective Gobo Size)	≤Φ25mm		
Achromatic Cemented Lens	Φ44mm, Φ50mm, Φ64mm		
Coatings	Multi-layer anti-reflection		
Angles	Fixed	8°, 10°, 15°, 19°, 20°, 24°, 25 °, 26°, 30°, 36°, 40°, 45°,	Provide the schematic diagram of the light path for each angle option
	Zoom	8~15°, 8~17°, 9~20°, 9~22°, 9~23°, 12~25°, 13~37°, 16°~28°, 18~30°, 24~40°, 27~42°,	
Model Description	IMM25-F36， F indicates fixed focus, angle is 36°.		
	IMM25-Z1830， Z indicates zoom, zoom range is 18°~30°.		

Schematic diagram of imaging light path

There are two typical variable optical imaging system schematic diagrams are showed here. Each one consists of four parts, from left to right they are, LED, condensing lens set, gate (Gobo), and imaging lens set. The condensing lens set is composed of three plano-convex lenses, and the gate (effective gobo size) is Φ25mm.

①As shown in the following diagram, the part of imaging lens set consists of two achromatic cemented lenses. This is a zoom system, it output wide beam when two lenses are closing to each other, if the two lenses move away from each other, the output beam will be narrow-angle.

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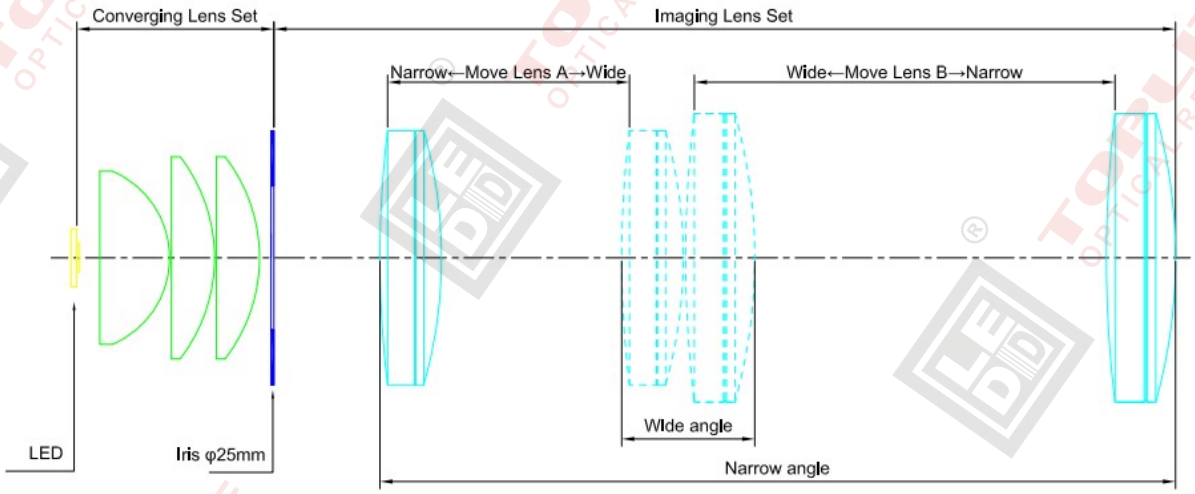
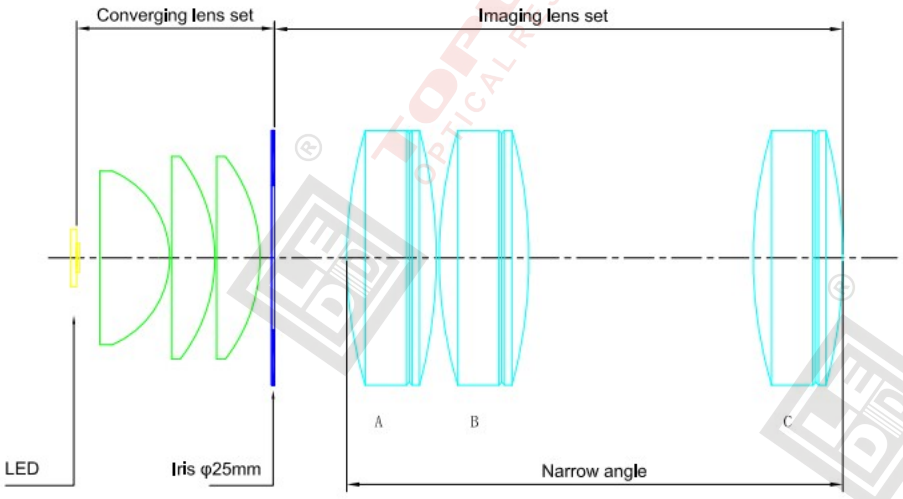
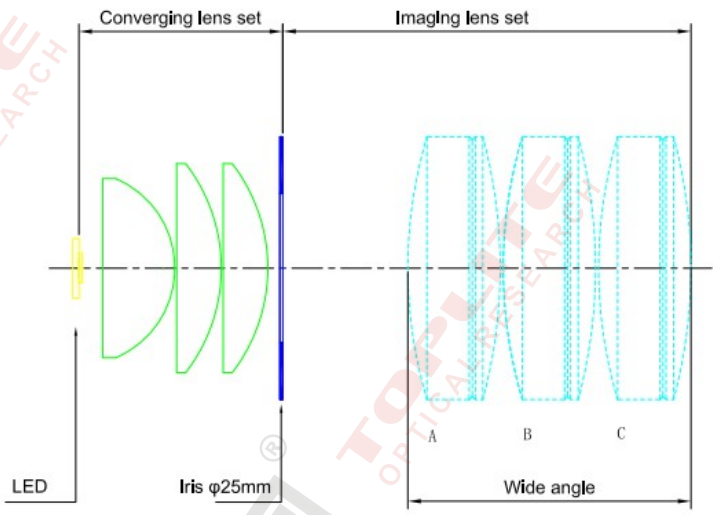


②As shown in the following diagram, the part of imaging lens set consists of three achromatic cemented lenses. We can divide these three lenses into two groups. From left to right, group 1 includes A and B, group 2 is C. This is a zoom system, it output wide beam when two lens groups are closing to each other, if the two lens groups move away from each other, the output beam will be narrow-angle.



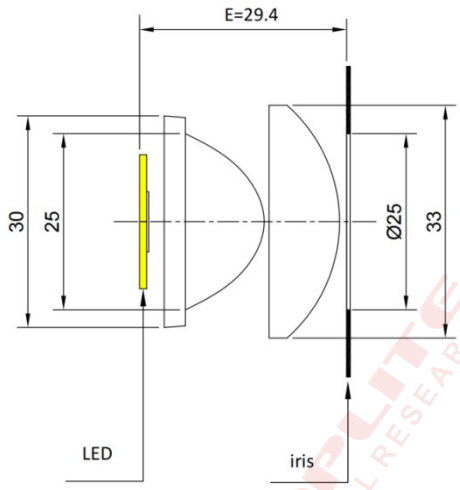


IMM25 imaging beam angle selection list:

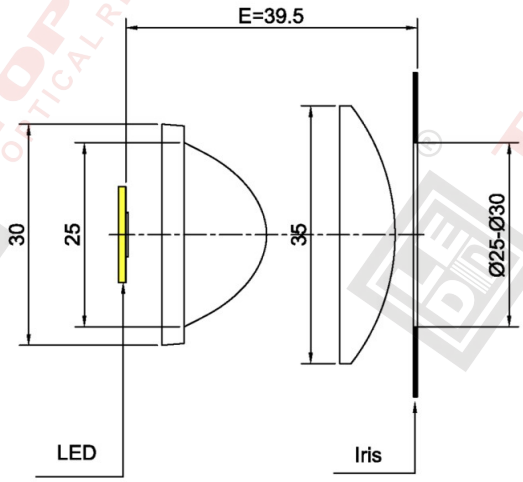
No.	IMM25 Model	Angle (°)	Imaging Lens Diameter (mm)				Light Path Length：E+F (mm)	
			A	B	C	D	Condensing (E)	Imaging (F)
1	IMM25-F8D64X2	8	Φ64	Φ64			29.4	273.8
2	IMM25-F10D4464	10	Φ44	Φ64			29.4	191.7
3	IMM25-F10D5064	10	Φ50	Φ64			29.4	191.8
4	IMM25-F10D64X2	10	Φ64	Φ64			29.4	188.8
5	IMM25-F15D4464	15	Φ44	Φ64			29.4	151.7
6	IMM25-F15D4450	15	Φ44	Φ50			29.4	140.2
7	IMM25-F19D44X2	19	Φ44	Φ44			29.4	104.6
8	IMM25-F20D44X2	20	Φ44	Φ44			29.4	102.8
9	IMM25-F24D44X2	24	Φ44	Φ44			29.4	87.7
10	IMM25-F25D44X2	25	Φ44	Φ44			29.4	83.7
11	IMM25-F26D44X2	26	Φ44	Φ44			29.4	80.8
12	IMM25-F30D44X2	30	Φ44	Φ44			29.4	73.7
13	IMM25-F36D44X3	36	Φ44	Φ44			29.4	74.4
14	IMM25-F40D44X3	40	Φ44	Φ44	Φ44		29.4	65.4
15	IMM25-F45D44X4	45	Φ44	Φ44	Φ44	Φ44	29.4	67.5

No.	IMM25 Model	Angle (°)	Imaging Lens Diameter (mm)			Light Path Length：E+F (mm)	
			A	B	C	Condensing (E)	Imaging (F)
16	IMM25-Z0815	8 ~ 15	Φ64	Φ64		29.4	198.1
17	IMM25-Z0817	8 ~ 17	Φ50	Φ64		29.4	203.1
18	IMM25-Z0920	9 ~ 20	Φ50	Φ64		29.4	199.6
19	IMM25-Z0922	9 ~ 22	Φ44	Φ64		29.4	197.1
20	IMM25-Z1225	12 ~ 25	Φ44	Φ50		29.4	154.5
21	IMM25-Z1628	16 ~ 28	Φ44	Φ50		29.4	122.1
22	IMM25-Z1830	18 ~ 30	Φ44	Φ44		29.4	110.5
23	IMM25-Z0923	9 ~ 23	Φ64	Φ64	Φ64	29.4	199.1
24	IMM25-Z1337	13 ~ 37	Φ44	Φ44	Φ64	29.4	185.1
25	IMM25-Z2440	24 ~ 40	Φ44	Φ44	Φ50	29.4	109.1
26	IMM25-Z2742	27 ~ 42	Φ44	Φ44	Φ44	29.4	98.3

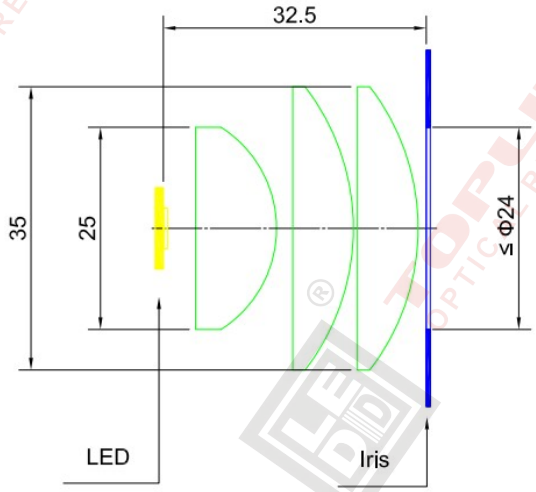
In the above lists, the imaging length F is the maximum imaging length of the system which is the length at the smallest angle value within a zoom range. The condensing part uses a lens set of IMMDX3033. If there is another lens set used in the system for LED focusing, the corresponding E value will change, as shown in the diagrams below.



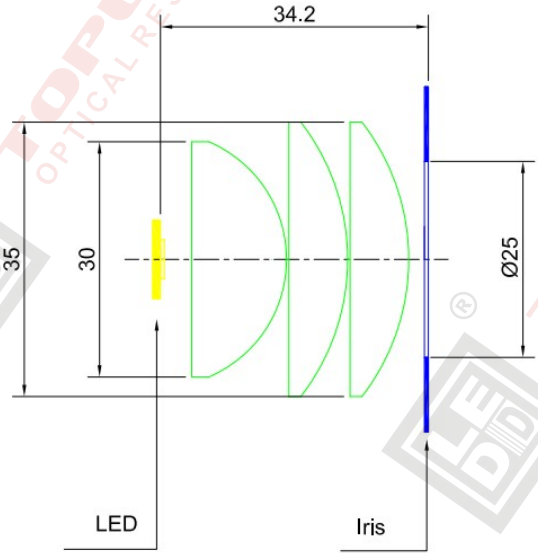
IMMDX3033



IMMDX3035



IMMDX253535



IMMDX303535