

Variable Optical Imaging System

High-definition Imaging Lens Set

IMM60

The "IMM60 Imaging Lens Set" includes three 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). IMM60 imaging lens set is particularly well-suited for high-definition imaging, pattern projection, profile cutting, and other medium to high-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.





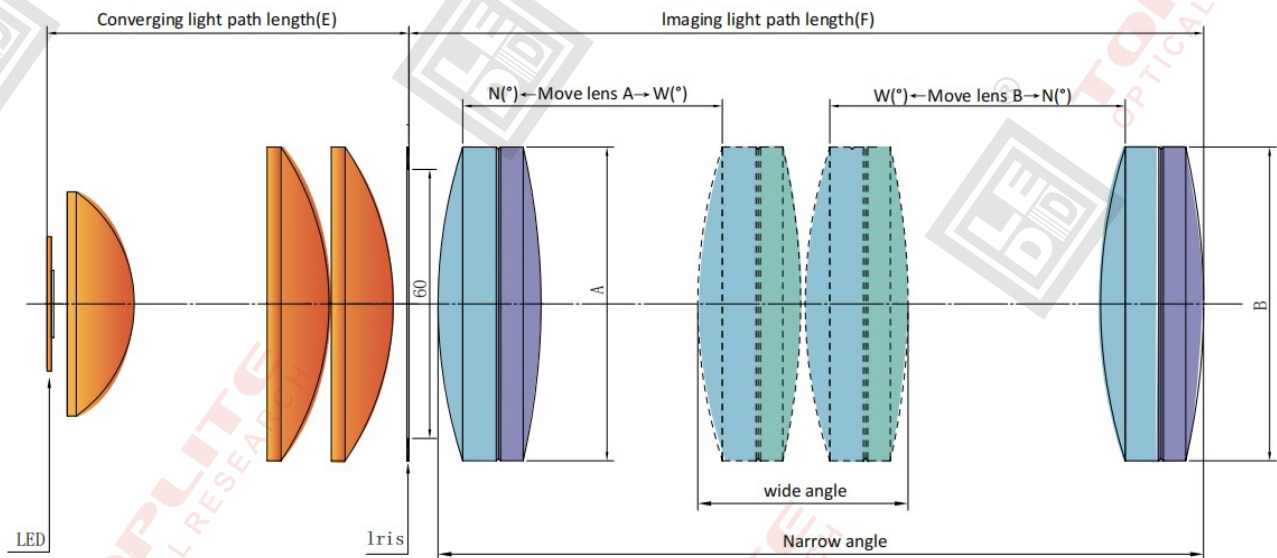
Main Parameters:

Product Model	IMM60		
Product Type	Optical Imaging Lens Set		
LED	High integrated LED or COB, LES ≤ Φ22mm, LED matrix module, e.g. STONEHENGE, MATBEAM, MATGOBO		
Condensing Lens Set	IMMDX5070X2(LES≤Φ15mm), IMMDX6672(LES≤Φ22mm) lens diameter: Φ50mm, Φ66mm, Φ70mm, Φ72mm Used to adapt to single LED, like COB		
Gate (Effective Gobo Size)	≤Φ60mm		
Achromatic Cemented Lens	Φ70mm, Φ100mm, Φ140mm		
Coatings	Multi-layer anti-reflection		
Angles	Fixed	9°, 10°, 14°, 15°, 19°, 20°, 24°, 25°, 26°, 30°, 36°, 40°, 45°, 50°, 55°, 60°	Provide the schematic diagram of the light path for each angle option
	Zoom	09~23°, 12~26°, 12~27°, 12~33°, 14~41°, 16~30°, 16~49°, 17~34°, 17~37°, 18~38°, 19~46°, 20~49°, 22~45°, 22~53°, 23~57°, 24~43°, 30~60°	
Model Description	IMM60-F36, F indicates fixed focus, angle is 36°.		
	IMM60-Z1630, Z indicates zoom, zoom range is 16°~30°.		

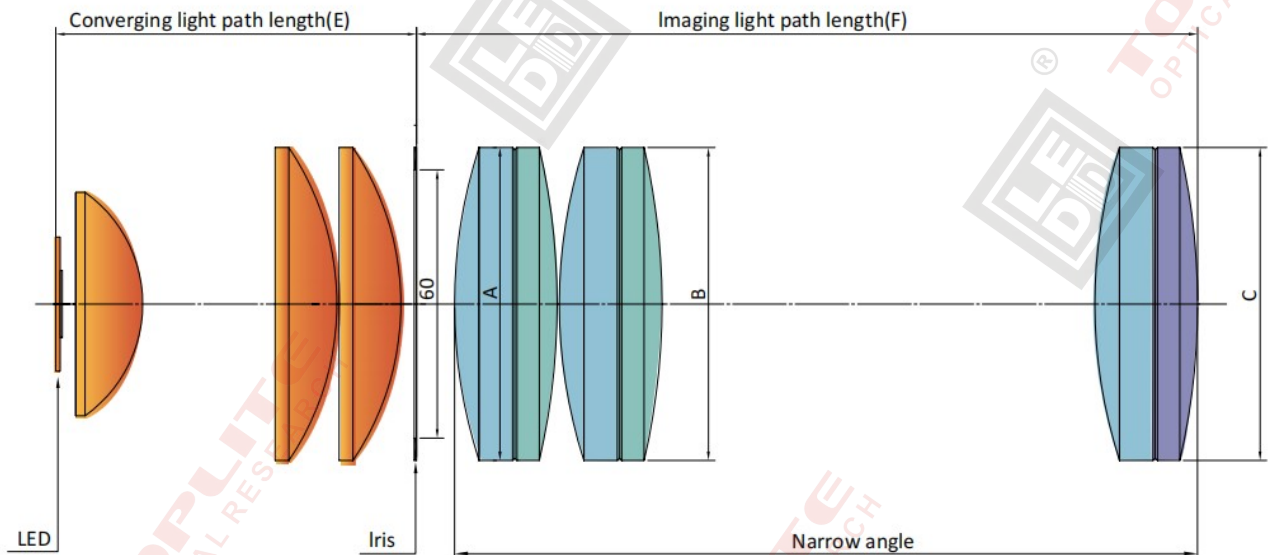
Schematic diagram of imaging light path

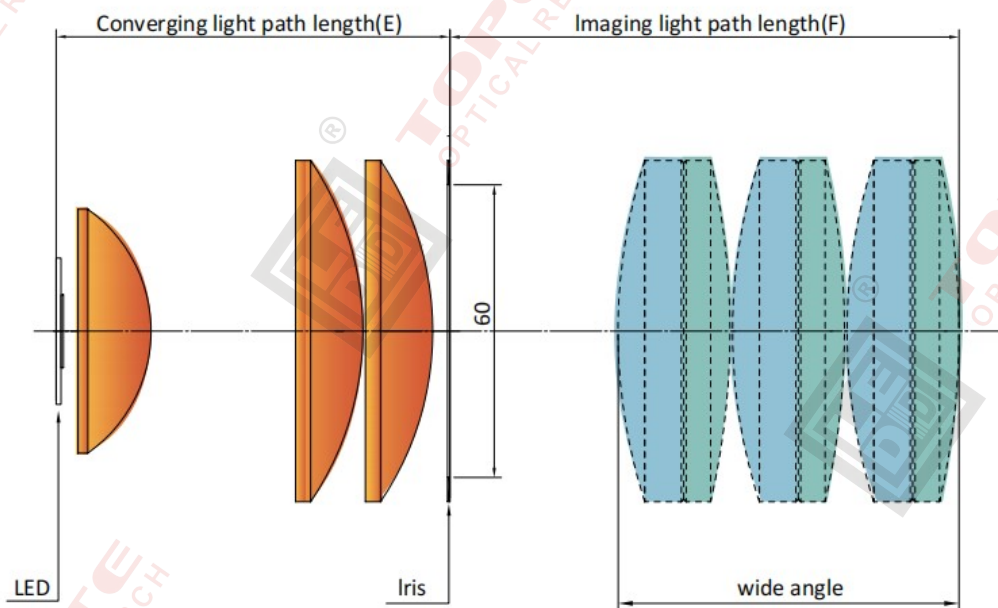
There are two typical variable optical imaging system schematic diagrams are showed here. Each one consists of four parts, from left to right they are, LED, condensing lens set, gate (Gobo), and imaging lens set. The condensing lens set is composed of three plano-convex lenses, and the gate (effective gobo size) is $\Phi 60\text{mm}$.

① As 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.



② As 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.





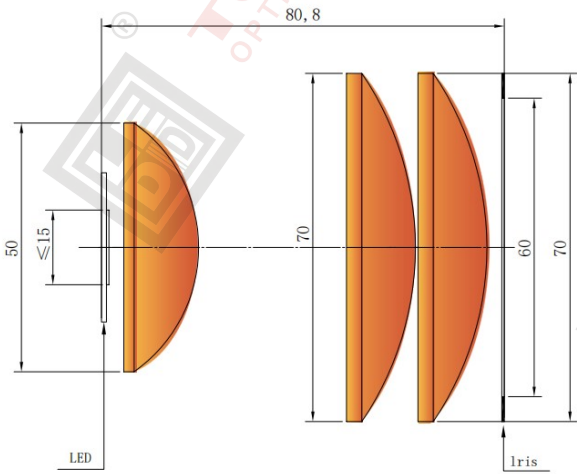
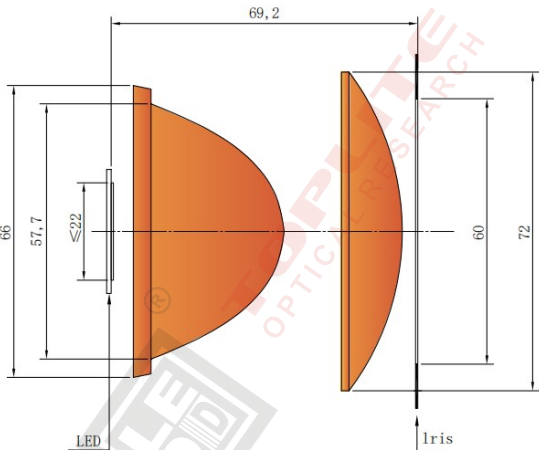
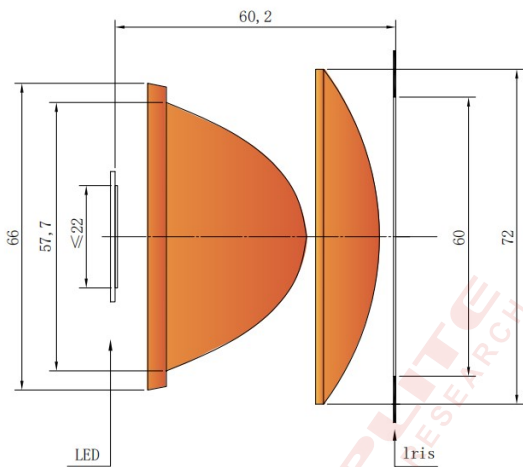
IMM60 imaging beam angle selection list:

No.	IMM60 Model	Angle (°)	Imaging lens size (mm)			Total light path length: E+F (mm)	
			A	B	C	Condensing lens set: E	Imaging lens set: F
1	IMM60-F9D140100	9	Φ100	Φ140	-	80.8	467.4
2	IMM60-F10D140100	10	Φ100	Φ140	-	80.8	475.4
3	IMM60-F14D140100	14	Φ100	Φ140	-	80.8	389.4
4	IMM60-F15D10070	15	Φ70	Φ100	-	80.8	316
5	IMM60-F19D70X2	19	Φ70	Φ70	-	80.8	118.4
6	IMM60-F19D100X2	19	Φ100	Φ100	-	80.8	242.1
7	IMM60-F19D10070	19	Φ70	Φ100	-	80.8	283
8	IMM60-F20D70X2	20	Φ70	Φ70	-	80.8	114.4
9	IMM60-F20D100X2	20	Φ100	Φ100	-	80.8	236.1
10	IMM60-F20D10070	20	Φ70	Φ100	-	80.8	273
11	IMM60-F24D70X2	24	Φ70	Φ70	-	80.8	175.5
12	IMM60-F24D100X2	24	Φ100	Φ100	-	80.8	204.1

No.	IMM60 Model	Angle (°)	Imaging lens size (mm)			Total light path length: E+F (mm)	
			A	B	C	Condensing lens set: E	Imaging lens set: F
13	IMM60-F24D10070	24	Φ70	Φ100	-	80.8	229
14	IMM60-F25D70X2	25	Φ70	Φ70	-	80.8	174.5
15	IMM60-F25D100X2	25	Φ100	Φ100	-	80.8	197.1
16	IMM60-F25D10070	25	Φ70	Φ100	-	80.8	218
17	IMM60-F26D70X2	26	Φ70	Φ70	-	80.8	172.5
18	IMM60-F26D100X2	26	Φ100	Φ100	-	80.8	188.1
19	IMM60-F26D10070	26	Φ70	Φ100	-	80.8	207
20	IMM60-F30D70X2	30	Φ70	Φ70	-	80.8	163.5
21	IMM60-F30D100X2	30	Φ100	Φ100	-	80.8	156.1
22	IMM60-F30D10070	30	Φ70	Φ100	-	80.8	167
23	IMM60-F36D70X2	36	Φ70	Φ70	-	80.8	141.5
24	IMM60-F36D100X3	36	Φ100	Φ100	Φ100	80.8	171.1
25	IMM60-F40D70X2	40	Φ70	Φ70	-	80.8	124.5
26	IMM60-F40D100X3	40	Φ100	Φ100	Φ100	80.8	152.1
27	IMM60-F45D70X3	45	Φ70	Φ70	Φ70	80.8	135.5
28	IMM60-F50D70X3	50	Φ70	Φ70	Φ70	80.8	129.5
29	IMM60-F55D70X3	55	Φ70	Φ70	Φ70	80.8	122.5
30	IMM60-F60D70X3	60	Φ70	Φ70	Φ70	80.8	105.5
31	IMM60-Z0923	9~23	Φ70	Φ100	-	80.8	467.4
32	IMM60-Z1226	12~26	Φ100	Φ100	-	80.8	322.5
33	IMM60-Z1227	12~27	Φ70	Φ100	-	80.8	333
34	IMM60-Z1233	12~33	Φ70	Φ100	-	80.8	330

No.	IMM60 Model	Angle (°)	Imaging lens size (mm)			Total light path length: E+F (mm)	
			A	B	C	Condensing lens set: E	Imaging lens set: F
35	IMM60-Z1441	14~41	Φ70	Φ70	Φ100	80.8	331
36	IMM60-Z1630D70100	16~30	Φ70	Φ100	-	80.8	252.4
37	IMM60-Z1630D100X2	16~30	Φ100	Φ100	-	80.8	250.2
38	IMM60-Z1649	16~49	Φ70	Φ70	Φ100	80.8	326.5
39	IMM60-Z1734	17~34	Φ70	Φ70	-	80.8	229.4
40	IMM60-Z1737	17~37	Φ70	Φ100	-	80.8	255.4
41	IMM60-Z1838	18~38	Φ70	Φ70	-	80.8	228.3
42	IMM60-Z1946	19~46	Φ70	Φ70	Φ100	80.8	250.4
43	IMM60-Z2049	20~49	Φ70	Φ70	Φ70	80.8	227.4
44	IMM60-Z2245	22~45	Φ100	Φ100	Φ100	80.8	230.6
45	IMM60-Z2253	22~53	Φ70	Φ70	Φ100	80.8	247.9
46	IMM60-Z2357	23~57	Φ70	Φ70	Φ70	80.8	226.8
47	IMM60-Z2443	24~43	Φ70	Φ70	-	80.8	177.5
48	IMM60-Z3060	30~60	Φ70	Φ70	Φ70	80.8	175

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 IMM60X5070X2. If there is another lens set used in the system for LED focusing, the corresponding E value will change, as shown in the list below.

Condensing lens set model	Schematic diagram	Remark
IMMDX5070X2		LED LES≤ Φ15mm
IMMDX6672		high uniformity, LED LES≤ Φ22mm
IMMDX6672		high efficiency, LED LES≤ Φ22mm