

# HB-2X2-WW

~65° wide beam

### **SPECIFICATION:**

Dimensions	50.0 x 50.0 mm
Height	8.5 mm
Fastening	glue, pin, screw
ROHS compliant	yes 🛈



### MATERIALS:

Component HB-2X2-WW **Type** Multi-lens

Material	Colour	Finish
PMMA	clear	

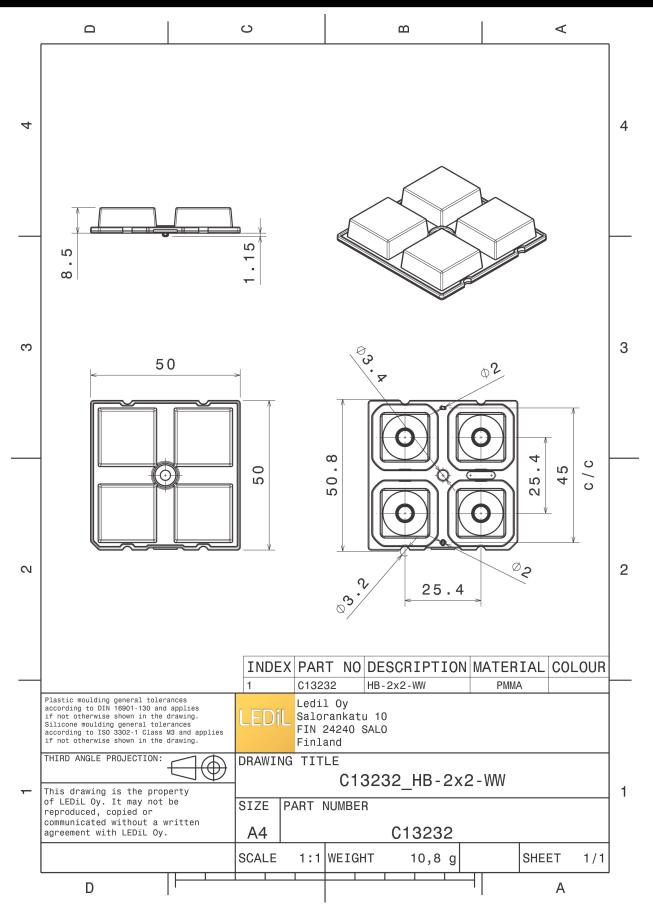
#### **ORDERING INFORMATION:**

Component C13232\_HB-2X2-WW » Box size: 480 x 280 x 300 mm

Qty in box	MOQ	MPQ	Box weight (kg)
800	160	160	9.5



# PRODUCT DATASHEET C13232\_HB-2X2-WW



See also our general installation guide: www.ledil.com/installation\_guide



CREE -			90 <sup>*</sup>
LED	XP-G		
FWHM / FWTM	69.0° / 92.0°		75
Efficiency	91 %		200
Peak intensity	0.8 cd/lm		
LEDs/each optic	1		
Light colour	White		400
Required compone	nts:		
			38° 137 0° 137
			90 <sup>4</sup>
LED	XP-G2		
FWHM / FWTM	69.0° / 92.0°		75
Efficiency	91 %		200
Peak intensity	0.7 cd/lm		60 <sup>8</sup>
LEDs/each optic	1		
Light colour	White		er*
Required compone	nts:		
			30
	•		13° 0° 15°
CREE -			97 <sup>6</sup>
			90*
LED	XT-E		34
LED FWHM / FWTM	XT-E 65.0° / 89.0°		39* 73*
LED FWHM / FWTM Efficiency	XT-E 65.0° / 89.0° 91 %		5° 75 6°
LED FWHM / FWTM Efficiency Peak intensity	XT-E 65.0° / 89.0° 91 % 0.9 cd/lm		94 25 64 60
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	XT-E 65.0° / 89.0° 91 % 0.9 cd/lm 1		5° 27 66 50 50 50
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XT-E 65.0° / 89.0° 91 % 0.9 cd/lm 1 White		5° 
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	XT-E 65.0° / 89.0° 91 % 0.9 cd/lm 1 White		5° 
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XT-E 65.0° / 89.0° 91 % 0.9 cd/lm 1 White		5° 60 60
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XT-E 65.0° / 89.0° 91 % 0.9 cd/lm 1 White		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XT-E 65.0° / 89.0° 91 % 0.9 cd/lm 1 White nts:		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XT-E 65.0° / 89.0° 91 % 0.9 cd/lm 1 White nts:		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XT-E 65.0° / 89.0° 91 % 0.9 cd/lm 1 White nts:		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XT-E 65.0° / 89.0° 91 % 0.9 cd/lm 1 White nts: EDS LUXEON Q 67.0° / 92.0°		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XT-E 65.0° / 89.0° 91 % 0.9 cd/lm 1 White nts: EDS LUXEON Q 67.0° / 92.0° 91 %		77
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XT-E 65.0° / 89.0° 91 % 0.9 cd/lm 1 White nts: EDS LUXEON Q 67.0° / 92.0° 91 % 0.8 cd/lm		77
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XT-E 65.0° / 89.0° 91 % 0.9 cd/lm 1 White nts: EDS LUXEON Q 67.0° / 92.0° 91 % 0.8 cd/lm 1		77
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone Compose Equired compone Compose Equired compone Efficiency Peak intensity LEDs/each optic Light colour	XT-E 65.0° / 89.0° 91 % 0.9 cd/lm 1 White nts: EDS LUXEON Q 67.0° / 92.0° 91 % 0.8 cd/lm 1 White		77
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XT-E 65.0° / 89.0° 91 % 0.9 cd/lm 1 White nts: EDS LUXEON Q 67.0° / 92.0° 91 % 0.8 cd/lm 1 White		77
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone Composition Required compone Composition LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XT-E 65.0° / 89.0° 91 % 0.9 cd/lm 1 White nts: EDS LUXEON Q 67.0° / 92.0° 91 % 0.8 cd/lm 1 White		77
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone Composition Required compone Composition LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XT-E 65.0° / 89.0° 91 % 0.9 cd/lm 1 White nts: EDS LUXEON Q 67.0° / 92.0° 91 % 0.8 cd/lm 1 White		77



🙆 LUMIL	.EDS	99 <sup>4</sup> 99 <sup>4</sup>
LED	LUXEON Z ES	
FWHM / FWTM	59.0° / 87.0°	
Efficiency	90 %	
Peak intensity	1 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone	ents:	
		80
		34. 35.
		135 <sup>1</sup> d <sup>4</sup> 135 <sup>3</sup>
		99°
LED	NVSxE21A	77
FWHM / FWTM	54.0° / 89.0°	
Efficiency	94 %	
Peak intensity	1.1 cd/lm	
LEDs/each optic	1	
Light colour	White	e
Required compone	ents:	
		30 <sup>4</sup> 35 <sup>4</sup> 0 <sup>4</sup> 35 <sup>4</sup>
OSRAM	1	90* 90 <sup>*</sup>
LED	PrevaLED Brick HP 2x8	
FWHM / FWTM	67.0° / 92.0°	77
Efficiency	92 %	
Peak intensity	0.8 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone		
		300
OSRAM		19 <sup>5</sup> 0 <sup>6</sup> 13 <sup>5</sup>
Opto Semiconductors		50° 50°
LED	OSLON Square CSSRM2/CSSRM3	75
FWHM / FWTM	67.0° / 92.0°	
Efficiency	92 %	ga
Peak intensity	0.8 cd/lm	
LEDs/each optic	1	
Light colour	White	¢*
Required compone	ents:	
		30* <u>90</u> 30* <del>00</del> 30* 30*



OSRAM		
Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	OSLON Square CSSRM2/CSSRM3 71.0° / 94.0° 94 % 0.7 cd/lm 1 White ents:	
OSRAM Opto Semiconductors		50 <sup>4</sup>
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	OSLON Square PC 63.0° / 90.0° 91 % 0.9 cd/lm 1 White ents:	
OSRAM Opto Semiconductors		91 <sup>4</sup> 97 <sup>4</sup>
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	OSLON SSL 80 54.0° / 80.0° 92 % 1.1 cd/lm 1 White ents:	
SAMS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LH351A 68.0° / 91.0° 92 % 0.8 cd/lm 1 White	



SAMSI	JNG		90*	90'
LED	LH351B			
FWHM / FWTM	65.0° / 92.0°		75'	75'
Efficiency	89 %		200	
Peak intensity	0.8 cd/lm		50°	60
LEDs/each optic	1		400	
Light colour	White		45*	45
Required compone				X
i toquiloù oompono				
			30° 500 00	15°
<b>S</b> ΛΜS	ING		90°	90'
LED	LH351Z			
FWHM / FWTM	63.0° / 89.0°		78'	75
Efficiency	89 %			
Peak intensity	0.9 cd/lm		60 <sup>1</sup>	60'
LEDs/each optic	1		400	
Light colour	White		45*	
Required compone				X
Required compone	1113.			
			***	
			36°	12°, 30,
SEOUL			90*	90'
LED	Z8Y15			
FWHM / FWTM	56.0° / 92.0°		75°	778
	85 %		- 200	
Efficiency	85 % 0.9 cd/lm		200	60'
Efficiency Peak intensity	0.9 cd/lm		60 <sup>1</sup>	60
Efficiency Peak intensity LEDs/each optic	0.9 cd/lm 1		200 Ext T	
Efficiency Peak intensity LEDs/each optic Light colour	0.9 cd/lm 1 White		er er eo	65
Efficiency Peak intensity LEDs/each optic	0.9 cd/lm 1 White		20 20 40 27	67
Efficiency Peak intensity LEDs/each optic Light colour	0.9 cd/lm 1 White		20 6 7 7 60 80	60
Efficiency Peak intensity LEDs/each optic Light colour	0.9 cd/lm 1 White		200 200 400 200 400 000	e 
Efficiency Peak intensity LEDs/each optic Light colour Required compone	0.9 cd/lm 1 White			15°
Efficiency Peak intensity LEDs/each optic Light colour Required compone	0.9 cd/lm 1 White			60 67 57 99
Efficiency Peak intensity LEDs/each optic Light colour Required compone	0.9 cd/lm 1 White nts:			5° 50 50 50 50 50 50 50 50 50 50 50 50 50
Efficiency Peak intensity LEDs/each optic Light colour Required compone	0.9 cd/lm 1 White nts: Z8Y19			13°
Efficiency Peak intensity LEDs/each optic Light colour Required compone	0.9 cd/lm 1 White nts: Z8Y19 56.0° / 92.0°			12, 23 12, 20 12, 20 12
Efficiency Peak intensity LEDs/each optic Light colour Required compone scoul staticonductor LED FWHM / FWTM Efficiency	0.9 cd/lm 1 White nts: Z8Y19 56.0° / 92.0° 85 %			12 <sup>3</sup> 25 12 <sup>3</sup> 20 <sup>3</sup>
Efficiency Peak intensity LEDs/each optic Light colour Required compone soul stanconductor LED FWHM / FWTM Efficiency Peak intensity	0.9 cd/lm 1 White nts: Z8Y19 56.0° / 92.0°			57°
Efficiency Peak intensity LEDs/each optic Light colour Required compone stous semiconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	0.9 cd/lm 1 White nts: Z8Y19 56.0° / 92.0° 85 % 0.9 cd/lm 1			-75
Efficiency Peak intensity LEDs/each optic Light colour Required compone stour semconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	0.9 cd/lm 1 White nts: Z8Y19 56.0° / 92.0° 85 % 0.9 cd/lm 1 White			
Efficiency Peak intensity LEDs/each optic Light colour Required compone sources sources sources teD FWHM / FWTM Efficiency Peak intensity LEDs/each optic	0.9 cd/lm 1 White nts: Z8Y19 56.0° / 92.0° 85 % 0.9 cd/lm 1 White			-75
Efficiency Peak intensity LEDs/each optic Light colour Required compone sources sources ted FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	0.9 cd/lm 1 White nts: Z8Y19 56.0° / 92.0° 85 % 0.9 cd/lm 1 White			5° 5° 5° 5° 5° 5° 5°
Efficiency Peak intensity LEDs/each optic Light colour Required compone SEQUESTIC COMPOSE SEQUESTIC SEQUES	0.9 cd/lm 1 White nts: Z8Y19 56.0° / 92.0° 85 % 0.9 cd/lm 1 White			



stour semiconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	Z8Y22 55.0° / 94.0° 94 % 1 cd/lm 1 White nts:	20 20 20 20 20 20 20 20 20 20
SEOUL		
stout stemiconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	Z8Y22P 65.0° / 95.0° 94 % 0.9 cd/lm 1 White nts:	25° 20° 20° 20° 20° 20° 20° 20° 20
TOSHIBA		90* 90*
Leading Innovation >>> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	TL1L4 60.0° / 87.0° 84 % 0.9 cd/lm 1 White nts:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	RLE G1 49x121mm 2000lm xxx EXC OTD 67.0° / 93.0° 94 % 0.9 cd/lm 1 White	50° 50° 50° 50° 50° 50° 50° 50°



LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	RLE G1 49x133mm 2000lm xxx EXC OTD 67.0° / 93.0° 94 % 0.9 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	RLE G1 49x223mm 4000lm xxx EXC OTD 67.0° / 93.0° 94 % 0.9 cd/lm 1 White	
<b>TRIDON</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	RLE G1 49x245mm 4000lm xxx EXC OTD 67.0° / 93.0° 94 % 0.9 cd/lm 1 White	



# **OPTICAL RESULTS (SIMULATED):**

CREE LED LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	XD16 69.0° / 90.0° 95 % 0.8 cd/lm 1 White	
		90 <sup>4</sup>
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	XP-G2 72.0° / 94.0° 92 % 0.7 cd/lm 1 White	
Protective plat	e, glass	
		30° 30° 30°
LUMILEI	DS	90* 90*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 3030 2D (Round LES) 64.0° / 82.0° 94 % 1 cd/lm 1 White	27 61 67 60 60 60 60 60 60 60 60 60 60 60 60 60
🤭 LUMILEI	DS	90*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON C 65.0° / 88.0° 94 % 0.8 cd/lm 1 White	20 60 60 60 60 60 60 60 60 60 60 60 60 60



# **OPTICAL RESULTS (SIMULATED):**

OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	OSCONIQ C 2424 68.0° / 82.0° 97 % 0.9 cd/lm 1 White	
OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate	OSLON Square CSSRM2/CSSRM3 70.0° / 94.0° 88 % 0.7 cd/lm 1 White	999 999 999 999 999 999 999 999 999 99
seoul SENICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Z8Y22T 63.0° / 86.0° 94 % 1 cd/lm 1 White	99 <sup>4</sup> 99 <sup>4</sup> 9



# PRODUCT DATASHEET C13232\_HB-2X2-WW

#### **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.

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