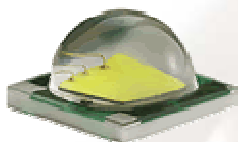




16 mm : LLC01N LLC01M LLC01W LLC01X
 LLC01S LLC01E
32 mm : LLC05N LLC05M LLC05W
35 mm : LLC07N LLC17N
45 mm : LLC49R

CREE XM_L Datasheet



*Lednlight, a high performance LED collimator series,
for all your high power LEDs lighting applications*



Benefits of the Lednlight product range :

- Innovative and unique design, which allows you to use most existing LEDs references
- Homogeneous light distribution, resulting from software optimization and quality polymer
- Available with mechanical holders for ease of use and production
- Ready to use and easy integration into a cluster part

Particularity of collimator LLC01E:

- Compatible with automotive standards (ECE and SAE)
- Compatible with traffic light standards (class M)

Particularity of collimator LLC01X:






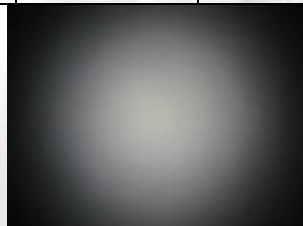





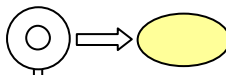

- Broad light distribution, suitable for outdoor lighting

Particularity of collimator LLC05N :

- Reduced divergence and high brightness light beam for all for long range lighting applications

16mm Lednlight used with CREE XM-L

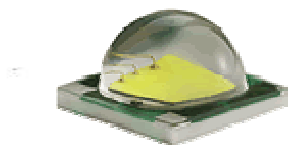
Optical Characteristics, Overview table

Collimator	LED	Half-angle At 50% (°)	half-angle at 10% (°)	Efficacy Cd/Lm	Holder & options		
 LLC01N	CREE XM-L	12.8	20.6	3.6			
					(1) -Mono -Mono & adhesive -tri / quadri		
 LLC01M	CREE XM-L	19.1	29.4	1.8			
					- Mono -Mono & adhesive -tri / quadri		
 LLC01W	CREE XM-L	22.1	34.7	1.3			
					- Mono -Mono & adhesive -tri / quadri		
 LLC01X	CREE XM-L	30.9	50.9	0.7			
					Mono -Mono & adhesive -tri / quadri		
 LLC01S	CREE XM-L	32.7	49.8	0.7			
					Mono -Mono & adhesive -tri / quadri		
 LLC01E	CREE XM-L	14.6v	19.3h	26.2v	35.3h	1.8	
					Mono -Mono & adhesive -tri / quadri		

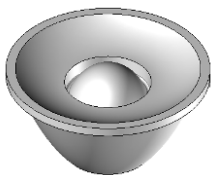

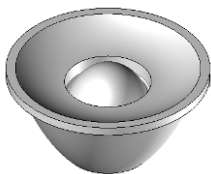
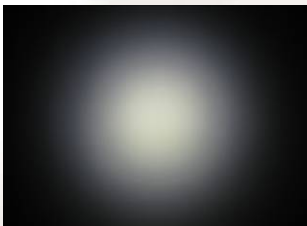
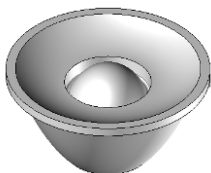





(1) Provide a square beam

32 mm & 35mm Lednlight used with

CREE XM-L

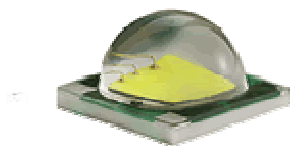


Optical Characteristics, Overview table



Collimator	LED	Half-angle At 50% (°)	half-angle at 10% (°)	Efficacy Cd/Lm	Holder & options
 LLC05N	CREE XM-L	6.5	10.1	16.1	
					LLH02XAL00 adhesive Or LLH02AAC00 Using screw
 LLC05M	CREE XM-L	9.2	19.9	5.0	
					LLH02XAL00 adhesive Or LLH02AAC00 Using screw
 LLC05W	CREE XM-L	13.0	24.7	2.9	
					LLH02XAL00 adhesive Or LLH02AAC00 Using screw
 LLC07N	CREE XM-L	5.1	8.9	22	
					(2)
 LLC17N	CREE XM-L	5.1	9.9	18.5	
					no

(2) provides a ghost image of the die

45mm Lednlight used with CREE XM-L



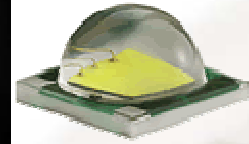
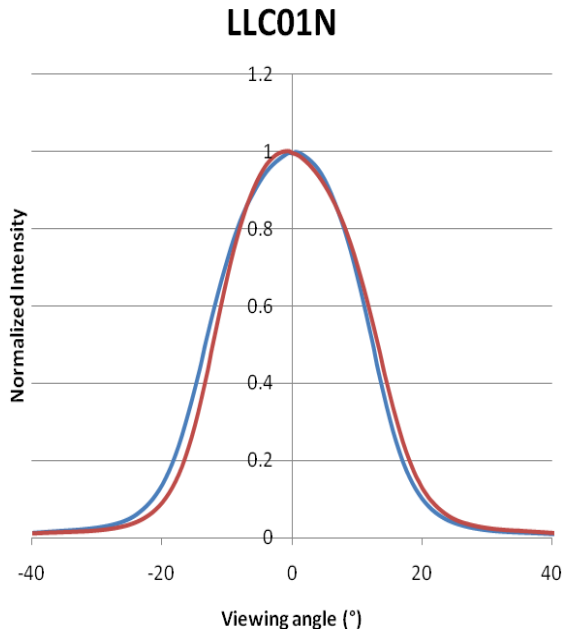
Optical Characteristics, Overview table

<i>Collimator</i>	<i>LED</i>	<i>Half-angle At 50% (°)</i>	<i>Half-angle at 10% (°)</i>	<i>Efficacy Cd/Lm</i>	<i>Holder & options</i>
 LLC49R	CREE XM-L	3.7	6.6	36.4	
					No



Optical characteristics and intensity distribution Collimator LLC01N – CREE XM-L series

Measurements done with
Ledgon 100 photogoniometer

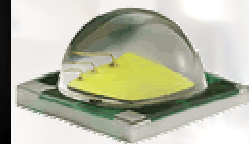
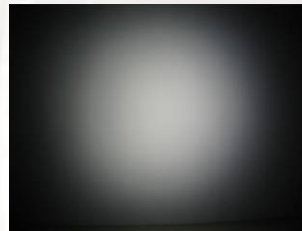
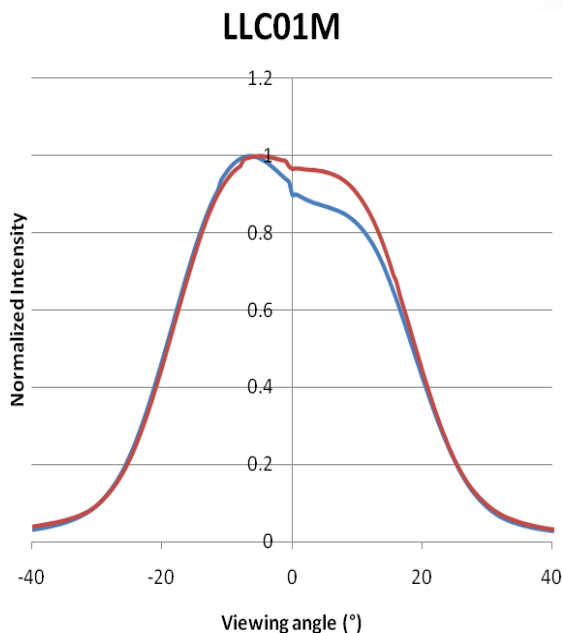


- CREE XM-L @ 350 mA
- Narrow square beam
- Efficiency in candelas per lumen : 3.6 cd/lm
- Half-angle at 50% from maximum 12.8°
- Half-angle at 10% from maximum 20.6°
- Available with dedicated holder
Ref LLH01AAA00 with dots or
LLH01XRR00 for one optic
LLH03XRR0x for three optics and
LLH04XRR0x for four optics



Optical characteristics and intensity distribution Collimator LLC01M - CREE XM-L series

Measurements done with
Ledgon 100 photogoniometer

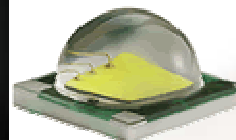
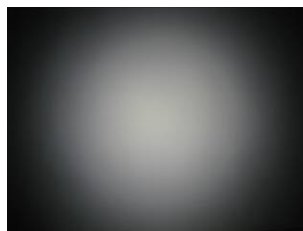
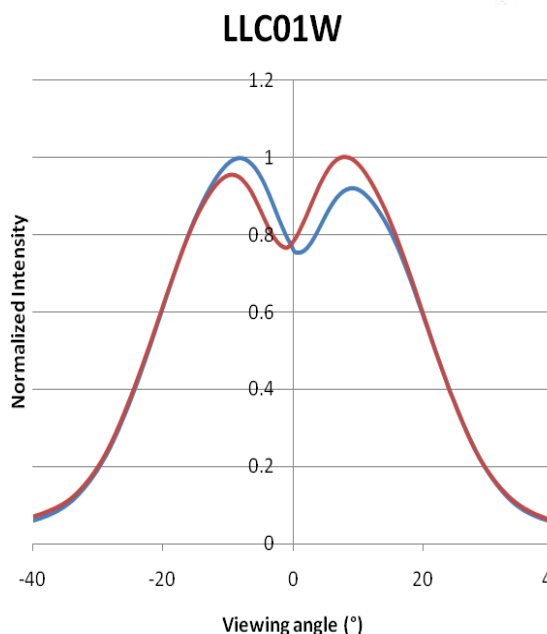


- CREE XM-L @ 350 mA
- Medium circular beam
- Efficiency in candelas per lumen : 1.8 cd/lm
- Half-angle at 50% from maximum 19.1°
- Half-angle at 10% from maximum 29.4°
- Available with dedicated holder
Ref LLH01AAA00 with dots or
LLH01XRR00 for one optic
LLH03XRR0x for three optics and
LLH04XRR0x for four optics



Optical characteristics and intensity distribution Collimator LLC01W- CREE XM-L series

Measurements done with
Ledgon 100 photogoniometer

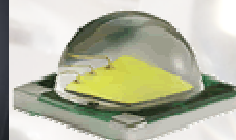
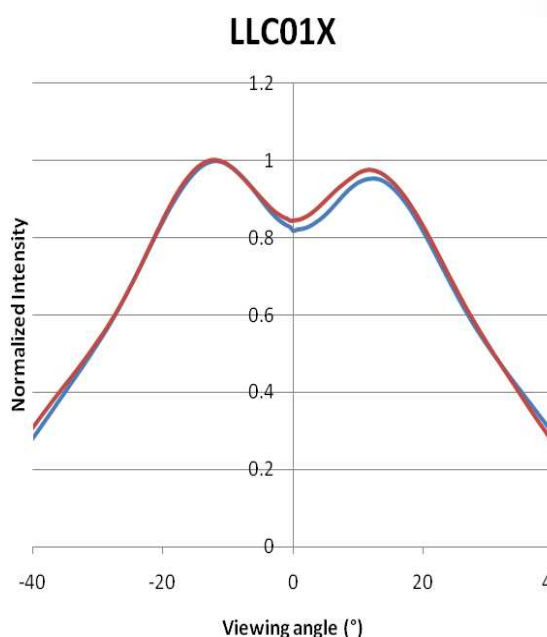


- CREE XM-L @ 350 mA
- Wide circular beam
- Efficiency in candelas per lumen :
1.3 cd/lm
- Half-angle at 50% from maximum 22.1°
- Half-angle at 10% from maximum 34.7°
- Available with dedicated holder
*Ref LLH01AAA00 with dots or
LLH01XRR00 for one optic
LLH03XRR0x for three optics and
LLH04XRR0x for four optics*



Optical characteristics and intensity distribution Collimator LLC01X- CREE XM-L series

Measurements done with
Ledgon 100 photogoniometer

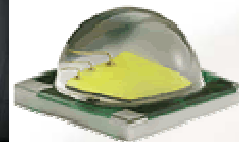
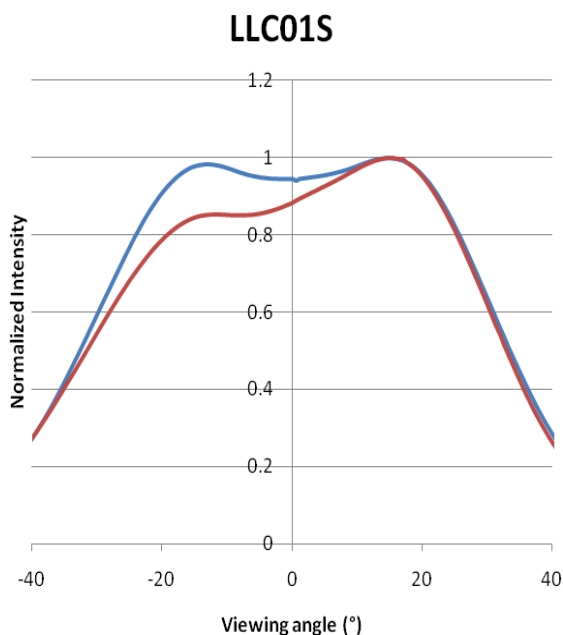


- CREE XM-L @ 350 mA
- eXtra Wide circular beam
- Efficiency in candelas per lumen :
0.7 cd/lm
- Half-angle at 50% from maximum 30.9°
- Half-angle at 10% from maximum 50.9°
- Available with dedicated holder
*Ref LLH01AAA00 with dots or
LLH01XRR00 for one optic
LLH03XRR0x for three optics and
LLH04XRR0x for four optics*



Optical characteristics and intensity distribution Collimator LLC01S- CREE XM-L series

Measurements done with
Ledgon 100 photogoniometer

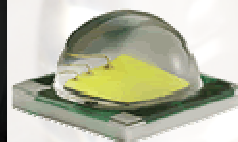
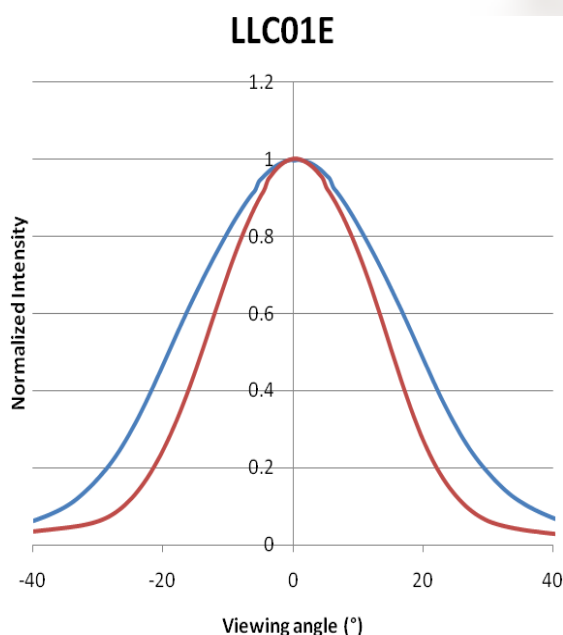


- CREE XM-L @ 350 mA
 - Super wide circular beam
 - Efficiency in candelas per lumen : 0.7 cd/lm
 - Half-angle at 50% from maximum 32.7°
 - Half-angle at 10% from maximum 49.8°
- Available with dedicated holder
Ref LLH01AAA00 with dots or
LLH01XRR00 for one optic
LLH03XRR0x for three optics and
LLH04XRR0x for four optics



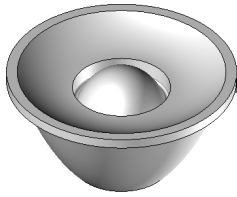
Optical characteristics and intensity distribution Collimator LLC01E- CREE XM-L series

Measurements done with
Ledgon 100 photogoniometer



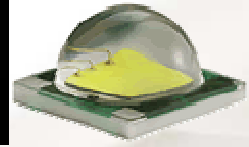
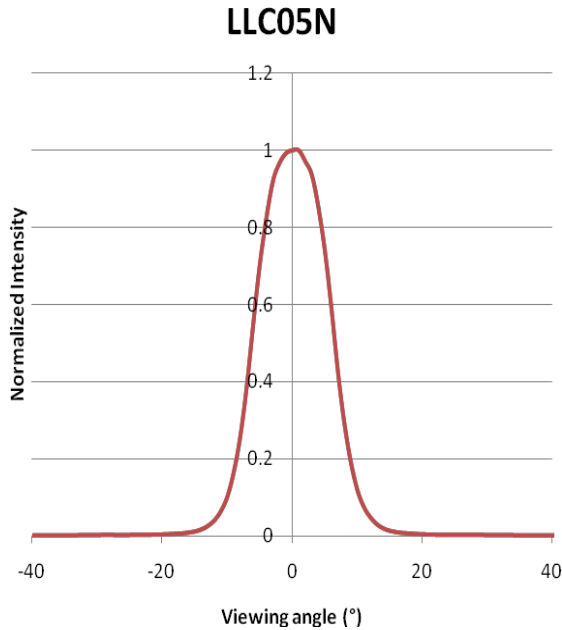
- CREE XM-L @ 350 mA
- Elliptical beam
- Efficiency in candelas per lumen : 1.8cd/lm
- Half-angle at 50% from maximum 14.6°v / 19.3 °h
- Half-angle at 10% from maximum 26.2v / 35.3h
- Available with dedicated holder
Ref LLH01AAA00 with dots or
LLH01XRR00 for one optic
LLH03XRR0x for three optic and
LLH04XRR0x for four optics



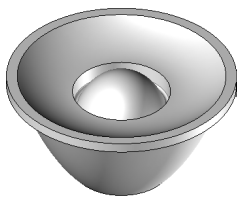


Optical characteristics and intensity distribution Collimator LLC05N - CREE XM-L series

Measurements done with
Ledgon 100 photogoniometer

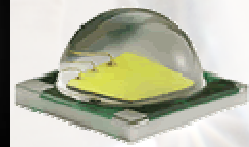
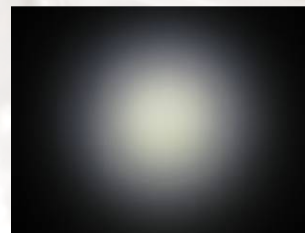
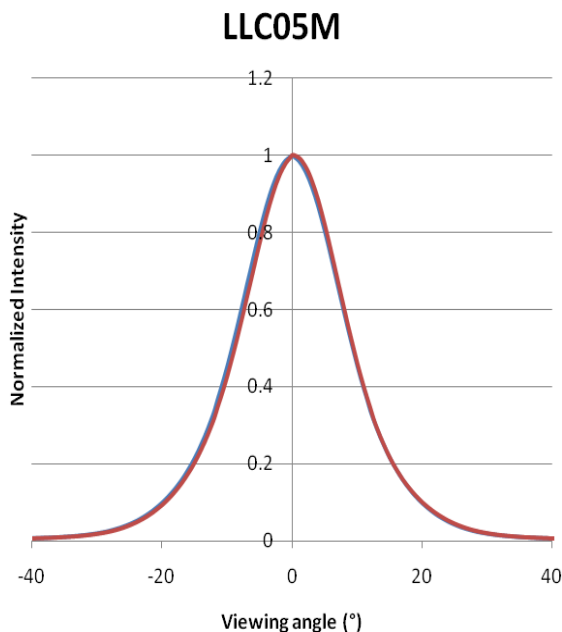


- CREE XM-L @ 350 mA
- Narrow square beam
- Efficiency in candelas per lumen : 16.1 cd/lm
- Half-angle at 50% from maximum: 6.5 °
- Half-angle at 10% from maximum 10.1 °
- Available with holder using M3 screw
Ref LLH02AAC00 or adhesive
LLH02XAL02

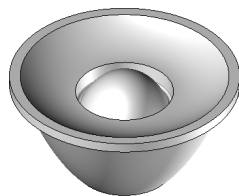


Optical characteristics and intensity distribution Collimator LLC05M - CREE XM-L series

Measurements done with
Ledgon 100 photogoniometer

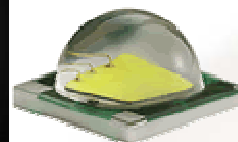
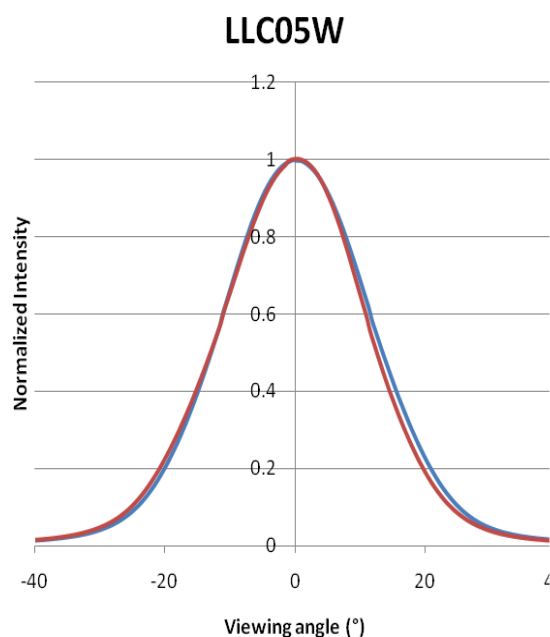


- CREE XM-L @ 350 mA
- Medium circular beam
- Efficiency in candelas per lumen : 5.0 cd/lm
- Half-angle at 50% from maximum 9.2 °
- Half-angle at 10% from maximum 19.9 °
- Available with holder using M3 screw
Ref LLH02AAC00 or adhesive
LLH02XAL02

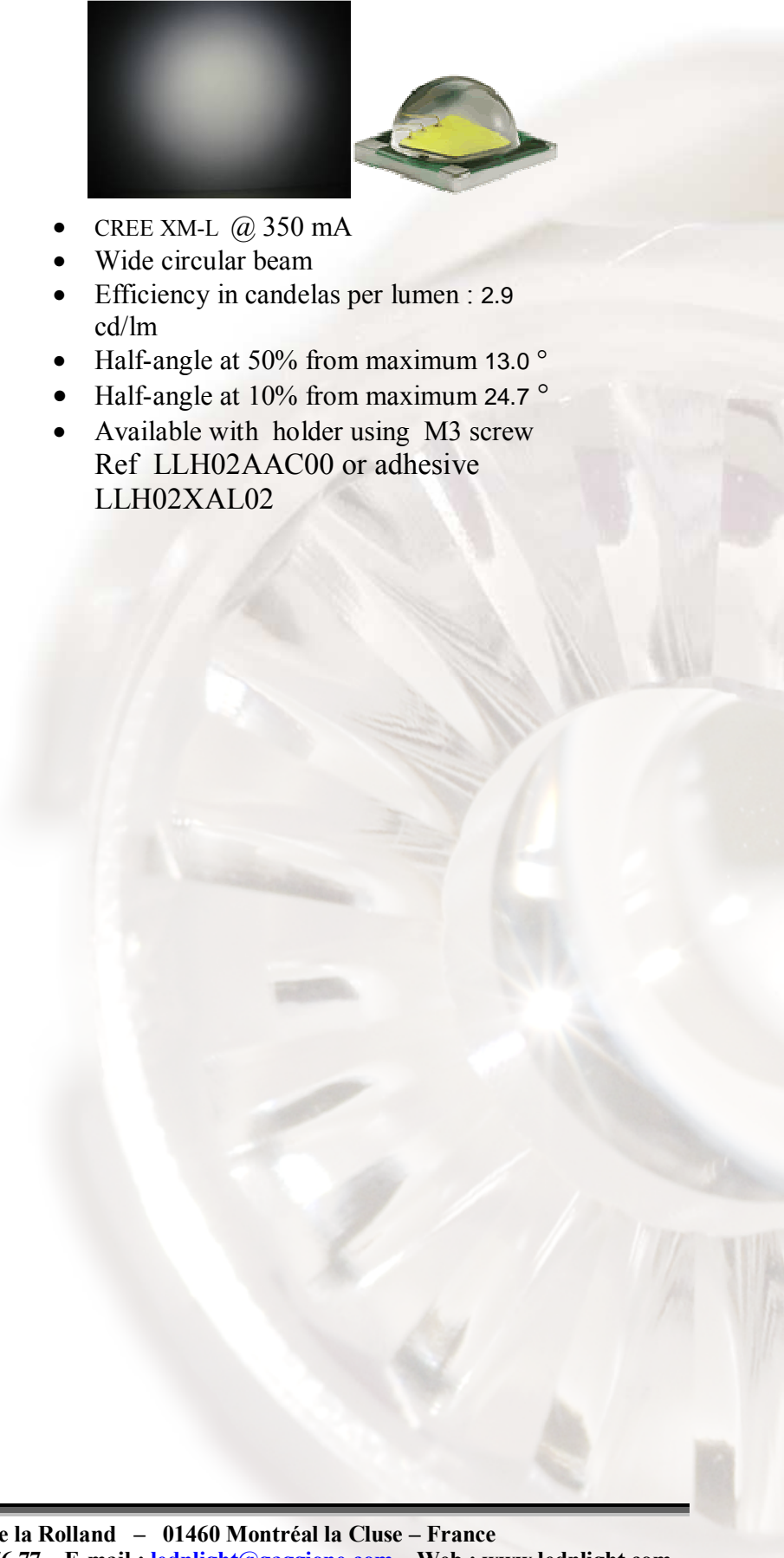


Optical characteristics and intensity distribution Collimator LLC05W - CREE XM-L series

Measurements done with
Ledgon 100 photogoniometer



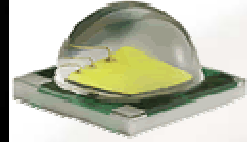
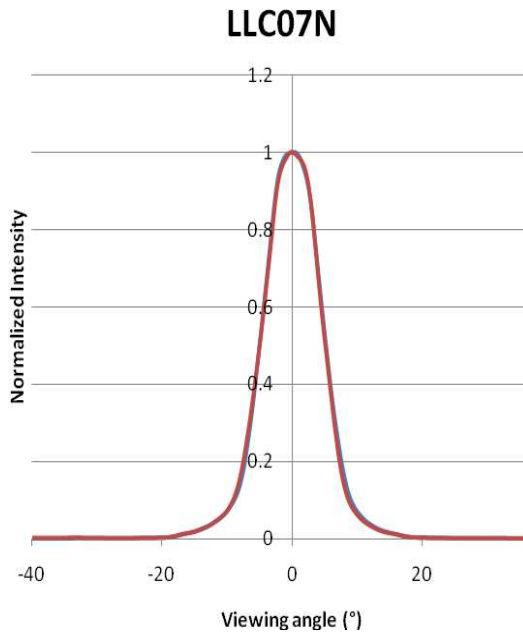
- CREE XM-L @ 350 mA
- Wide circular beam
- Efficiency in candelas per lumen : 2.9 cd/lm
- Half-angle at 50% from maximum 13.0 °
- Half-angle at 10% from maximum 24.7 °
- Available with holder using M3 screw
Ref LLH02AAC00 or adhesive
LLH02XAL02





Optical characteristics and intensity distribution Collimator LLC07N - CREE XM-L series

*Measurements done with
Ledgon 100 photogoniometer*

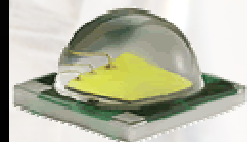
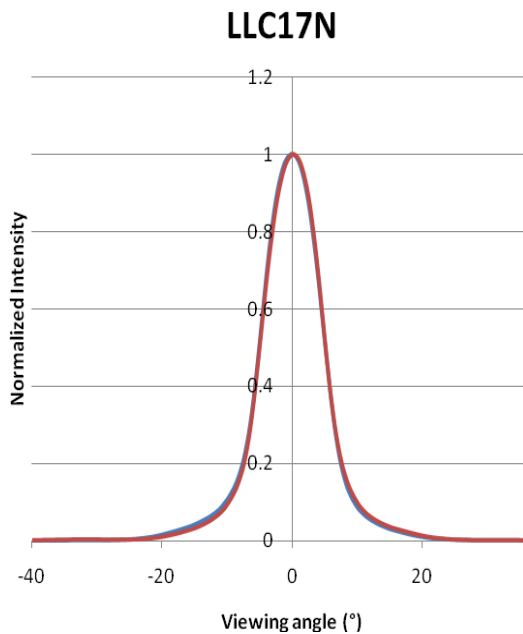


- CREE XM-L @ 350 mA Warm white
- Narrow circular beam
- ghost image of the die
- Efficiency in candelas per lumen : 22 cd/lm
- Half-angle at 50% from maximum 5.1 °
- Half-angle at 10% from maximum 8.9 °



Optical characteristics and intensity distribution Collimator LLC17N - CREE XM-L series

*Measurements done with
Ledgon 100 photogoniometer*

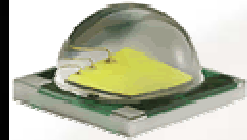
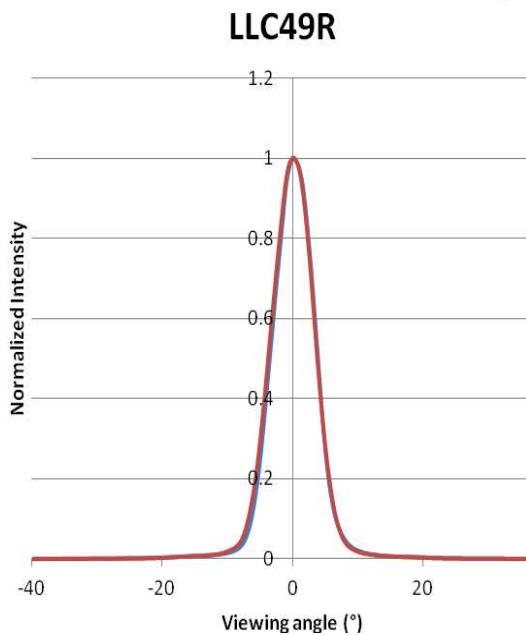


- CREE XM-L @ 350 mA Warm white
- Narrow circular beam
- Efficiency in candelas per lumen : 18.5 cd/lm
- Half-angle at 50% from maximum 5.1 °
- Half-angle at 10% from maximum 9.9 °



Optical characteristics and intensity distribution Collimator LLC49R - CREE XM-L series

Measurements done with
Ledgon 100 photogoniometer



- CREE XM-L @ 350 mA Warm white
- Very Narrow circular beam
- Efficiency in candelas per lumen : 36.4 cd/lm
- Half-angle at 50% from maximum 3.7 °
- Half-angle at 10% from maximum 6.6 °

Mechanical characteristics LLC49R

Without holder, all dimensions are in millimetres, General tolerance ± 0.15 mm
(standard NF T 58 -000 cat. 4, reduced class)

