

PRODUCT DATASHEET CS16511_HB-IP-2X6-G2-W

HB-IP-2X6-G2-W

~60° wide beam

SPECIFICATION:

Dimensions	172.0 x 71.0 mm
Height	8.2 mm
Fastening	pin, screw
Ingress protection classes	IP67
ROHS compliant	yes 🛈



MATERIALS:

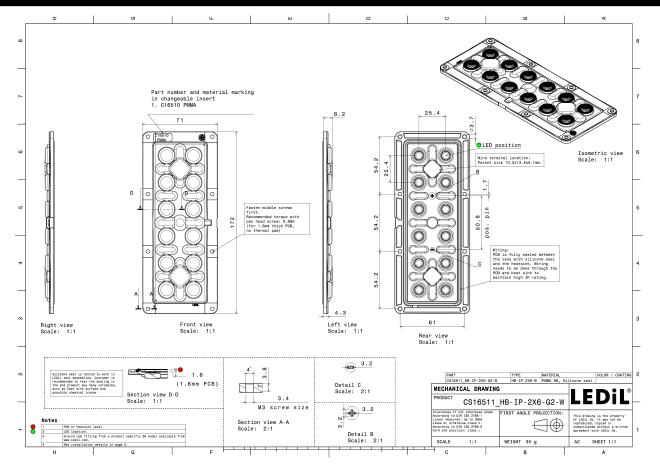
Component	Туре	Material	Colour	Finish
HB-IP-2X6-G2-W	Multi-lens	PMMA	clear	
SEAL-IP-2X6-G2	Seal	Silicone	white	

ORDERING INFORMATION:

Component		Qty in box	MOQ	MPQ	Box weight (kg)
CS16511_HB-IP-2X6-G2-W	Multi-lens	132	44	44	5.8
» Box size: 476 x 273 x 247 mm					



PRODUCT DATASHEET CS16511_HB-IP-2X6-G2-W



See also our general installation guide: <u>www.ledil.com/installation_guide</u>



OPTICAL RESULTS (MEASURED):

		90 ⁺ 90 ⁺
LED	XP-L2	77
FWHM / FWTM	66.0° / 89.0°	
Efficiency	94 %	
Peak intensity	0.8 cd/lm	
LEDs/each optic	1	
Light colour	White	at at
Required compone		
		30 ⁴ 00 30 ⁴
🥙 LUMIL	.EDS	93 ² 92 ²
LED	LUXEON 5050 Round LES	77
FWHM / FWTM	64.0° / 81.0°	
Efficiency	97 %	
Peak intensity	0.9 cd/lm	
LEDs/each optic	1	
Light colour	White	a. a.
Required compone		
		30 ⁴ 227 0 ⁴ 22 ⁵
ØNICHI/	N Contraction of the second seco	9°
LED	NVSW519A	x, , , , , , , , , , , , , , , , , , ,
FWHM / FWTM	68.0° / 84.0°	
Efficiency	98 %	002 002
Peak intensity	0.8 cd/lm	
LEDs/each optic	1	
Light colour	White	9°
Required compone	ents:	
		300
		25% qt 125*
SAMSI	JNG	90 ⁴ 90 ⁴
LED	HiLOM RM12 ZP (LH502C)	
FWHM / FWTM	66.0° / 82.0°	25
Efficiency	97 %	
Peak intensity	0.9 cd/lm	ete de la constante de la const
LEDs/each optic	1	
Light colour	White	gr and a second s
Required compone		
	ino.	
		00
		30" 30" 30"
1		



OPTICAL RESULTS (MEASURED):

SCIC LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	ROY-S26XPL2 (XP-L2) 66.0° / 89.0° 94 % 0.8 cd/lm 1 White	
seout SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	2x6 5050 module - SMJD-3625012F-XX 68.0° / 85.0° 94 % 0.9 cd/lm 1 White ents:	
seoul semiconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	Z5M3 63.0° / 76.0° 94 % 1 cd/lm 1 White ents:	



bridgelux. LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Bridgelux SMD 5050 62.0° / 81.0° 94 % 1 cd/lm 1 White	25. 60 60 60 60 72 52 60 60 60 60 60 60 60 60 60 60
CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	J Series 5050 Round LES 62.0° / 79.0° 95 % 1 cd/lm 1 White	99 ⁴ 99 ⁴ 9
CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	J Series 5050B 6V K Class 62.0° / 78.0° 95 % 1 cd/lm 1 White	30° 30° 40° 40° 40° 40° 40° 40° 40° 40°
CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	MHB-A/B 65.6° / 90.3° 94 % 0.9 cd/lm 1 White	200 200 00 00 00 00 00 00 00 00



		90° 90°
LED	XP-G2	
FWHM / FWTM	63.0° / 77.0°	75. 25.
Efficiency	94 %	
Peak intensity	1.1 cd/lm	60° 60°
LEDs/each optic	1	
Light colour	White	e*e
Required components:	white	
		30-
		30 1230 30 15° 0° 15°
		90°
LED	XP-G2 HE	
FWHM / FWTM	66.0° / 84.0°	200
Efficiency	94 %	60 ⁴
Peak intensity	0.9 cd/lm	
LEDs/each optic	1	
Light colour	White	42. 42.
Required components:		
		300 320
1		
		99° 99° 99°
CREE ÷ LEDs	XP-G3	99° 99°
	XP-G3 62.4° / 78.1°	39* 32* 39* 39* 32* 39*
LED		
LED FWHM / FWTM	62.4° / 78.1°	39* 39* 39* 39* 99* 90* 99* 90* 90* 90*
LED FWHM / FWTM Efficiency	62.4° / 78.1° 92 %	121 0 ¹ 121 99* 99* 99* 75* 99* 99* 64 64* 64*
LED FWHM / FWTM Efficiency Peak intensity	62.4° / 78.1° 92 % 1 cd/lm	23° 0 ⁴ 23°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	62.4° / 78.1° 92 % 1 cd/lm 1	g g g g g g g g g g g g g g g g g g g
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	62.4° / 78.1° 92 % 1 cd/lm 1	23 ¹ 2 ³ 22 ¹
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	62.4° / 78.1° 92 % 1 cd/lm 1	23* 24 121 99* 99* 99* 64* 66* 66* 66* 66* 66*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	62.4° / 78.1° 92 % 1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	62.4° / 78.1° 92 % 1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	62.4° / 78.1° 92 % 1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	62.4° / 78.1° 92 % 1 cd/lm 1 White NFMW48xA	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	62.4° / 78.1° 92 % 1 cd/lm 1 White NFMW48xA 62.4° / 82.8°	30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 90. 90. 90. 90. 32. 90. 90. 90. 90. 33. 90. 90. 90. 90.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	62.4° / 78.1° 92 % 1 cd/lm 1 White NFMW48xA 62.4° / 82.8° 94 %	30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 90. 90. 90. 90. 32. 90. 90. 90. 90. 33. 90. 90. 90. 90.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	62.4° / 78.1° 92 % 1 cd/lm 1 White NFMW48xA 62.4° / 82.8° 94 % 1 cd/lm	30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 90. 90. 90. 90. 32. 90. 90. 90. 90. 33. 90. 90. 90. 90.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	62.4° / 78.1° 92 % 1 cd/lm 1 White NFMW48xA 62.4° / 82.8° 94 % 1 cd/lm 1	30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 90. 90. 90. 90. 32. 90. 90. 90. 90. 33. 90. 90. 90. 90.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	62.4° / 78.1° 92 % 1 cd/lm 1 White NFMW48xA 62.4° / 82.8° 94 % 1 cd/lm	30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 90. 90. 90. 90. 32. 90. 90. 90. 90. 33. 90. 90. 90. 90.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	62.4° / 78.1° 92 % 1 cd/lm 1 White NFMW48xA 62.4° / 82.8° 94 % 1 cd/lm 1	30. 30. 30. 30. 30. 30. 30. 400 60. 60. 60. 60. 60. 60. 60. 60. 60. 60. 52. 35. 35.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	62.4° / 78.1° 92 % 1 cd/lm 1 White NFMW48xA 62.4° / 82.8° 94 % 1 cd/lm 1	30. 30. 30. 30. 30. 30. 30. 400 60. 60. 60. 60. 60. 60. 60. 60. 60. 60. 52. 35. 35.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	62.4° / 78.1° 92 % 1 cd/lm 1 White NFMW48xA 62.4° / 82.8° 94 % 1 cd/lm 1	30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 90. 90. 90. 90. 32. 90. 90. 90. 90. 33. 90. 90. 90. 90.



ED FWHM / FWTM Efficiency	NV4WB35AM	90* 90*
FWHM / FWTM Efficiency		
Efficiency		
	68.0° / 86.0°	75° 75°
	95 %	
Peak intensity	1 cd/lm	400
LEDs/each optic	1	
Light colour	White	er et
Required components:		
		30* 500 30*
OSRAM		123.0
		90* 90*
LED	PrevaLED Brick HP IP 2x6	75° 75°
FWHM / FWTM	62.0° / 75.0°	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~
Efficiency	94 %	60* 60*
Peak intensity	1 cd/lm	440
LEDs/each optic	1	
Light colour	White	43°
Required components:		
		30° 30° 30°
OSRAM Opto Semiconductors		90°
	Duris S8	
		75°
		60° 60°
		er er
		30 30
OSRAM		125% of 150
Opto Semiconductors		90* 90*
LED	OSCONIQ P 3030	75*
FWHM / FWTM	58.0° / 66.0°	
Efficiency	95 %	àge 400
D I I I I I I I I I I I I I I I I I I I	1.3 cd/lm	
Peak intensity		
LEDs/each optic	1	45°
LEDs/each optic Light colour	White	a ^r ar
LEDs/each optic		e ^r
LEDs/each optic Light colour		¢ \$6
LEDs/each optic Light colour		97 - 89
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Duris S8 58.3° / 77.5° 94 % 1.1 cd/lm 1 White	E



[
OSRAM Opto Semiconductors		90* 90*
Opto Semiconductors	OSCONIQ P 3737 (2W version)	
FWHM / FWTM	62.0° / 78.0°	75. 75.
Efficiency	94 %	
Peak intensity	94 /o 1.1 cd/lm	60° 60°
LEDs/each optic	1 Militia	19 ¹
Light colour	White	
Required components:		800
		30° 15° 0° 15° 30°
OSRAM		
Opto Semiconductors		80° 80°
LED	OSLON Square CSSRM2/CSSRM3	73.
FWHM / FWTM	61.0° / 71.0°	
Efficiency	94 %	60°
Peak intensity	1.1 cd/lm	400
LEDs/each optic	1	
Light colour	White	45°
Required components:		
		34. 34.
1		
	10	157 00 259
SAMSUN	IG	50° 0° 10°
SAMSUN LED	I G LH351B	90°
		200 200 200 200 200 200 200 200 200 200
LED	LH351B	200 00° 10° 10° 10° 10° 10° 10° 10° 10° 1
LED FWHM / FWTM	LH351B 65.0° / 82.0°	30° 30° 30° 30°
LED FWHM / FWTM Efficiency	LH351B 65.0° / 82.0° 94 %	227 0 ⁴ 127 200 607 400 400
LED FWHM / FWTM Efficiency Peak intensity	LH351B 65.0° / 82.0° 94 % 0.9 cd/lm	41. 200 80. 200 90. 30.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LH351B 65.0° / 82.0° 94 % 0.9 cd/lm 1	57° 0 ⁴ 12° 57° 0 ⁴ 12° 50° 60 ⁴ 60° 50° 60° 60° 60°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH351B 65.0° / 82.0° 94 % 0.9 cd/lm 1	99 ⁵ 99 ⁵ 99 ⁵ 99 ⁵ 200 60 60 60 60 60 60 60 60 60 60 60 60 6
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH351B 65.0° / 82.0° 94 % 0.9 cd/lm 1	200 - 200 90° - 200
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH351B 65.0° / 82.0° 94 % 0.9 cd/lm 1	200 200 200 200 200 200 200 200
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LH351B 65.0° / 82.0° 94 % 0.9 cd/lm 1 White	61 60 - 61 60 - 60 - 60 - 60 - 60 - 60 -
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LH351B 65.0° / 82.0° 94 % 0.9 cd/lm 1 White	61 61 61 61 61 61 61 61 61 61 61 61 61 6
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH351B 65.0° / 82.0° 94 % 0.9 cd/lm 1 White	61 61 61 61 61 61 61 61 61 61 61 61 61 6
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LH351B 65.0° / 82.0° 94 % 0.9 cd/lm 1 White	61 61 61 61 61 61 61 61 61 61 61 61 61 6
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LH351B 65.0° / 82.0° 94 % 0.9 cd/lm 1 White	30. 30. 30. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: SAMSUN LED FWHM / FWTM	LH351B 65.0° / 82.0° 94 % 0.9 cd/lm 1 White	30. 30. 30. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: SAMSUN LED FWHM / FWTM Efficiency	LH351B 65.0° / 82.0° 94 % 0.9 cd/lm 1 White	30. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: SAMSUN LED FWHM / FWTM Efficiency Peak intensity	LH351B 65.0° / 82.0° 94 % 0.9 cd/lm 1 White LH502C 64.0° / 80.0° 95 % 0.9 cd/lm	30. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: SAMSUN LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LH351B 65.0° / 82.0° 94 % 0.9 cd/lm 1 White LH502C 64.0° / 80.0° 95 % 0.9 cd/lm 1	30. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: SAMSUN LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH351B 65.0° / 82.0° 94 % 0.9 cd/lm 1 White LH502C 64.0° / 80.0° 95 % 0.9 cd/lm 1	30. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: SAMSUN LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH351B 65.0° / 82.0° 94 % 0.9 cd/lm 1 White LH502C 64.0° / 80.0° 95 % 0.9 cd/lm 1	30. 30. 30. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20. 20.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: SAMSUN LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH351B 65.0° / 82.0° 94 % 0.9 cd/lm 1 White LH502C 64.0° / 80.0° 95 % 0.9 cd/lm 1	30. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 20. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30. 30.



SAMSUN	IG	90° 90°
LED	LH508A	
FWHM / FWTM	60.9° / 80.0°	75'
Efficiency	93 %	
Peak intensity	1.1 cd/lm	60° - 400
LEDs/each optic	1	
Light colour	White	97°
Required components:		
		· · · · · · · · · · · · · · · · · · ·
		15 ⁵ 0 ⁶ 15 ⁵
SEOUL SEOUL SEMICONDUCTOR		90* 90*
	Z5M1/Z5M2	
FWHM / FWTM	63.0° / 76.0°	75°
Efficiency	94 %	
Peak intensity	1 cd/lm	60° 60°
LEDs/each optic	1	
Light colour	White	gr
Required components:		
		800
		34"
		15° 0° 15°
SEOUL		90° 90°
SEOUL SEMICONDUCTOR	Z8Y22T	
FWHM / FWTM	56.0° / 68.0°	75*
Efficiency	94 %	
Peak intensity	1.2 cd/lm	60° 60°
LEDs/each optic	1	
Light colour	White	454 454
Required components:		
		30" 30"
		15° 0° 15°



GENERAL INFORMATION:

NOTE: The typical beam angle will be changed by different color, chip size and chip position tolerance. The typical total beam angle is the full angle measured where the luminous intensity is half of the peak value.

MATERIALS:

As part of our continuous research and improvement processes, and to ensure the best possible quality and availability of our products, LEDiL reserves the right to change material grades without notice.

PRODUCT DATA USER AGREEMENT AND DISCLAIMER:

The measured data in the provided downloadable LEDiL Product Datasheets and Mechanical 2D-Drawings is rounded and provided as reference for planning. LEDiL Oy's optical specifications have been verified by conducting performance testing of the products in accordance with the company's quality system. The reported data are averaged results of multiple measurements with typical variation. LEDiL Oy reserves the right to without prior notification make changes and improvements to its products.

LEDiL Oy assumes neither warranty, nor guarantee nor any other liability of any kind for the contents and correctness of the provided data. The provided data has been generated with highest diligence but the provided data may in reality not represent the complete possible variation range of all intrinsic parameters. Therefore, in certain cases a deviation from the provided data could occur.

LEDiL Oy reserves the right to undertake technical changes of its products without further notification which could lead to changes in the provided data. LEDiL Oy assumes no liability of any kind for the possible deviation from any provided data or any other damage resulting from the usage of the provided data.

The user agrees to this disclaimer and user agreement with the download or usage of the provided files.

LEDiL Oy

Joensuunkatu 13 FI-24240 SALO Finland

LEDiL Inc. 228 West Page Street Suite D Sycamore IL 60178 USA

Ledil Optics Technology (Shenzhen) Co., Ltd. # 405 , Block B Casic Motor Building Shenzhen 518057 P.R.CHINA

Local sales and technical support www.ledil.com/ where_to_buy

Shipping locations Salo, Finland Hong Kong, China

Distribution Partners www.ledil.com/ where_to_buy

Last update: 06/09/2023 Subject to change without prior notice Published: 04/05/2018 LEDiL is a registered trademark of LEDiL Oy in the European Union, USA, and certain other countries. 10/10