

GAGGIONE

Standard Optics Range

Highlights

LLC25x . LLC59x . LLC79x . LLC66x



SHAPING
YOUR
LIGHT



who we are

Established in 1948, GAGGIONE's corporate and primary manufacturing facilities are in Montréal La Cluse within the Northern Rhone-Alps region of France, located between Lyon and Geneva, at the heart of one of the main European industrial cross-roads.

We continue our dedication to successfully producing the highest quality optical solutions for LED and other light applications since introducing the world's first collimator for the Barracuda LED in 1996.

GAGGIONE applies its extensive experience and resources to provide comprehensive design, development and manufacturing capabilities for the production of custom-made optical parts and systems.

Quality and production consistency are the results of highly educated optic designers along with our pre-production and tooling team, generations of know-how optimized with great technology such as diamond machining equipment to realize mould inserts; and naturally a production shop of the highest precision injection process machines, operators and ISO 9001 certification.

GAGGIONE also operates strategic alliance and sister company relationships with SURCOTEC in Geneva, Switzerland, QUADRATEC in Quebec, Canada and OPTICA in Bangalore, India. SURCOTEC provides high-end surface analysis and treatment including silver metallization, UV coating and texture finishing. Our QUADRATEC and OPTICA operations provide general and optical grade injection facilities.

The standard range of optics is the fruit of long experience in the custom optical components business. It has developed naturally in the face of constantly changing market demands and fast time-to-market, and continues to be one of the exciting businesses GAGGIONE serves in shaping our customer's light.

LLC25X

LLC25 series is the new colour mixing 32mm product range. Its "non chip imaging" characteristics allow combination with single or multi-chips RGBW, tunable white or standard white LEDs. It will provide colour mixing capability but also a solution without chip image projection for high power single or multi-chip white LEDs. LLC25 range has three references:

- **LLC25N: Narrow Version**
A 10° beam angle combined with 4mm² RGBW LEDs provides very good far field colour mixing and uncompromised beam angle.
- **LLC25C: Colour Version**
Designed to provide very good colour mixing capability within short field of projection it is the best balance between beam angle and colour mixing.
- **LLC25M: Medium Version**
A new approach for RGBW wall washing, combining the short field behavior of a medium and the far field of a narrow, it provides a new possibility for close field colour mixing quality demanding applications.

Upcoming version

- **LLC25V: Wide Version**
54° beam angle with colour mixing capability for downlight small size and limited glare tunable white applications.

Compatibility Matrix

LLC25N	OSRAM Ostar Stage	LUMILEDS Luxeon Z RGBW	CREE XML RGBW	CREE XHP35 HI
FWHM (°)	10,0	12,9	14,7	10,3
FWTM (°)	18,8	22,7	25,8	19,8
Efficacy (cd/lm)	24,4	15,5	11,8	21,5

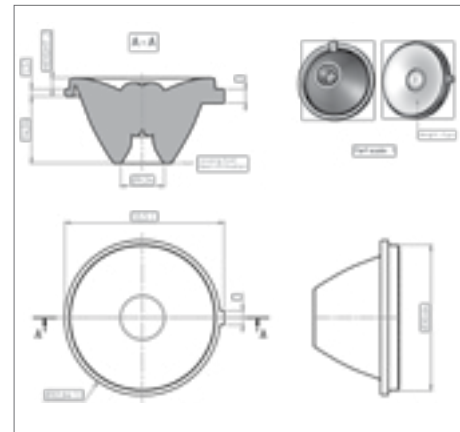
LLC25C	OSRAM Ostar Stage	LUMILEDS Luxeon Z RGBW	CREE XML RGBW	CREE XHP35 HI
FWHM (°)	13,6	14,2	17,0	15,5
FWTM (°)	26,5	27,6	31,9	29,0
Efficacy (cd/lm)	11,8	11,1	8,0	9,6

LLC25M	OSRAM Ostar Stage	LUMILEDS Luxeon Z RGBW	CREE XML RGBW	CREE XHP35 HI
FWHM (°)	14,2	16,2	17,8	15,9
FWTM (°)	30,3	33,1	35,8	33,1
Efficacy (cd/lm)	8,9	7,1	6,1	7,2

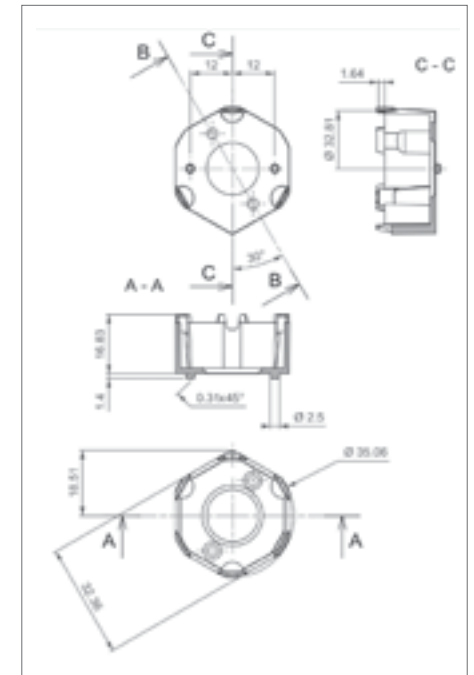
For full compatibility matrix please refer to our website www.gaggione.com



Drawings



LLC25X



LLH02HEL

LLC59X

Based on our knowledge in stage lighting applications GAGGIONE is proud to present a new 45 mm diameter colour mixing collimator range. Based on patented technology, four references are available:

- **LLC59U : Ultra Narrow Beam**
The narrowest market available 45mm collimator with an extra sharp beam of 4° FWHM with 1mm² LES has extreme beam consistency, cut-off and colour mixing features.
- **LLC59N : Narrow Beam**
Designed for entertainment / stage lighting applications this version is a balanced compromise solution for sharp beam requirements and colour mixing capability.
- **LLC59C : Colour Version Narrow Beam**
Dedicated for less than 10° narrow beam without any compromise accepted on colour mixing quality. Designed to fit architectural / interior most demanding wall glazing applications.
- **LLC59E : Elliptical Beam**
Also designed for architectural or wall glazing applications, it provides a typical 6° x 31° elliptical beam. Will fit both colour mixing and white quality demanding applications.

Compatibility Matrix

LLC59U	Ostar Stage	Luxeon Z RGBW	CREE XML RGBW	CREE XHP35 HI
FWHM (°)	5,7	7,2	8,6	5,7
FWTM (°)	10,1	14,4	15,5	11,2
Efficacy (cd/lm)	81,9	40,4	32,6	65,3

LLC59N	Ostar Stage	Luxeon Z RGBW	CREE XML RGBW	CREE XHP35 HI
FWHM (°)	6,2	8,3	8,4	6,5
FWTM (°)	11,6	15,3	16,7	12,2
Efficacy (cd/lm)	64,5	36,3	29,3	54,6

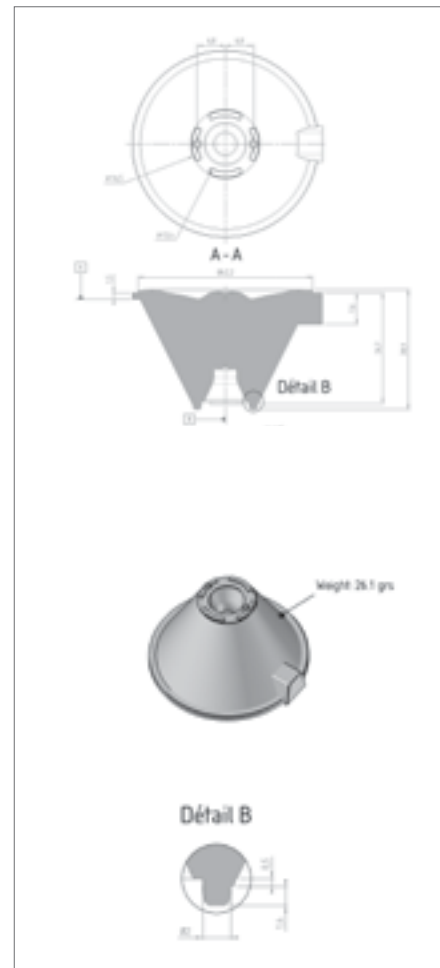
LLC59C	Ostar Stage	Luxeon Z RGBW	CREE XML RGBW	CREE XHP35 HI
FWHM (°)	9,8	11,2	11,8	9,9
FWTM (°)	18,3	21,1	22,2	19,2
Efficacy (cd/lm)	25,1	18,7	16,4	23,2

LLC59E	Ostar Stage	Luxeon Z RGBW	CREE XML RGBW	CREE XHP35 HI
FWHM (°)	31,7 - 6,4	31,2 - 8,4	31,1 - 9,4	31,9 - 6,7
FWTM (°)	40,4 - 11,8	43,9 - 15,6	44,4 - 17,3	41,3 - 12,5
Efficacy (cd/lm)	13,3	9,7	8,1	13,3

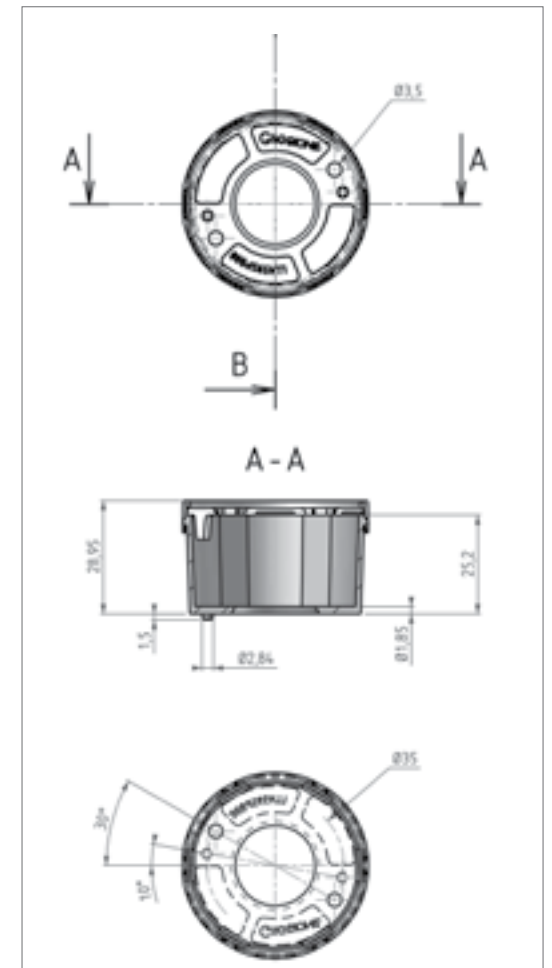
For full compatibility matrix please refer to our website www.gaggione.com



Drawings



LLC59X



Holder LLH59SPB

LLC79X

The LLC79 45mm silicone collimator range has been designed to provide the advantages of LLC66 within a smaller form factor. Designed for demanding requirements, LLC79 range provides high homogeneity with great cut-off beams for high power LEDs, 6mm and 9mm COBs.

Three references are available: Narrow LC79N7, Medium LLC79M7, Wide LLC79W7

The LLH79C holder assembled with the Narrow, Medium or Wide version is compatible with the LLH66B bases. It allows a very easy and fast product design compatible with many different COB holders. A LLH66B6 high power dedicated base option has been developed to fit LLH79 compatibility with this type of LED.

Upcoming Version

LLC79Z Zoom will be provided with the same mechanical ecosystem concept as the LLC66Z7.

Compatibility Matrix

LLC79N7	Citizen CLU701	Citizen CLU711	CREE CXA1310	CREE CXB1520	CREE XHP35 HI
FWHM (°)	16,9	20,8	14,5	20,8	7,3
FWTM (°)	27,7	35,8	27,7	33,3	13,5
Efficacy (cd/lm)	9,3	5,9	11,3	6,7	45,2
LLC79M7	Citizen CLU701	Citizen CLU711	CREE CXA1310	CREE CXB1520	CREE XHP35 HI
FWHM (°)	23,7	23,6	25,0	23,9	23,5
FWTM (°)	43,2	46,6	43,9	47,1	41,6
Efficacy (cd/lm)	4,4	4,0	4,0	4,0	4,5
LLC79W7	Citizen CLU701	Citizen CLU711	CREE CXA1310	CREE CXB1520	CREE XHP35 HI
FWHM (°)	32,5	30,4	31,2	30,1	32,9
FWTM (°)	60,1	60,9	60,1	60,7	60,1
Efficacy (cd/lm)	2,2	2,2	2,3	2,2	2,0



17° FWHM



24° FWHM

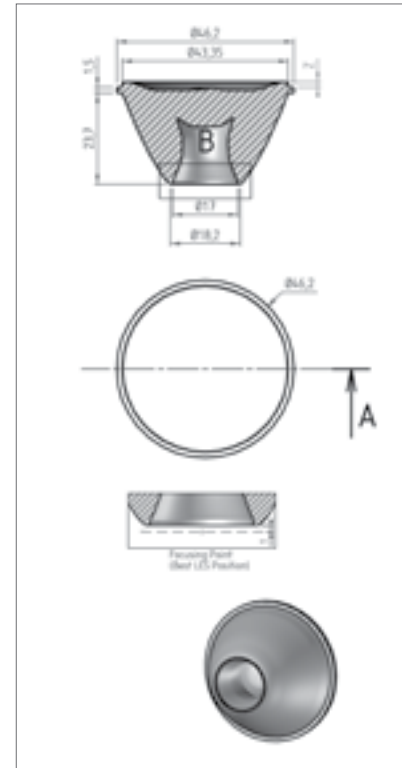


33° FWHM

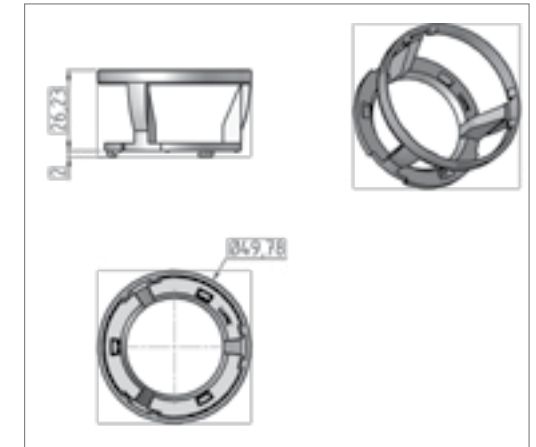


17 - 30° FWHM

Drawings



LLC79X



Holder LLH79C



Holder Zoom LLH79CZ

ECOSYSTEM for LLC79X and LLC66X Series

Two parts mechanical holding system consisting of five base options for various COB interface manufacturers and one universal assembled collimator and cage holder set.



LLC66X7

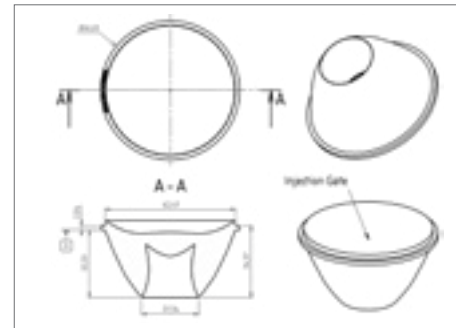
Following the LLC66N7 narrow beam silicone collimator, GAGGIONE is now introducing five new references to match market requirements on beam angle options: LLC66M7 medium beam, LLC66W7 wide Beam, LLC66Z7 zoomable, LLC66L7 large beam and LLC66V7 very large beam based on the same patented technology.

Compatibility Matrix

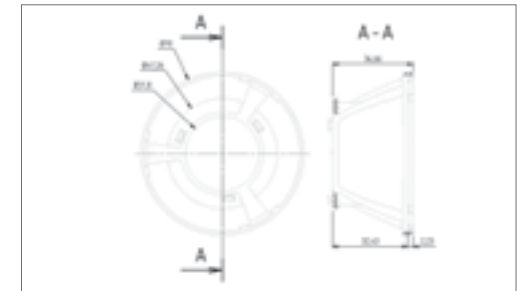
LLC66N7	Citizen CLU701	Citizen CLU711	CREE CXB1310	CREE CXB1520	CREE XHP70
FWHM (°)	9,7	13,7	9,9	13,4	12,0
FWTM (°)	16,9	22,8	16,4	24,0	20,1
Efficacy (cd/lm)	26,2	14,0	28,4	13,2	18,3
LLC66M7	Citizen CLU701	Citizen CLU711	CREE CXB1310	CREE CXB1520	CREE XHP70
FWHM (°)	21,3	19,9	21,4	20,6	20,1
FWTM (°)	34,0	36,1	33,8	37,4	34,7
Efficacy (cd/lm)	6,2	6,0	6,7	5,4	6,4
LLC66W7	Citizen CLU701	Citizen CLU711	CREE CXB1310	CREE CXB1520	CREE XHP70
FWHM (°)	31,9	30,8	32,1	30,7	30,2
FWTM (°)	52,7	53,0	51,9	53,9	52,0
Efficacy (cd/lm)	2,4	2,4	2,6	2,3	2,6
LLC66L7	Citizen CLU731	CREE CXA1830	XICATO XTM19	OSRAM SOLERLIQU S13	BRIDGELUX VERO13
FWHM (°)	39,1	37,7	35,1	40,7	41,1
FWTM (°)	60,5	59,4	60,0	61,6	63,5
Efficacy (cd/lm)	1,7	1,8	1,9	1,7	1,6
LLC66V7	Citizen CLU731	CREE CXA1830	XICATO XTM19	OSRAM SOLERLIQU S13	BRIDGELUX VERO13
FWHM (°)	54,3	54,9	50,7	55,7	53,5
FWTM (°)	80,9	82,1	79,6	81,7	80,1
Efficacy (cd/lm)	0,9	0,9	1,0	0,9	0,9
LLC66Z7	Citizen CLU701	Citizen CLU711	CREE CXB1310	CREE CXB1520	Nichia NVNWS007Z_V1
FWHM (°)	10,0-21,2	14,4-18,9	10,2-21,2	14,0-17,4	10,2-22,5
FWTM (°)	17,8-44,6	22,8-45,5	17,8-44,2	22,6-42,4	17,7-44,5
Efficacy (cd/lm)	24,8-4,1	16-4,7	24,4-4,2	13,3-4,7	24,7-4,1



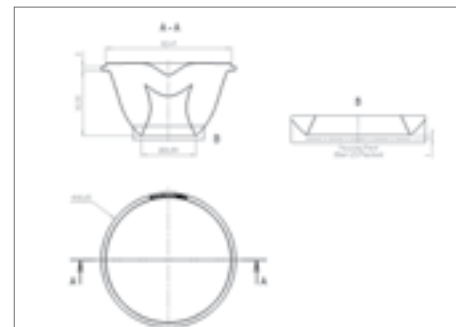
Drawings



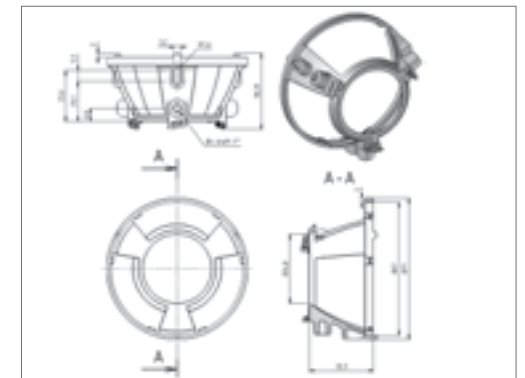
LLC66N7, LLC66M7, LLC66W7



Holder LLH66C



LLC66L7, LLC66V7



Holder Zoom LLH66CZ

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