

GAGGIONE

SHAPING YOUR LIGHT



STANDARD OPTICS RANGE

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 mold 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 QUADRATEC in Quebec, Canada and OPTICA in Bangalore, India. 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.

Custom solution

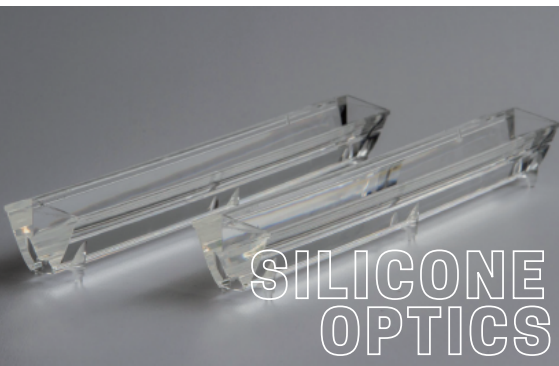
A custom made solution is the right choice for a customer not finding the standard optic in the GAGGIONE's off-the-shelf portfolio. Based on customer's specifications and requirements, GAGGIONE is able to **design the complete optical system and deliver the appropriated lens, collimator, diffuser, light guide or other optic** to work with the requirement. Our experience includes applications in the field of general lighting, street and area lighting, transportation industry or other applications requiring us to shape the light a certain way.

But creating a specific light distribution is not the only reason to decide for a custom design. More and more companies understand the strategic value and show the interest to invest in their **own solution to achieve cost savings**. In this growing market, reducing the bill of materials as well of time of assembly is critical to bringing **competitiveness and delivering to the market fast**. Optics are playing a more impactful role than before and are bringing many opportunities for integration of functionality and increasing lifetime value. In the end, a single part if well designed optimized can help **reduce the bill of materials, simplify stock management, and shorten assembly time resulting in lower overall cost**.

Not only do custom optics help reduce the complexity of the system; they are also the **solution for a better performance efficiency and market distinction and recognition**.

Having your own optical system is a differentiation by design and provides greater potential for increased performance of the end product. Leveraging a partner with solid experience and proven reputation is the solution Gaggion serves in Shaping Your Light.

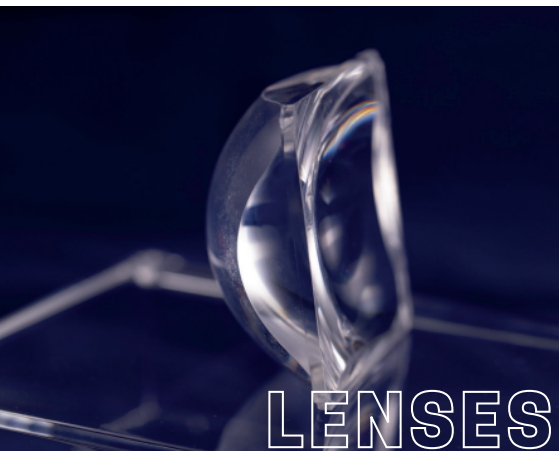
Our products



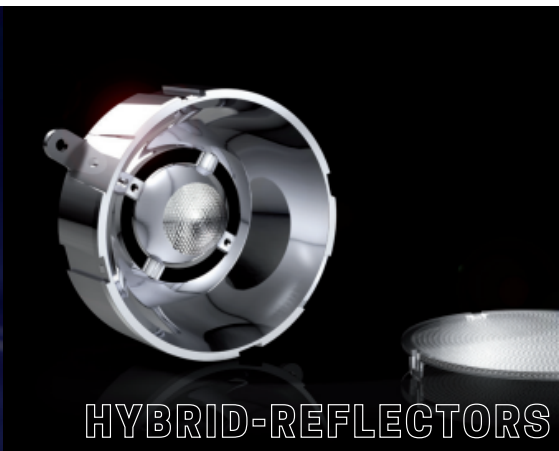
SILICONE
OPTICS



COLLIMATORS



LENSES



HYBRID-REFLECTORS



CLUSTER



FRESNEL LENSES

Standard range



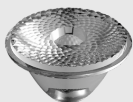
POLLUX
Linear optics for
indoor applications



HADAR70
Ø70mm PMMA
lens for COBs



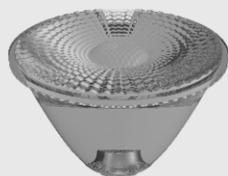
AVIKA
Street lighting
range



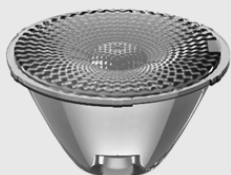
LLC22
Ø16mm PMMA
collimator range



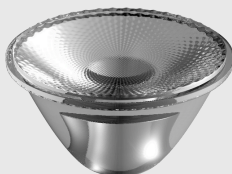
LLC25
Ø32mm PMMA & PC
collimator range



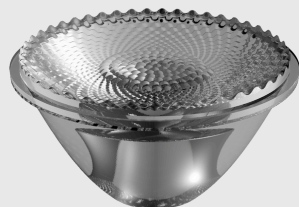
LLC59
Ø45mm PMMA
collimator range



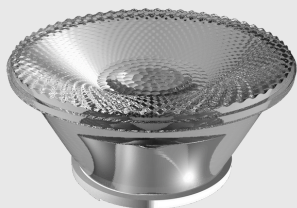
VEGA45
Ø45mm PMMA & PC
collimator range



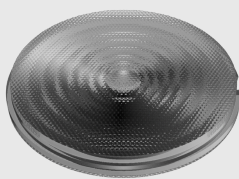
LLC79
Ø45mm silicone
collimator range



LLC66
Ø67mm silicone
collimator range



LLC76
Ø67mm silicone
collimator range



UFO
Ø45 & Ø67mm
Ultra Flat Optics



SIRIUS
Zoom solutions in
Ø35 & Ø50mm



Color mixing accessory
GALAXY
for ZOOM optics:
SIRIUS & HADAR70Z

POLLUX

Linear optics and accessories for indoor applications



POLLUX7X1AS25 - Asymmetric Shelf beam

POLLUX7X1DA35 - Double Asymmetric beam

POLLUX7X1E - Elliptical beam

POLLUX7X1L - Large beam

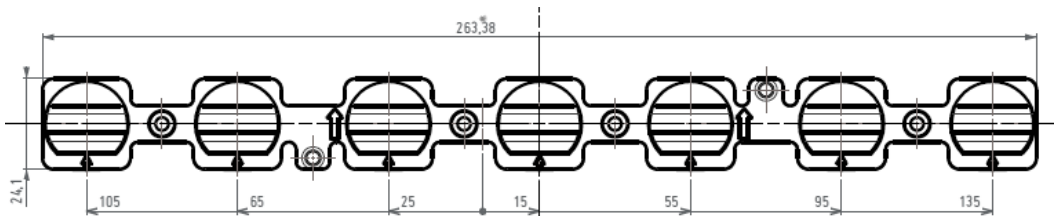
POLLUX7X1M - Medium beam

POLLUX7X1N - Narrow beam

POLLUX7X1VL - Very Large beam

POLLUX7X1W - Wide beam

POLLUX7X1G - Wall Grazer



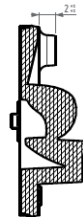
 Compatible Louvres

LVRPOLLUX7X101 - White Glossy Louvre

LVRPOLLUX7X101M - White Matte Louvre

LVRPOLLUX7X102 - Black Glossy Louvre

LVRPOLLUX7X102M - Black Matte Louvre



280mm x 40mm



POLLUX7X1 LEAFLET

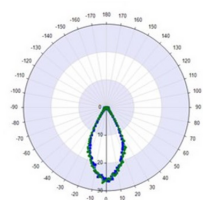
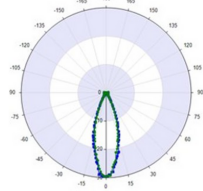
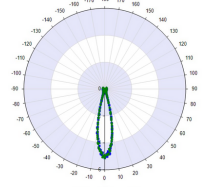
COMPATIBILITY MATRIX

NICHIA

NICHIA

SAMSUNG

POLLUX7X1N	E17 (1717)	E21	LH301B+
FWHM (°)	9.7	16.2	23
FWTM (°)	17.7	27.7	35
Efficacy (cd/lm)	41.1	9.1	5.1



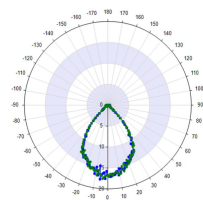
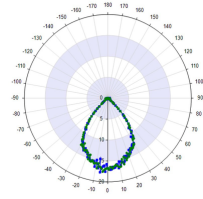
NICHIA

POLLUX7X1G	E17
FWHM (°)	20.3
FWTM (°)	42.7
Efficacy (cd/lm)	3.6

SAMSUNG

LUMILEDS

POLLUX7X1M	2 X 3030	5050
FWHM (°)	34.1	27.1
FWTM (°)	58.2	49.9
Efficacy (cd/lm)	21.1	2.9



LUMILEDS

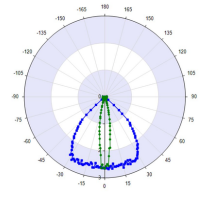
POLLUX7X1W	4 X 2835
FWHM (°)	51
FWTM (°)	74.2
Efficacy (cd/lm)	1

LUMILEDS

POLLUX7X1L	4 X 2835
FWHM (°)	73.2
FWTM (°)	106.5
Efficacy (cd/lm)	0.5

LUMILEDS

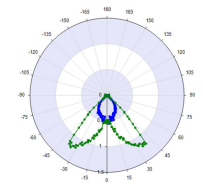
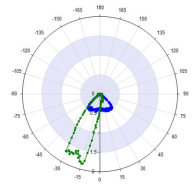
POLLUX7X1VL	4 X 2835
FWHM (°)	83.8
FWTM (°)	96.4
Efficacy (cd/lm)	0.5



SAMSUNG

NICHIA

POLLUX7X1E	2 X 3030	2 X E21
FWHM (°)	22 x 84	18 x 87
FWTM (°)	43 x 101	35 x 97
Efficacy (cd/lm)	1.4	1.3



POLLUX7X1AS25

POLLUX7X1DA35

HADAR70 New!

New generation of 70mm PMMA & PC collimators & accessories for COBs



HADAR70N

Narrow beam $\approx 10^\circ$



HADAR70M

Medium beam $\approx 25^\circ$



HADAR70W

Wide beam $\approx 33^\circ$



HADAR70L

Large beam $\approx 40^\circ$



HADAR70V

Very large beam $\approx 50^\circ$



HADAR70Z

Zoom beam $\approx 10^\circ - 45^\circ$



Accessories for better light control

Window accessories are designed for extra flexibility and with asymmetrical wall washer beam.



HADAR70WF - Narrow Frosted beam $\approx 13^\circ$

HADAR70WM - Medium beam $\approx 25^\circ$

HADAR70WW - Wide beam $\approx 30^\circ$

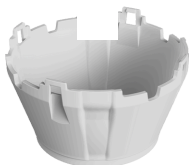
HADAR70WL - Large beam $\approx 40^\circ$

HADAR70WV - Very Large beam $\approx 50^\circ$

HADAR70WS - Super Wide beam $\approx 53^\circ$

HADAR70WA - Wall Washer (asymmetric)

For its integration, holders are available in clear, black and white



HADAR70 LEAFLET

HADAR70H10 - Bender+Wirth & compatible with existing LLH66B bases

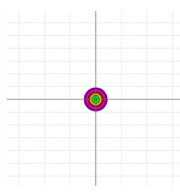
HADAR70H40 & HADAR70H41 - BJB 35 & 50mm compatible

HADAR70H90 - Bender+Wirth & Hekla compatible

COMPATIBILITY MATRIX

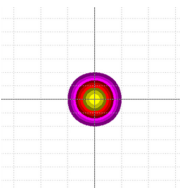
HADAR70N

LES	6mm	9mm	12mm	15mm	19mm	23mm
FWHM (°)	8.7	11.8	16.8	20.8	25.8	24.1
FWTM (°)	15.9	20.9	27.9	34.7	42	43.9
Efficacy (cd/lm)	30.9	16.2	9.2	5.9	3.9	3.8



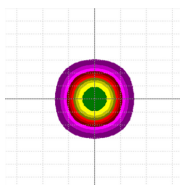
HADAR70M

LES	6mm	9mm	12mm	15mm	19mm	23mm
FWHM (°)	25.5	24.3	25.1	26.6	30	27.9
FWTM (°)	39.7	41.3	44.8	48.2	54.4	52.6
Efficacy (cd/lm)	4.8	4.7	4	3.3	2.6	2.7



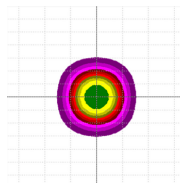
HADAR70V

LES	6mm	9mm	12mm	15mm	19mm	23mm
FWHM (°)	32.3	33.2	35	36.4	38	49
FWTM (°)	52.4	53.5	54.8	56.7	60.3	62.3
Efficacy (cd/lm)	2.6	2.5	2.4	2.3	1.8	1.7



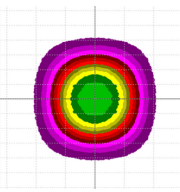
HADAR70L

LES	6mm	9mm	12mm	15mm	19mm	23mm
FWHM (°)	39.5	39.5	40.6	42.6	43.6	44.3
FWTM (°)	61.6	61.6	63.6	67.4	71.6	75
Efficacy (cd/lm)	2	2	1.9	1.6	1.5	1.3



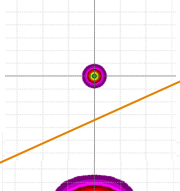
HADAR70V

LES	6mm	9mm	12mm	15mm	19mm	23mm
FWHM (°)	55.7	55.8	53.7	51.2	51.6	52.6
FWTM (°)	83.4	85.2	83.9	83.3	85.6	89.6
Efficacy (cd/lm)	1	1	1.1	1.1	1.1	1



HADAR70Z

LES	6mm	9mm	12mm	15mm	19mm	23mm
FWHM (°)	13.3 - 40.5	15.3 - 42.3	16.8 - 43.6	20.9 - 45.3	23.8 - 45.9	28.1 - 46.6
FWTM (°)	25.3 - 68.3	30.7 - 72.1	34.3 - 73.5	43.5 - 76.9	49.9 - 80.2	59.5 - 85.6
Efficacy (cd/lm)	10.1 - 1.5	6.9 - 1.3	5.6 - 1.2	3.4 - 1.1	2.5 - 1.0	1.8 - 0.9



AVIKA

Street lighting range (50 mm x 50 mm)

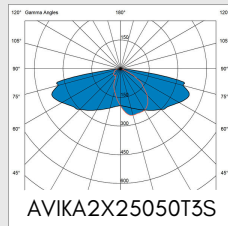
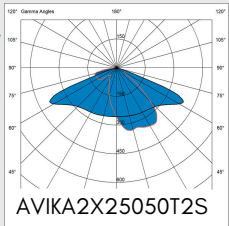
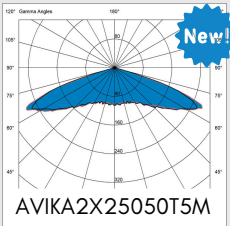
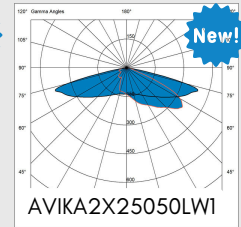
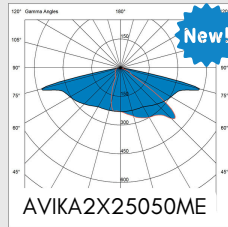
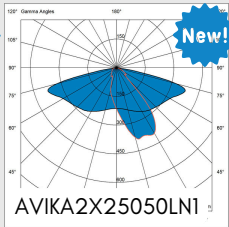
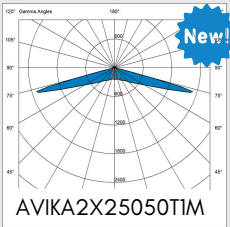


AVIKA 2x2



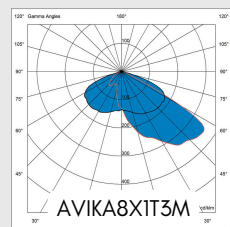
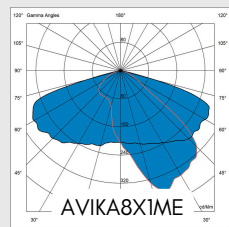
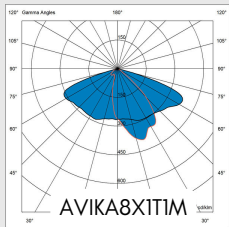
M1 AVIKA 2x2

Backlight blocking accessory



AVIKA 8x1

(with Backlight blocking accessory)



LLC22

Ø 16mm PMMA collimator range



LLC22R

Ultra narrow beam



LLC22F

Focus beam



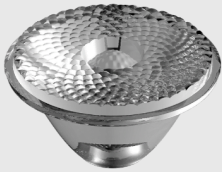
LLC22N

Narrow beam



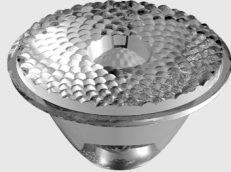
LLC22T

Tight beam



LLC22M

Medium beam



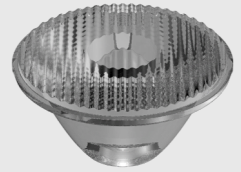
LLC22W

Wide beam



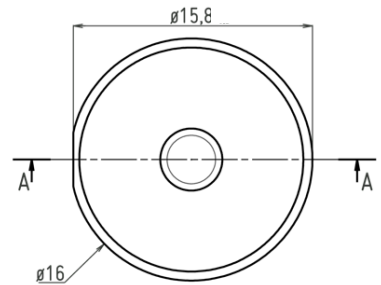
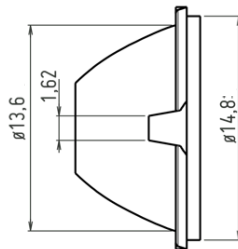
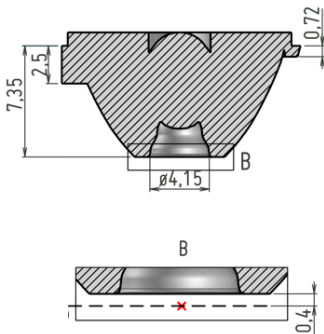
LLC22V

Very large beam



LLC22E

Elliptical beam



Focus point : 0,4

Holders : **LLH01CC*** - 8.6mm pin spacing

LLH01BB* - reduced PCB footprint & different heights

New! White holders are now available

NON CHIP IMAGE PATENTED TECHNOLOGY

		CREE	OSRAM	NICHIA	LUMILEDS
LLC22R	XQ-E HI	OSLON COMPACT CL		NCSWE17AT	LUXEON Z
FWHM (°)	7.1	8.6	7.6	8	
FWTM (°)	13.3	13.6	13	13.1	
Efficacy (cd/lm)	40.7	37.2	41.1	40.4	

		CREE	OSRAM	NICHIA	CREE
LLC22F	XQ-E HI	OSLON COMPACT CL		NCSWE17AT	XD16
FWHM (°)	7.6	8.3	10.0	11.8	
FWTM (°)	14.1	14.2	18.2	19.8	
Efficacy (cd/lm)	36.9	36.7	21.5	17.1	

		CREE	OSRAM	NICHIA	CREE
LLC22N	XQ-E HI	OSLON COMPACT CL		NCSWE17AT	XD16
FWHM (°)	9.6	9.8	11.2	13.2	
FWTM (°)	18.6	19.2	21.7	24.5	
Efficacy (cd/lm)	18.7	19.1	14.9	10.1	

		CREE	OSRAM	NICHIA	CREE
LLC22T	XQ-E HI	OSLON COMPACT CL		NCSWE17AT	XD16
FWHM (°)	11.9	11.8	12.8	13.8	
FWTM (°)	21.5	21.3	24.3	25.1	
Efficacy (cd/lm)	15.8	17.2	12.7	11.4	

		OSRAM	LUMILEDS	CREE	NICHIA
LLC22M	OSTAR STAGE RGBW	LUXEON Z RGBW		XP-E2	NF2W757_MT
FWHM (°)	23.8	28.8	24.5	25.0	
FWTM (°)	44.6	56.1	44.1	48.0	
Efficacy (cd/lm)	4.0	2.3	3.9	3.3	
CCI*	7.3	9.3	2.2	3	

		OSRAM	LUMILEDS	NICHIA	NICHIA
LLC22W	OSTAR STAGE RGBW	LUXEON Z RGBW		NCSWE17AT	NF2W757_MT
FWHM (°)	35.1	34.2	34.4	34.1	
FWTM (°)	62.1	66.0	60.4	62.8	
Efficacy (cd/lm)	1.9	1.6	2.1	1.9	
CCI*	6.2	6.4	1.7	2.5	

		OSRAM	LUMILEDS	CREE	NICHIA
LLC22V	OSTAR STAGE RGBW	LUXEON Z TW CLUSTER		XP-E2	NF2W757_MT
FWHM (°)	52.3	54.4	56.1	53.6	
FWTM (°)	79.4	83.8	82.0	82.5	
Efficacy (cd/lm)	1.0	0.8	0.9	0.9	
CCI*	10.5	2.3	1.5	4.2	

		OSRAM	LUMILEDS	CREE	NICHIA
LLC22E	OSTAR STAGE RGBW	LUXEON Z TW CLUSTER		XP-E2	NF2W757_MT
FWHM (°)	16.6 - 38.8	22.7 - 36.6	11.9 - 43.8	17.8 - 38.9	
FWTM (°)	32.1 - 67.8	38.5 - 70.4	28.1 - 65.2	35.4 - 67.3	
Efficacy (cd/lm)	3.3	2.6	4.0	3.2	
CCI*	9.4	1.8	2.5	6.3	

LLC25

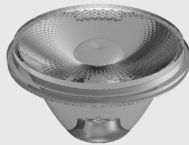
Available in PC

Color mixing \varnothing 32mm PMMA collimator range

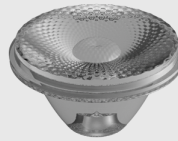
NON CHIP IMAGE PATENTED TECHNOLOGY



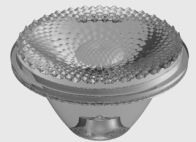
LLC25R
Ultra intensive beam



LLC25N
Narrow beam



LLC25C
Color beam



LLC25G
Wall grazing beam



LLC25M
Medium beam



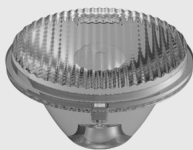
LLC25W
Wide beam



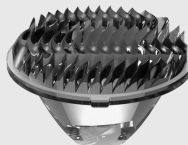
LLC25V
Very large beam



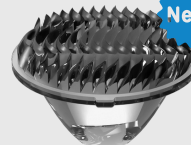
LLC25VC
Very large beam optimized
for color mixing



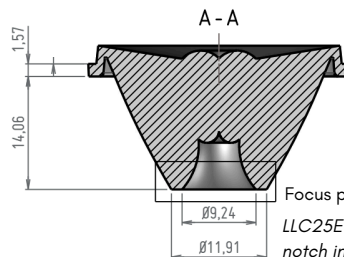
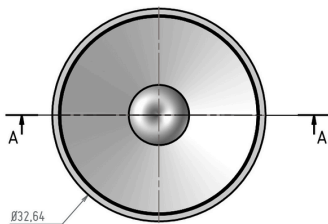
LLC25E
Elliptical beam



LLC25A
Asymmetric beam



LLC25AF
Asymmetric frosted beam



Focus point : 0
LLC25E & LLC25A/AF have an orientation
notch in addition to these 2D

Holder : **LLH02B & LLH02C** - Reduced Footprint
and High Power & COB compatible



White holders are now available

	OSRAM	LUMILEDS	NICHIA	CREE
LLC25R	OSLON COMPACT CL LUW CEUP	LUXEON Z	NVSW719AC	XHP35.2 HI
FWHM (°)	4.2	3.9	7.7	10.2
FWTM (°)	6.5	6.4	13.5	18.4
Efficacy (cd/lm)	164.3	178.4	41.7	21.3
CCI*	-	-	1.2	5.8

	OSTAR STAGE RGBW	LUXEON Z RGBW	NCSWE17AT	XHP35.2 HI
LLC25N				
FWHM (°)	11.5	12.9	7.9	11.3
FWTM (°)	20.8	22.7	15.9	22.3
Efficacy (cd/lm)	18.3	15.5	33.6	16.5
CCI*	6.0	16.5	1.8	3.1

	OSTAR STAGE RGBW	LUXEON Z RGBW	NCSWE17AT	XHP35.2 HI
LLC25C				
FWHM (°)	14.9	16.8	11.3	14.5
FWTM (°)	27.9	31.4	23.1	28.3
Efficacy (cd/lm)	10.6	8.1	16.6	10.3
CCI*	4.0	10.7	1	0.8

	OSTAR STAGE RGBW	LUXEON Z RGBW	NCSWE17AT	XHP35.2 HI
LLC25G				
FWHM (°)	15.0		12.4	15.6
FWTM (°)	30.6	32.7	28.4	32.9
Efficacy (cd/lm)	8.5	7.1	10.4	7.3
CCI*	3.4	3.9	0.8	1.3

	OSTAR STAGE RGBW	LUXEON Z RGBW	NCSWE17AT	XHP35.2 HI
LLC25M				
FWHM (°)	21.5	20.8	19.7	21.2
FWTM (°)	42.1	41.6	38.5	42.2
Efficacy (cd/lm)	3.9	4.0	4.8	4.0
CCI*	2.9	6.3	0.9	0.9



LLC25W	OSTAR STAGE RGBW	LUXEON Z RGBW	NCSWE17AT	XHP35.2 HI
FWHM (°)	30.7	32.3	31.5	31.6
FWTM (°)	58.5	60.3	57.9	60.0
Efficacy (cd/lm)	2.2	1.8	2.3	2.1
CCI*	3.2	6.3	1.4	0.8

LLC25V	OSTAR STAGE RGBW	LUXEON Z RGBW	NCSWE17AT	XHP35.2 HI
FWHM (°)	57.5	55.0	55.2	56.9
FWTM (°)	79.6	78.0	78.0	81.7
Efficacy (cd/lm)	0.9	1.0	1.0	1.0
CCI*	6.8	7.0	2	1.8

OSRAM LUMILEDS CREE NICHIA

LLC25VC	OSTAR STAGE LE RTDUW S2WN	LUXEON Z RGBW	XHP35.2 HI	NCSWE17AT
FWHM (°)	54.3	53	54.6	51.1
FWTM (°)	83.9	83.4	84.2	80.2
Efficacy (cd/lm)	1	1	0.9	1.1
CCI*	4.4	6.3	0.4	-

OSRAM LUMILEDS NICHIA CREE

LLC25E	OSTAR STAGE RGBW	LUXEON Z RGBW	NCSWE17AT	XHP35.2 HI
FWHM (°)	11.1 - 33.9	12.9 - 33.2	8.5 - 34.4	12.8 - 33.9
FWTM (°)	20.0 - 51.2	22.5 - 53.2	15.9 - 48.4	23.5 - 52.8
Efficacy (cd/lm)	6.6	5.5	8.4	5.6
CCI*	4.4	9.3	1.8	2.7

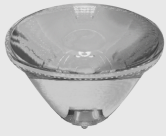


*Color Consistency Index, [more information](#)

LLC59

Color mixing Ø 45mm PMMA collimator range

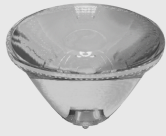
NON CHIP IMAGE PATENTED TECHNOLOGY



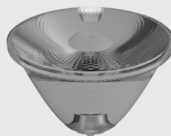
LLC59R
Ultra intensive
beam



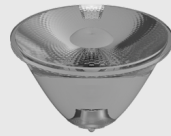
LLC59U
Ultra narrow
beam



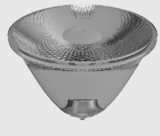
LLC59RF
Narrow beam



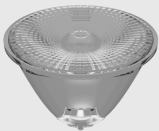
LLC59N
Narrow beam



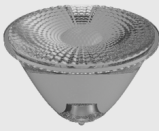
LLC59NF
Narrow beam



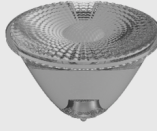
LLC59C
Color beam



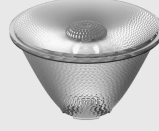
LLC59CM
Medium color
beam



LLC59M
Medium beam



LLC59W
Wide beam

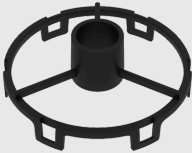


LLC59V
Very large beam

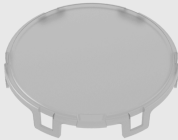


LLC59E
Elliptical beam

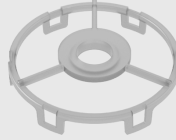
Accessories for better light control



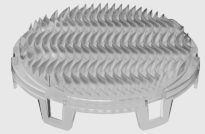
LLW59HM
High Mask



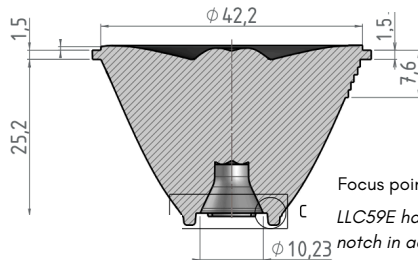
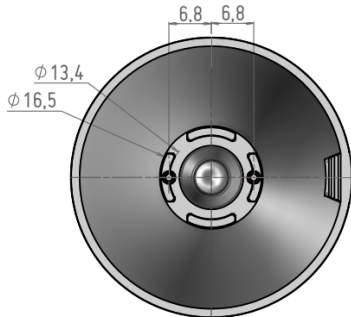
LLW59GW
Frosted Window



LLW59FM00
Flat Mask
Also available in black



LLW59A
Wall Washer Accessory
Compatible with RGBW



Focus point : 0

LLC59E has an orientation notch in addition to these 2D



White holders are now available

	OSRAM	LUMILEDS	CREE	NICHIA
LLC59R	OSLON COMPACT CL LUW CEUP	LUXEON Z ES	XHP35.2 HI	NV4WB35AM
FWHM (°)	1.8	3.4	7	7.6
FWTM (°)	3.8	7.6	12.2	14.8
Efficacy (cd/lm)	572.9	160.4	48.6	34.8
CCI	3.1	1.8	4.0	1.4

	OSLON COMPACT CL LUW CEUP	LUXEON Z ES	XHP35.2 HI	NV4WB35AM
LLC59U	OSLON COMPACT CL LUW CEUP	LUXEON Z ES	XHP35.2 HI	NV4WB35AM
FWHM (°)	3.7	4.4	7.3	7.6
FWTM (°)	6.3	8.2	13.1	14.0
Efficacy (cd/lm)	181.6	112.2	43.7	37.1
CCI*	1.0	1.5	-	1.1

	OSLON COMPACT CL LUW CEUP	LUXEON Z ES	XHP35.2 HI	NV4WB35AM
LLC59RF	OSLON COMPACT CL LUW CEUP	LUXEON Z ES	XHP35.2 HI	NV4WB35AM
FWHM (°)	3.6	4.6	7.3	8.4
FWTM (°)	7.9	9.8	14.2	15.9
Efficacy (cd/lm)	120.1	79.2	35.5	28.1
CCI*	1.9	0.7	2.8	1.0

	OSLON COMPACT CL LUW CEUP	LUXEON Z ES	XHP35.2 HI	NV4L144AR
LLC59N	OSLON COMPACT CL LUW CEUP	LUXEON Z ES	XHP35.2 HI	NV4L144AR
FWHM (°)	4.4	5.4	7.6	7.6
FWTM (°)	8.3	10.1	14.1	15.1
Efficacy (cd/lm)	118.7	77.8	40.2	32.7
CCI*	-	1.5	-	1.3

	OSLON COMPACT CL LUW CEUP	LUXEON Z ES	XHP35.2 HI	NV4WB35AM
LLC59NF	OSLON COMPACT CL LUW CEUP	LUXEON Z ES	XHP35.2 HI	NV4WB35AM
FWHM (°)	5.5	6.1	8.1	9.4
FWTM (°)	10.8	12.1	15.7	18.0
Efficacy (cd/lm)	61.7	50.7	29.5	22.3
CCI*	0.4	0.9	1.9	0.9



	OSRAM	LUMILEDS	CREE	NICHIA
LLC59C	OSTAR STAGE LE RTDUW S2WN	LUXEON Z ES	XHP35.2 HI	NV4WB35AM
FWHM (°)	9.4	9.2	10.3	10.9
FWTM (°)	18.2	18.1	19.9	21.1
Efficacy (cd/lm)	27.0	25.6	21.1	17.0
CCI*	4.8	1.4	-	1.1

	OSRAM	LUMILEDS	CREE	CREE
LLC59CM	OSTAR STAGE LE RTDUW S2WN	LUXEON Z RGBW	XM-L COLOR GEN 2 HI	XHP50.3 HD
FWHM (°)	11.9	13.7	13.3	15.4
FWTM (°)	23.6	27.3	27.1	30.3
Efficacy (cd/lm)	14.2	10.7	11	8.4
CCI*	2.9	9.6	6.1	0.4

	OSRAM	LUMILEDS	CREE	CREE
LLC59M	OSTAR STAGE LE RTDUW S2WN	LUXEON M	XHP35.2 HI	NF2W757G MT
FWHM (°)	24.0	24.2	25.2	23.8
FWTM (°)	40.2	44.1	42.7	40.8
Efficacy (cd/lm)	4.7	3.9	4.1	4.6
CCI*	2.3	1	-	0.9

	OSRAM	LUMILEDS	CREE	CREE
LLC59W	OSTAR STAGE LE RTDUW S2WN	LUXEON Z ES	XHP35.2 HI	NV4WB35AM
FWHM (°)	31.8	32.1	33.0	32.2
FWTM (°)	57.7	59.9	60.1	58.4
Efficacy (cd/lm)	2.3	2.0	2.1	2.2
CCI*	3.1	0.6	-	1.5

	OSRAM	LUMILEDS	CREE	CREE
LLC59V	OSTAR STAGE S2WN	LUXEON Z CLUSTER TW	XHP50.3 HD	XM-L COLOR GEN 2 HI
FWHM (°)	48.6	48	48.2	48.8
FWTM (°)	75.5	76.2	77.9	77.4
Efficacy (cd/lm)	1.3	1.3	1.2	1.2
CCI*	4.5	1.4	1.3	5

	OSRAM	LUMILEDS	CREE	CREE
LLC59E	OSTAR STAGE LE RTDUW S2WN	LUXEON Z ES	XHP35.2 HI	NV4WB35AM
FWHM (°)	6.4 - 32.8	5.9 - 32.0	7.6 - 33.4	8.2 - 31.5
FWTM (°)	11.7 - 41.3	11.5 - 39.9	41 - 43.9	15.3 - 43.1
Efficacy (cd/lm)	13.4	13.2	10.6	9.1
CCI*	6.8	1.4	-	1.7

*Color Consistency Index, [more information](#)

VEGA45

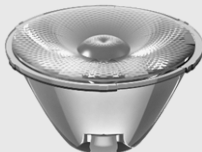
COB-oriented Ø 45mm PMMA & PC collimator range



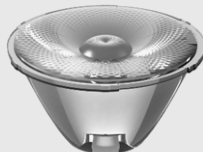
VEGA45U
Ultra narrow
beam



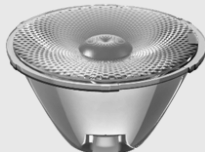
VEGA45UF
Ultra narrow frosted
beam



VEGA45N
Narrow beam



VEGA45NF
Narrow frosted
beam



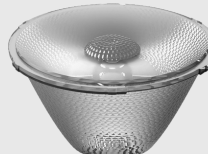
VEGA45C
Color beam



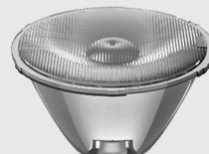
VEGA45M
Medium beam



VEGA45W
Wide beam

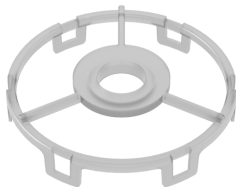


VEGA45V
Very large beam



VEGA45E
Elliptical beam

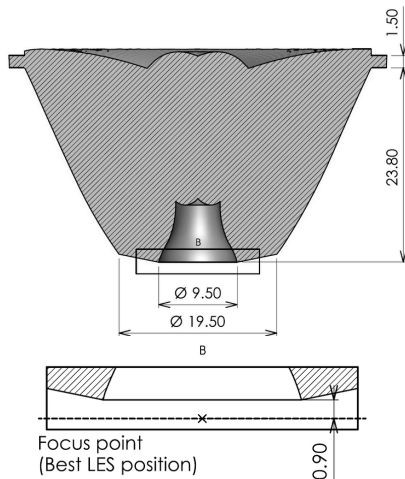
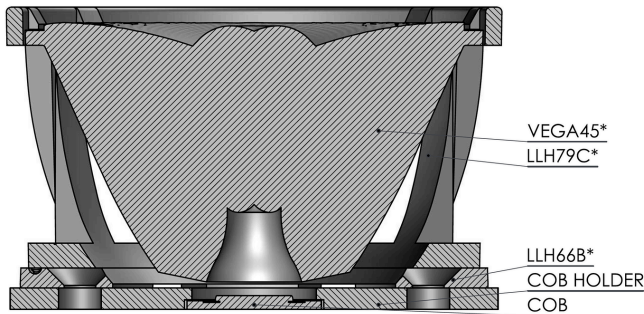
New! *Accessories for better light control*



WVEGA45FM00
Translucid Flat Mask
Available in black



WVEGA45GW
Frosted window



NON CHIP IMAGE PATENTED TECHNOLOGY

CITIZEN

CREE

CREE

LUMINUS

VEGA45U	CLU7S3	CXB1310	CXB1520	CXM_3
FWHM (°)	8.6	12.7	17.9	8.1
FWTM (°)	14.7	21.8	30.8	13.4
Efficacy (cd/lm)	35.2	14.6	6.1	40.5

VEGA45UF

CLU7S3

CXB1310

CXB1520

CXM_3

FWHM (°)	8.9	13.1	18.4	8.5
FWTM (°)	16.2	23	31.7	16
Efficacy (cd/lm)	28	12.7	5.4	27.4

VEGA45N

CLU7S3

CXB1310

CXB1520

CXM_3

FWHM (°)	8.3	12.5	17.5	8.2
FWTM (°)	15.6	22.3	31.4	15.6
Efficacy (cd/lm)	34.3	14.4	6.1	31.9

CITIZEN

CREE

CREE

NICHIA

VEGA45NF

CLU7S3

XHP35.2 HI

XP-G4

NVSW719AC

FWHM (°)	8.8	8.1	7.3	7.7
FWTM (°)	16.5	15.5	15.3	15.1
Efficacy (cd/lm)	28.8	29.5	88.7	34.7

CITIZEN

CREE

CREE

BRIDGELUX

VEGA45C

CLU7S3

CXB1310

CXB1520

VESTA_6_TW

FWHM (°)	11.1	13.8	17.9	14.6
FWTM (°)	20.9	26.6	34.9	27.6
Efficacy (cd/lm)	19.2	11.1	5.4	10.4
CCI*	1.2	0.5	0.9	2

*CCI: Color Consistency Index, [more information](#)

CITIZEN CREE CREE BRIDGELUX

VEGA45M	CLU7S3	CXB1310	CXB1520	VESTA_6_TW
FWHM (°)	25.3	25.4	27	25.7
FWTM (°)	43.1	46.2	53.8	46.6
Efficacy (cd/lm)	4	3.4	2.3	3.4
CCI*	0.5	0.5	0.5	0.5

VEGA45W	CLU7S3	CXB1310	CXB1520	VESTA_6_TW
FWHM (°)	33.7	34.2	35.2	34.3
FWTM (°)	61.7	63.9	75.1	65.6
Efficacy (cd/lm)	1.9	1.7	1.4	1.7
CCI*	0.5	0.5	0.3	0.6

CITIZEN CITIZEN CITIZEN NICHIA

VEGA45V	CLU702	CLU711	CLU7R3	NJNSW012Z
FWHM (°)	46.2	46.7	48.1	47.9
FWTM (°)	77.1	80.9	73	74
Efficacy (cd/lm)	1.2	1	1.2	1.2
CCI*	0.2	1.8	1.4	1.5

CITIZEN CREE CREE BRIDGELUX

VEGA45E	CLU7S3	CXB1310	CXB1520	VESTA_6_TW
FWHM (°)	8.8 - 33.1	14.6 - 21	17 - 32.5	13.4 - 32.4
FWTM (°)	15.7 - 44.9	26.6 - 37	33.2 - 57.8	23.7 - 51
Efficacy (cd/lm)	8.7	5.5	3.2	5.4
CCI*	3.1	1	0.7	2.6

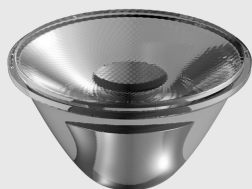


VEGA45 DATASHEET

*CCI: Color Consistency Index, [more information](#)

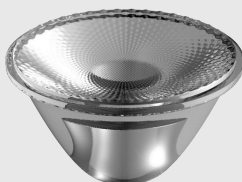
LLC79

Ø 45mm silicone collimator range



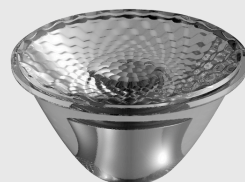
LLC79N7

Narrow beam



LLC79C7

Color beam



LLC79M7

Medium beam



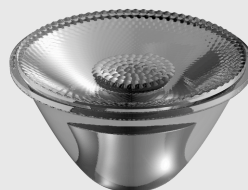
LLC79W7

Wide beam



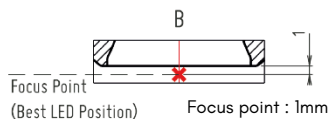
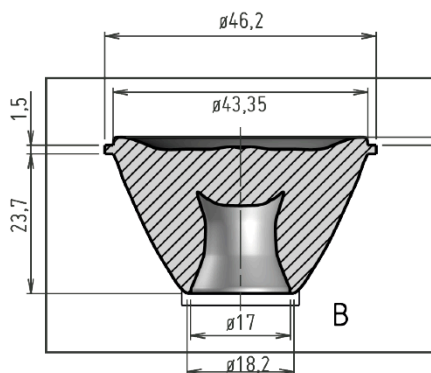
LLC79V7

Very large beam



LLC79Z7

Zoom beam



PATENTED TECHNOLOGY

	CITIZEN	CITIZEN	CREE	CREE	CREE
LLC79N7	CLU700	CLU711	CXB1310	CXB1520	XHP35HI
FWHM (°)	15.3	20.8	14.5	20.8	7.3
FWTM (°)	27.5	35.8	27.7	33.3	13.5
Efficacy (cd/lm)	10.2	5.9	11.3	6.7	45.2

	CLU700	CLU711	CXB1310	CXB1520	XHP35HI
LLC79C7					
FWHM (°)	15.4	21.4	16.7	23.8	8.7
FWTM (°)	28.4	37.3	30.1	40	17.2
Efficacy (cd/lm)	9.9	5.6	8.8	4.8	27.6

	CLU700	CLU711	CXB1310	LCXB1520	XHP35HI
LLC79M7					
FWHM (°)	24.8	23.6	25.0	23.9	23.5
FWTM (°)	43.6	46.6	43.9	47.1	41.6
Efficacy (cd/lm)	4.2	4.0	4.0	4.0	4.5

	CLU700	CLU711	CXB1310	CXB1520	XHP35HI
LLC79W7					
FWHM (°)	34.4	30.4	31.2	30.1	32.9
FWTM (°)	60.4	60.9	60.1	60.7	60.1
Efficacy (cd/lm)	2.1	2.2	2.3	2.2	2.0

LLC79V7 MEASUREMENTS ARE IN PROGRESS

	CITIZEN	CITIZEN	CREE	BRIDGELUX	NICHIA
LLC79Z7	CLU700	CLU7AZ	CXB1310	V4HD	NVNWS007Z_V1
FWHM (°)	15.5 - 29.1	10.7 - 33.1	14.7 - 24.6	12.0 - 33.1	15.2 - 37
FWTM (°)	27.2 - 49.6	19.8 - 45.1	31.4 - 50	22.4 - 47.9	26.1 - 54.5
Efficacy (cd/lm)	10 - 2.8	18 - 2.7	8.9 - 3.2	14.6 - 2.5	10.8 - 1.9

MECHANICAL SYSTEM for LLC79, VEGA45 and LLC66 Series

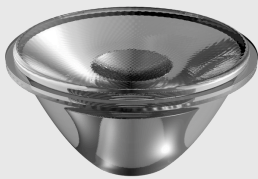
Two parts mechanical holding system consisting in six base options for various COB interface manufacturers and one universal assembled collimator and cage holder set.



LLC79 DATASHEET

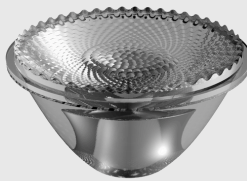
LLC66

Ø 67mm silicone collimator range



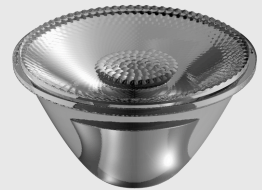
LLC66N7

Narrow beam



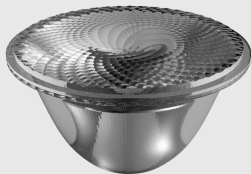
LLC66M7

Medium beam



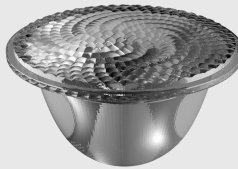
LLC66W7

Wide beam



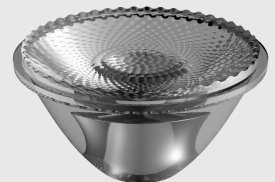
LLC66L7

Large beam



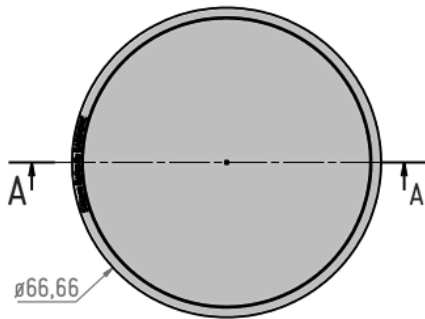
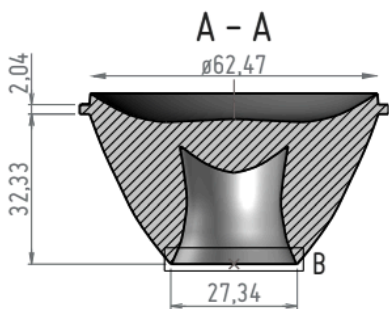
LLC66V7

Very Large beam



LLC66Z7

Zoom beam



Focus Point
(Best LED Position)



Focus point : 0mm

PATENTED TECHNOLOGY

	CITIZEN	CITIZEN	LUMINUS	LUMILEDS	CREE
LLC66N7	CLU702	CLU711	CXM-4	LUXEON MZ	XHP70.2
FWHM (°)	10.8	13.7	7.8	6.3	12.0
FWTM (°)	18.5	22.8	15.5	10.8	20.1
Efficacy (cd/lm)	21.1	14.0	33.4	62.1	18.3

	CITIZEN	CITIZEN	LUMINUS	LUMILEDS	CREE
LLC66M7	CLU702	CLU711	CXM-4	LUXEON MZ	XHP70.2
FWHM (°)	22.0	19.9	21.4	22.9	20.1
FWTM (°)	36.5	36.1	33.4	32.0	34.7
Efficacy (cd/lm)	5.4	6.0	6.1	6.1	6.4

	CITIZEN	CITIZEN	LUMINUS	LUMILEDS	CREE
LLC66W7	CLU702	CLU711	CXM-4	LUXEON MZ	XHP70.2
FWHM (°)	34.7	30.8	33.3	33.6	30.2
FWTM (°)	55.7	53.0	51.7	51.1	52.0
Efficacy (cd/lm)	2.2	2.4	2.4	2.5	2.6

	CITIZEN	CREE	XICATO	LUMINUS	BRIDGELUX
LLC66L7 (LES > 13MM)	CLU731	CXA1830	XTM19	CVM-18	VERO13
FWHM (°)	39.1	37.7	35.1	38.9	41.1
FWTM (°)	60.5	59.4	60.0	66.1	63.5
Efficacy (cd/lm)	1.7	1.8	1.9	1.7	1.6

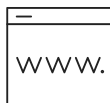
	CITIZEN	CREE	XICATO	LUMINUS	BRIDGELUX
LLC66V7 (LES > 13MM)	CLU731	CXA1830	XTM19	CVM-18	VERO13
FWHM (°)	54.3	54.9	50.7	43.1	53.5
FWTM (°)	80.9	82.1	79.6	75.9	80.1
Efficacy (cd/lm)	0.9	0.9	1.0	1.2	0.9

	CITIZEN	CITIZEN	CREE	CREE	NICHIA
LLC66Z7 (LES < 9mm)	CLU701	CLU711	CXB1310	CXB1520	NVNW007Z_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	16.0 - 4.7	24.4 - 4.2	13.3 - 4.7	24.7 - 4.1



LLC66 DATASHEET

The integration of the LLC66 is similar to the LLC79

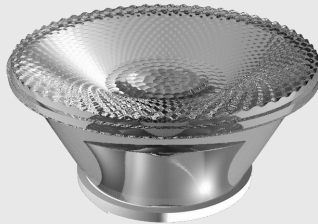


LLC76

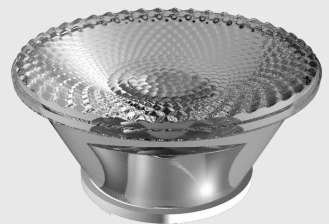
Ø 67mm silicone collimator range



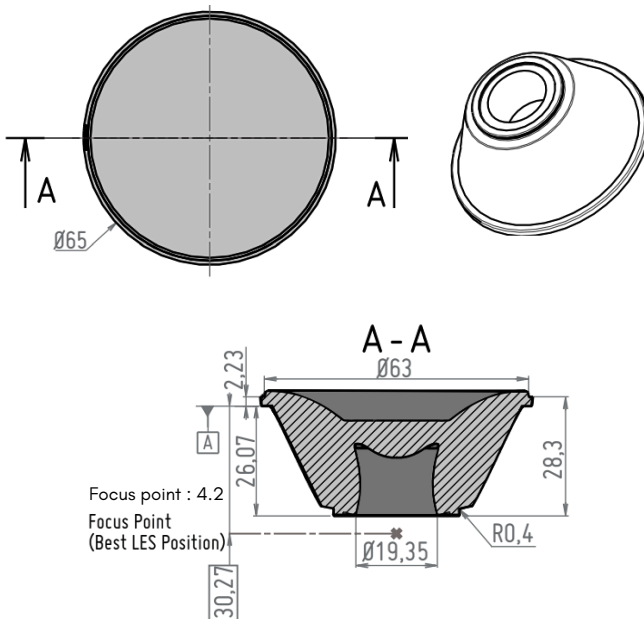
LLC76N7
Narrow beam



LLC76M7
Medium beam



LLC76W7
Wide beam



PATENTED TECHNOLOGY

	CITIZEN	CITIZEN	XICATO	CREE	LUMILEDS
LLC76N7	CLU702	CLU711	X0B09	XHP35.2 HD	LUXEON COB 1202 HB
FWHM (°)	9.8	13.4	12.6	6.5	9.9
FWTM (°)	18.1	22.2	22.3	11.9	17.7
Efficacy (cd/lm)	20.0	11.7	11.0	40.6	22.1

	CLU702	CLU711	X0B09	XHP35.2 HD	LUXEON COB 1202 HB
LLC76M7	CLU702	CLU711	X0B09	XHP35.2 HD	LUXEON COB 1202 HB
FWHM (°)	23.0	22.5	21.0	14.3	21.5
FWTM (°)	36.7	39.2	37.0	36.5	35.1
Efficacy (cd/lm)	4.8	4.5	4.3	6.1	5.6

	CLU702	CLU711	X0B09	XHP35.2 HD	LUXEON COB 1202 HB
LLC76W7	CLU702	CLU711	X0B09	XHP35.2 HD	LUXEON COB 1202 HB
FWHM (°)	36.6	36.2	31.9	28.9	34.7
FWTM (°)	58.2	61.5	55.0	56.0	55.4
Efficacy (cd/lm)	1.8	1.7	1.8	2.3	2.0

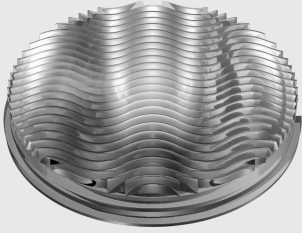
LLH76B4 & LLH76B8 bases for LLC76 series

We created a snapped-in holder ring allowing a very fast and reliable attachment of the optics to the interface.

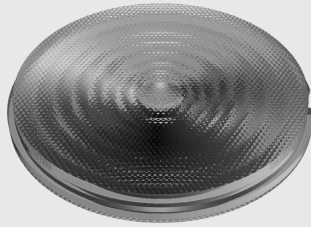


UFO

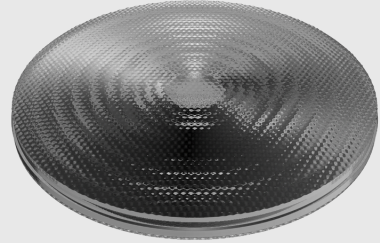
Ø45 and Ø67mm Ultra Flat Optics



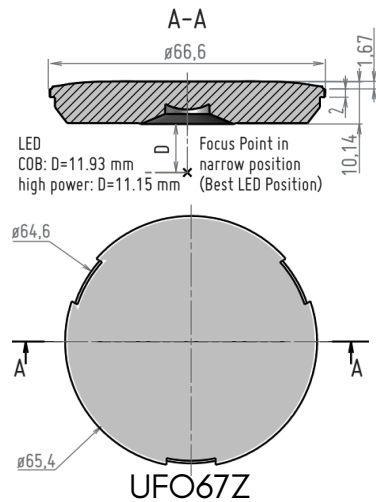
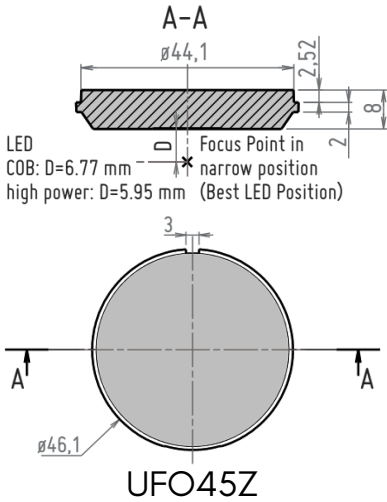
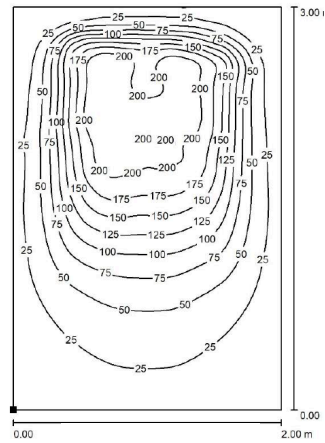
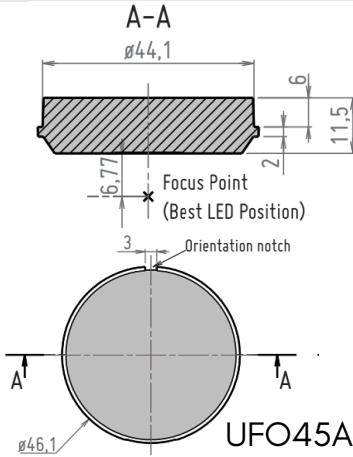
UFO45A



UFO45Z



UFO67Z



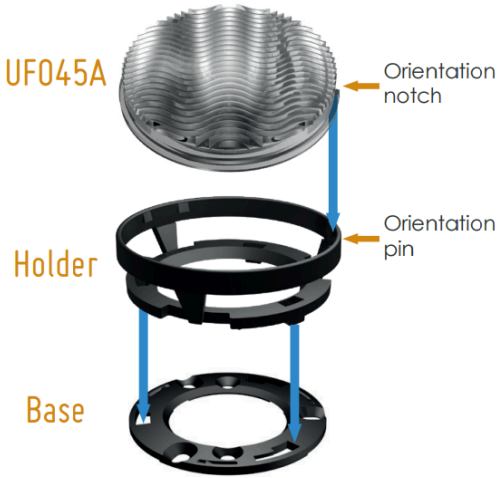
UFO45A [Download the IES file](#)

UFO45Z	VESTA 6 TW	CLU7B2	XHP35.2 HI	LUXEON MZ	OSLON SQUARE FLAT
FWHM (°)	17.4 - 43.9	14.1 - 35.7	13.9 - 35.2	13.6 - 48.2	11.8 - 34.4
FWTM (°)	32.9 - 66.0	25.2 - 52.3	24.7 - 51.0	24.4 - 65.8	22.5 - 51.2
Efficacy (cd/lm)	6.1 - 1.5	9.7 - 2.3	9.5 - 2.4	10.4 - 1.3	12.1 - 2.5
CCI*	2.3	1.5	1.2	0.8	2.6

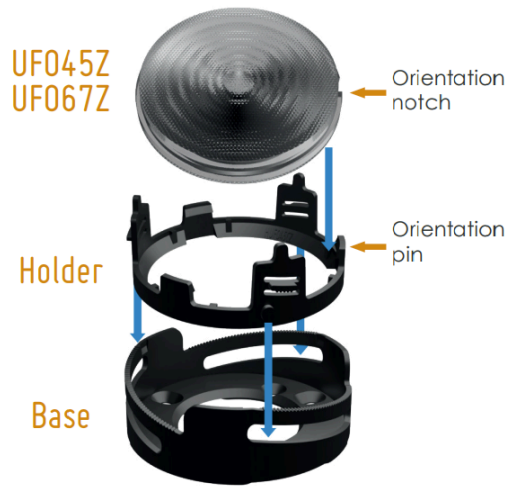
UFO67Z	VESTA 6 TW	CLU7B2	XHP35.2 HI	LUXEON MZ	OSLON SQUARE FLAT
FWHM (°)	13.9 - 44.1	12.2 - 36.5	12.2 - 35.6	11.3 - 50.3	11.3 - 34.5
FWTM (°)	25.6 - 60.1	22.3 - 50.4	22.4 - 48.9	21.6 - 65.7	21.7 - 49.1
Efficacy (cd/lm)	9.4 - 1.7	11.3 - 2.4	10.8 - 2.4	13.4 - 1.4	12.2 - 2.8
CCI*	1.3	0.8	0.6	1	1.9

Mechanical system

Asymmetric



Zoom



Distance between narrow and wide positions
 UFO45Z: 6 mm
 UFO67Z: 9 mm



Available in black and clear



UFO45 DATASHEET

SUFO45NZ*, SUFO67NZ*

*CCI: Color Consistency Index, [more information](#)

SIRIUS

Zoom solutions in 35 & 50mm



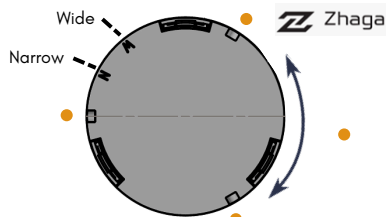
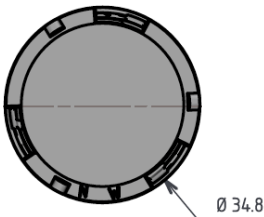
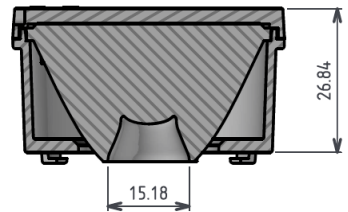
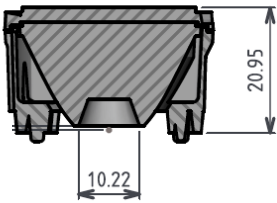
KSIRIUS35

Focus point : 0.3mm



SSIRIUS50

Focus point : 0.5mm



For more information, please refer to the 2D Schematic on the product page

Rotating window has 3 notches for easy integration to the luminaire (free adjustment)

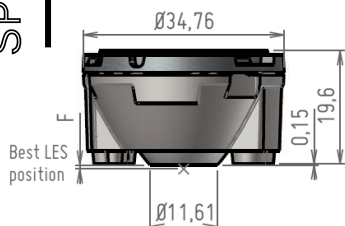


SIRIUS DATASHEET

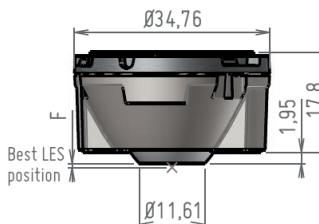
KSIRIUS35*

This range offers different holders to be compatible with major brands of COB holders and HP LED.

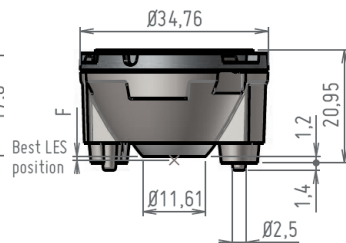
KSIRIUS35Z1*



KSIRIUS35Z4*



KSIRIUS35Z6*



**BENDER
+WIRTH**

TE
connectivity

for High Power

* Available in transparent by adding a 0 : KSIRIUS35Z10, KSIRIUS35Z40, KSIRIUS35Z60 & also available in black by adding a 2 : KSIRIUS35Z12, KSIRIUS35Z42, KSIRIUS35Z62

SSIRIUS50Z*

The range offers **two different windows** with different compromises.

SSIRIUS50ZTW0: Set SIRIUS50 with a **tunable white** compatible window & a transparent holder

SSIRIUS50ZTW2: Set SIRIUS50 with a **tunable white** compatible window & a black holder

SSIRIUS50Z0: Set SIRIUS50 with the **narrower** window & a transparent holder

SSIRIUS50Z2: Set SIRIUS50 with the **narrower** window & a black holder



TUNABLE WHITE

SSIRIUS50ZTW



NARROWER VERSION

SSIRIUS50Z

For its integration, SSIRIUS50 is compatible with LLH66B bases.

**BENDER
+ WIRTH**

bridgelux®

TE



LLH66B10*

LLH66B202

LLH66B402



**Mechanical Ecosystem
for COBs**

LUMINUS

CITIZEN

CREE

CREE

KSIRIUS35Z**	CXM_3	CLU702	XHP35.2 HI	XHP50.3 HI
FWHM (°)	16.9 - 47	21.9 - 50.6	15.6 - 47.8	16.7 - 47.6
FWTM (°)	33.9 - 72.8	45.7 - 81.3	30.7 - 72.6	34 - 73.6
Efficacy (cd/lm)	6.8 - 1.4	3.7 - 1.1	7.5 - 1.3	6.4 - 1.3
CCI*	0.4	0.8	0.6	1.4

CITIZEN

CREE

LUMILED

CREE

SSIRIUS50ZTW*	CLU702	CXB1520	CLUST. TW LUXZ	XHP50B
FWHM (°)	17.8 - 52.2	21.5 - 53	13.5 - 47.4	15.1 - 46.9
FWTM (°)	35.8 - 74.8	43.1 - 78.5	24.9 - 69.4	30.4 - 69.6
Efficacy (cd/lm)	6.6 - 1.2	4.2 - 1.1	15.9 - 1.9	9.3 - 1.5
CCI*	0.7	1.1	2.2	0.8

SSIRIUS50Z*

CLU702

CXB1520

CLUST. TW LUXZ

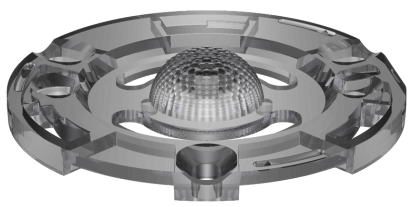
XHP50B

FWHM (°)	15.3 - 53.1	19 - 53.6	10 - 47	10.6 - 48
FWTM (°)	32.4 - 73.9	40.6 - 77.7	20.6 - 66.8	23 - 67.7
Efficacy (cd/lm)	8.2 - 1.2	5 - 1.1	24.6 - 2	16.5 - 1.6

*CCI: Color Consistency Index, [more information](#)

GALAXY New!

An accessory base for SIRIUS50 range, it seamlessly integrates innovative and **patented RGBW capability** with no color mixing compromise & **minimal impact on beam angles**.



GALAXY 1

for **SSIRIUS50ZTW**
with **RGBW high power LED**
like **OSTAR Stage S2WN**



GALAXY 2

for **SSIRIUS50ZTW**
with **high power and**
CSP custom RGBW LED clusters



SIRIUS50
Ø50mm zoom range



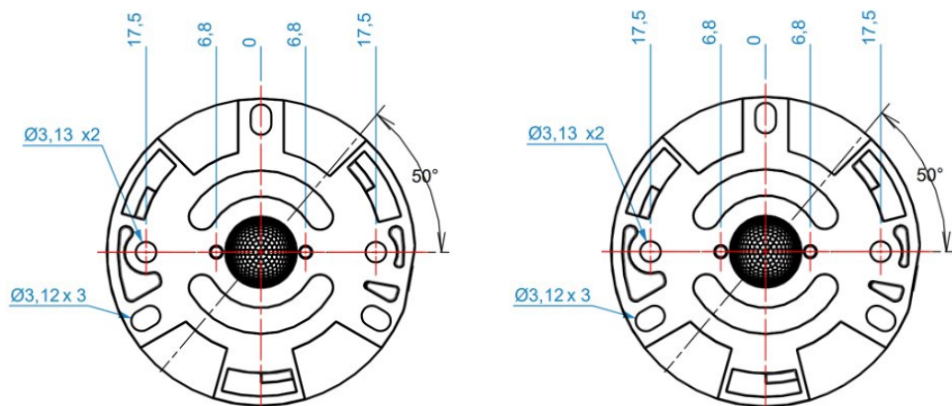
GALAXY
Color mixing accessory



WATCH VIDEO!



DATASHEET



The GALAXY bases are easy to integrate, securely mounted to the PCB with screws, allowing a twist and lock assembly of the selected SIRIUS50 set. To ensure the best possible color mixing results, they are equipped with 13.6mm spaced centering pins.

	OSRAM	CREE	PROLIGHT
G1SIRIUS50ZTW*	OSTAR STAGE RGBW	XML COLOR XI	PBEE
FWHM (°)	13.1 - 51.0	15.9 - 50.7	13.0 - 51.8
FWTM (°)	25.6 - 71.7	31.7 - 73.4	25.2 - 72.9
Efficacy (cd/lm)	10.3 - 1.1	7.0 - 1.1	10.8 - 1.1
CCI*	5.6 - 4.0	4.3 - 1.9	4.1 - 2.9

	LUXEON	LUXEON	NICHIA	OSRAM
G2SIRIUS50Z*	RUBIX RGBW	CZ RGBW	E17A RGBW	PURE 1010 RGBW
FWHM (°)	13.8 - 52.1	14.0 - 52.0	14.2 - 51.9	14.2 - 51.7
FWTM (°)	29.4 - 74.8	29.6 - 74.8	30.1 - 75.3	30.4 - 75.3
Efficacy (cd/lm)	8.1 - 1.0	7.9 - 1.0	7.5 - 1.0	7.4 - 1.0
CCI*	4.0 - 3.5	7.8 - 5.2	6.2 - 4.4	3.6 - 3.4

	LUXEON	LUXEON	NICHIA	OSRAM
G2SIRIUS50ZTW*	RUBIX RGBW	CZ RGBW	E17A RGBW	PURE 1010 RGBW
FWHM (°)	16.7 - 51.6	16.2 - 51.8	17.1 - 51.2	17.0 - 50.7
FWTM (°)	33.9 - 77.2	32.8 - 76.8	34.9 - 77.2	34.5 - 76.8
Efficacy (cd/lm)	8.2 - 1.2	6.3 - 76.9	5.6 - 1.0	5.6 - 1.0
CCI*	3.1 - 3.2	4.9 - 4.3	5.1 - 4.0	3.3 - 3.2

*CCI: Color Consistency Index, [more information](#)

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