

PRODUCT DATASHEET C14606_HB-2X2-WW

HB-2X2-WW

~65° wide beam optimized for CREE XP-L and XM-L

TECHNICAL SPECIFICATIONS:

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



MATERIAL SPECIFICATIONS:

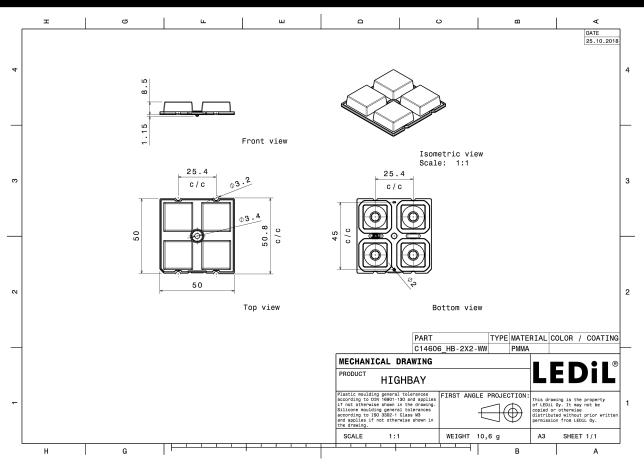
ComponentTypeMaterialColourHB-2X2-WWMulti-lensPMMAclear

ORDERING INFORMATION:

Component	Qty in box	MOQ	MPQ	Box weight (kg)
C14606_HB-2X2-WW	800	160	160	9.2
» Box size: 480 x 280 x 300 mm				

Finish

PRODUCT DATASHEET C14606_HB-2X2-WW



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



bridgelux. LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	Bridgelux SMD 5050 59.0° / 96.0° 94 % 0.8 cd/lm 1 White nts:	
CREE (LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XD16 61.0° / 97.0° 92 % 0.8 cd/lm 4 White	
CREE LEC LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XD16 63.0° / 92.0° 93 % 0.8 cd/lm 1 White	
CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XHP35 HD 67.0° / 100.0° 84 % 0.7 cd/lm 1 White	



	0		50*
LED	XM-L		73*
FWHM / FWTM	66.0° / 99.0°		
Efficiency	93 %		60 ⁴ 60 ⁴
Peak intensity	0.8 cd/lm		
LEDs/each optic	1		
Light colour	White		93* dz*
Required compone	ents:		
			540
			30* <u>00</u> 30* 30*
	D	and the second division of the second divisio	50°
LED	XM-L2		
FWHM / FWTM	62.0° / 96.0°		22.
Efficiency	92 %		200
Peak intensity	0.8 cd/lm		
LEDs/each optic	1		
Light colour	White		gr or
Required compone	ents:		
			30* 30*
			453 00 1350
			50° 50°
LED	XM-L3		75
FWHM / FWTM	70.0° / 98.0°		
Efficiency	94 %		97 - 200 - F
Efficiency Peak intensity	94 % 0.7 cd/lm		60 ⁴
Efficiency Peak intensity LEDs/each optic	94 % 0.7 cd/lm 1		60 ² 60 ²
Efficiency Peak intensity LEDs/each optic Light colour	94 % 0.7 cd/lm 1 White		gr
Efficiency Peak intensity LEDs/each optic	94 % 0.7 cd/lm 1 White		91 - 200 - 60 97 - 60
Efficiency Peak intensity LEDs/each optic Light colour	94 % 0.7 cd/lm 1 White		
Efficiency Peak intensity LEDs/each optic Light colour	94 % 0.7 cd/lm 1 White		
Efficiency Peak intensity LEDs/each optic Light colour	94 % 0.7 cd/lm 1 White		200 200 200 200 200 200 200 200 200 200
Efficiency Peak intensity LEDs/each optic Light colour	94 % 0.7 cd/lm 1 White ents:		
Efficiency Peak intensity LEDs/each optic Light colour Required compone	94 % 0.7 cd/lm 1 White ents:		94 ²
Efficiency Peak intensity LEDs/each optic Light colour Required compone	94 % 0.7 cd/lm 1 White ents:		137 - 35 - 157
Efficiency Peak intensity LEDs/each optic Light colour Required compone	94 % 0.7 cd/lm 1 White ents: XP-G2		94 ²
Efficiency Peak intensity LEDs/each optic Light colour Required compone CREE (LED ED FWHM / FWTM	94 % 0.7 cd/lm 1 White ents: XP-G2 63.0° / 93.0°		94 ²
Efficiency Peak intensity LEDs/each optic Light colour Required compone CREE (LED ED FWHM / FWTM Efficiency	94 % 0.7 cd/lm 1 White ents: XP-G2 63.0° / 93.0° 91 %		94 ²
Efficiency Peak intensity LEDs/each optic Light colour Required compone CREE (LED FWHM / FWTM Efficiency Peak intensity	94 % 0.7 cd/lm 1 White ents: XP-G2 63.0° / 93.0° 91 % 0.8 cd/lm		94 ²
Efficiency Peak intensity LEDs/each optic Light colour Required compone CREE (LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	94 % 0.7 cd/lm 1 White white XP-G2 63.0° / 93.0° 91 % 0.8 cd/lm 1 White		25 ⁻ 25 ⁻ 25 ⁻ 400 60 ⁻ 60 ⁻
Efficiency Peak intensity LEDs/each optic Light colour Required compone Equired compone CREE (LED EWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	94 % 0.7 cd/lm 1 White white XP-G2 63.0° / 93.0° 91 % 0.8 cd/lm 1 White		25 ⁻ 25 ⁻ 25 ⁻ 400 60 ⁻ 60 ⁻
Efficiency Peak intensity LEDs/each optic Light colour Required compone Equired compone CREE (LED EWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	94 % 0.7 cd/lm 1 White white XP-G2 63.0° / 93.0° 91 % 0.8 cd/lm 1 White		25 ⁻ 25 ⁻ 25 ⁻ 400 60 ⁻ 60 ⁻
Efficiency Peak intensity LEDs/each optic Light colour Required compone CREE (LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	94 % 0.7 cd/lm 1 White white XP-G2 63.0° / 93.0° 91 % 0.8 cd/lm 1 White		25 ⁻ 25 ⁻ 25 ⁻ 400 60 ⁻ 60 ⁻



				90*			90°
LED	XP-G3						
FWHM / FWTM	64.0° / 94.0°			75*			75*
Efficiency	86 %				$\langle / / \gamma^{*}$		
Peak intensity	0.8 cd/lm			60.5	\times	\times	60.
LEDs/each optic	1						
Light colour	White			45*			45*
Required componer					\times		
					/ \	»/``\	
				\sim			
							\sum
				30*	15°	° 15°	30*
			•	90°			90°
LED	XP-G3			75*		$ \land \frown $	1
FWHM / FWTM	63.0° / 95.0°			3	\square		
Efficiency	90 %			60.º			60*
Peak intensity	0.8 cd/lm				ΔI		
LEDs/each optic	1					<u>~</u>	\sim
Light colour	White			45*			45°
Required componer	nts:				A.		
							\searrow
Protective	plate, glass			1	$\sim \wedge$		
				30*	15° 0	25°	36°
				90*			90*
	XP-L HD						90*
				90* 75*			90° 75°
LED	XP-L HD						
LED FWHM / FWTM	XP-L HD 66.0° / 102.0°						20°
LED FWHM / FWTM Efficiency	XP-L HD 66.0° / 102.0° 93 %					0	90°
LED FWHM / FWTM Efficiency Peak intensity	XP-L HD 66.0° / 102.0° 93 % 0.7 cd/lm					0	90° 72° 60°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	XP-L HD 66.0° / 102.0° 93 % 0.7 cd/lm 1 White				3	e	90* 72* 60*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XP-L HD 66.0° / 102.0° 93 % 0.7 cd/lm 1 White						90°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XP-L HD 66.0° / 102.0° 93 % 0.7 cd/lm 1 White						99*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XP-L HD 66.0° / 102.0° 93 % 0.7 cd/lm 1 White						99'
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XP-L HD 66.0° / 102.0° 93 % 0.7 cd/Im 1 White nts:						80°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer	XP-L HD 66.0° / 102.0° 93 % 0.7 cd/lm 1 White nts:			73 60 93 30*			90 ²
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer	XP-L HD 66.0° / 102.0° 93 % 0.7 cd/lm 1 White hts: XP-L2			73 60 93 30*			90°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer	XP-L HD 66.0° / 102.0° 93 % 0.7 cd/lm 1 White nts: XP-L2 62.0° / 101.0°			73 60 43 30*			60°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer	XP-L HD 66.0° / 102.0° 93 % 0.7 cd/lm 1 White nts: XP-L2 62.0° / 101.0° 93 %			73 60 43 30*			60°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer	XP-L HD 66.0° / 102.0° 93 % 0.7 cd/lm 1 White nts: XP-L2 62.0° / 101.0° 93 % 0.8 cd/lm			73 60 43 30*			
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer	XP-L HD 66.0° / 102.0° 93 % 0.7 cd/lm 1 White nts: XP-L2 62.0° / 101.0° 93 % 0.8 cd/lm 1			73 60 43 30*			
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer Required componer CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XP-L HD 66.0° / 102.0° 93 % 0.7 cd/lm 1 White nts: XP-L2 62.0° / 101.0° 93 % 0.8 cd/lm 1 White			73 60 43 30*			
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer	XP-L HD 66.0° / 102.0° 93 % 0.7 cd/lm 1 White nts: XP-L2 62.0° / 101.0° 93 % 0.8 cd/lm 1 White			73 60 43 30*			
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XP-L HD 66.0° / 102.0° 93 % 0.7 cd/lm 1 White nts: XP-L2 62.0° / 101.0° 93 % 0.8 cd/lm 1 White			73 60 43 30*			
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XP-L HD 66.0° / 102.0° 93 % 0.7 cd/lm 1 White nts: XP-L2 62.0° / 101.0° 93 % 0.8 cd/lm 1 White			73 60 43 30*			



UMIL	.EDS	80*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LUXEON 5050 Round LES 61.0° / 96.0° 94 % 0.8 cd/lm 1 White	
	EDC	157 of 557
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LUXEON V 63.0° / 97.0° 93 % 0.8 cd/lm 1 White	
	EDS	50 ⁴
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LUXEON V2 61.0° / 93.0° 94 % 0.9 cd/lm 1 White ents:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	SST-10-B130 69.0° / 94.0° 95 % 0.8 cd/lm 1 Deep Red	



MST Your solu	itions	90 ⁴
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	RecLED 122x50mm 1900lm 730 2x4 Opt G1 61.0° / 94.0° 95 % 0.8 cd/lm 1 White ents:	
ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	NVSW219D 64.0° / 95.0° 94 % 0.8 cd/lm 1 White	
ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	NVSW219F 69.0° / 96.0° 95 % 0.8 cd/lm 1 White	
ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	NVSW219F 66.0° / 96.0° 94 % 0.8 cd/lm 1 White	



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LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	NVSW319B 68.0° / 100.0° 93 % 0.8 cd/lm 1 White	
ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	NVSW3x9A 62.0° / 97.0° 93 % 0.8 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	NWSx229A 63.0° / 97.0° 85 % 0.8 cd/lm 1 White	
OSRAN LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	PL-BRICK HP 3800 2x8 SSG 64.0° / 96.0° 94 % 0.8 cd/lm 1 White	



OSRAM		90 ⁴
LED	PrevaLED Brick HP 2x8	
FWHM / FWTM	64.0° / 93.0°	
Efficiency	92 %	
Peak intensity	0.8 cd/lm	
LEDs/each optic	1	
Light colour	White	gr d
Required compone	ents:	
		20 ⁻
OSRAM Opto Semiconductors		
Opto Semiconductors	Duris S8	
EED FWHM / FWTM	61.0° / 97.0°	7
Efficiency	93 %	
Peak intensity	0.8 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone		
- 1		
		207 207 0 ⁴ 20 ⁵
OSRAM Opto Semiconductors		994
LED	OSCONIQ P 3737 (2W version)	
FWHM / FWTM	58.0° / 88.0°	
Efficiency	91 %	
Peak intensity	0.9 cd/lm	
LEDs/each optic	1	
Light colour	White	er*
Required compone	onte:	
required compone		
		84
	e plate, glass	
		20 ⁴ 100 12 ⁷ 100 12 ⁷ 2 ⁵
		24 ³ 25 ³
Protective		
Protective OSRAM Opto Semiconductors	e plate, glass	
Protective OSRAM Opto Semiconductors LED	osconiq P 3737 (3W version)	27 - 29 29
Protective OSRAM Opto Semiconductors LED FWHM / FWTM	OSCONIQ P 3737 (3W version) 56.0° / 93.0°	27 - 29 29
Protective OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	OSCONIQ P 3737 (3W version) 56.0° / 93.0° 93 %	25
Protective OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency	OSCONIQ P 3737 (3W version) 56.0° / 93.0° 93 % 0.9 cd/lm	25
Protective OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	e plate, glass OSCONIQ P 3737 (3W version) 56.0° / 93.0° 93 % 0.9 cd/lm 1 White	25
Protective Oppo Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	e plate, glass OSCONIQ P 3737 (3W version) 56.0° / 93.0° 93 % 0.9 cd/lm 1 White	35- 36- 36- 36- 36- 36- 36- 36- 36- 36- 36
Protective Oppto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	e plate, glass OSCONIQ P 3737 (3W version) 56.0° / 93.0° 93 % 0.9 cd/lm 1 White	27 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20



OSRAM Opto Semiconductors		50, 50, 50,
LED	OSLON Square CSSRM2/CSSRM3	
FWHM / FWTM	64.0° / 93.0°	75
Efficiency	92 %	
Peak intensity	0.8 cd/lm	
LEDs/each optic	1	
Light colour	White	gr de la companya de
Required compone		
		v ,
		15° 0° 15°
PHILIF	S	50* 50*
LED	Fortimo FastFlex LED 2x8 DA G4	
FWHM / FWTM	64.0° / 96.0°	77
Efficiency	93 %	
Peak intensity	0.8 cd/lm	
LEDs/each optic	1	
Light colour	White	er / / / er
Required compone	ents:	
		30, 000 34,
PHILIP	05	80, 20, 20, 20, 20, 20, 20, 20, 20, 20, 2
LED FWHM / FWTM	Fortimo FastFlex LED 2x8 DA G4+ 64.0° / 101.0°	77
Efficiency	95 %	
Peak intensity	93 % 0.8 cd/lm	
LEDs/each optic	1	
Light colour	' White	e* / ***
Required compone		
noquirou compone		
		90°
PHILI	S	50*
LED	Fortimo FastFlex LED 2x8 DA G5	
FWHM / FWTM	64.0° / 97.0°	75
Efficiency	94 %	
Peak intensity	0.8 cd/lm	
LEDs/each optic	1	
Light colour	White	ar ar
Required compone		
		20 135 0° 15°



PHILIF	S	95 ⁴ 95 ⁴
LED	Fortimo FastFlex LED 2x8 DA HE	
FWHM / FWTM	59.0° / 97.0°	
Efficiency	95 %	and the second se
Peak intensity	0.9 cd/lm	
LEDs/each optic	1	
Light colour	White	a. A
Required compone	nts:	
		30° 0° 10° ×
S ΛΜSI	JNG	90 ⁴
LED	HiLOM RC12 Z (LH181B)	
FWHM / FWTM	48.0° / 85.0°	
Efficiency	96 %	
Peak intensity	1.1 cd/lm	
LEDs/each optic	1	
Light colour	White	er a
Required compone	nts:	
		20° 1200 30
		255 0 ⁴ 15 ⁵
SAMSU	JNG	50 ⁴ 50
LED	HiLOM RH12 Z (LH351C)	
FWHM / FWTM	62.0° / 97.0°	
Efficiency	95 %	
Peak intensity	0.8 cd/lm	
LEDs/each optic	1	
Light colour	White	or e
Required compone	nts:	
		30 ⁰ 20 ⁰ 20 ⁰ 20 ⁰
SVWSI	ING	
SVWSI		90 ⁴ 25 ⁷ 0 ⁴ 25 ⁴ 9
LED	HiLOM RH16 (LH351C)	
LED FWHM / FWTM	HiLOM RH16 (LH351C) 61.0° / 96.0°	
LED FWHM / FWTM Efficiency	HiLOM RH16 (LH351C) 61.0° / 96.0° 94 %	
LED FWHM / FWTM Efficiency Peak intensity	HiLOM RH16 (LH351C) 61.0° / 96.0° 94 % 0.9 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	HiLOM RH16 (LH351C) 61.0° / 96.0° 94 % 0.9 cd/lm 1	20 60 ⁷ 40
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	HiLOM RH16 (LH351C) 61.0° / 96.0° 94 % 0.9 cd/lm 1 White	20 60 ⁷ 40
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	HiLOM RH16 (LH351C) 61.0° / 96.0° 94 % 0.9 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	HiLOM RH16 (LH351C) 61.0° / 96.0° 94 % 0.9 cd/lm 1 White	20 60 ⁷ 40
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	HiLOM RH16 (LH351C) 61.0° / 96.0° 94 % 0.9 cd/lm 1 White	20 60 ⁷ 40



SAMSI	UNG	20 ⁴	90
LED	HiLOM RM12 Z (LH502C)		4.
FWHM / FWTM	57.0° / 98.0°		\checkmark
Efficiency	94 %		/~~«
Peak intensity	0.9 cd/lm		
LEDs/each optic	1		
Light colour	White		~ **
Required compone	ents:		
		30 ⁴ 15 ⁴ 0 ⁴	
SAMSI	JNG	84	90
LED	HiLOM RM16 Z (LH502C)		
FWHM / FWTM	57.0° / 97.0°		~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Efficiency	95 %	and the second se	
Peak intensity	0.9 cd/lm		
LEDs/each optic	1		
Light colour	White		× **
Required compone	ents:		
		30° (0) 15	. 32
SAMS	UNG	20'	90
LED	HILOM RM8 Z (LH502C)		
FWHM / FWTM	57.0° / 98.0°	72	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
Efficiency	95 %		6
Peak intensity	0.9 cd/lm		
LEDs/each optic	1		
Light colour	White	e .	~ ~
Light colour			
Light colour		e ^r . 60 50	
Light colour			
Light colour Required compone	ents:		
Light colour	unts:		
Light colour Required compone	ents:		, 30 , 30 , 73
Light colour Required compone SAMSI LED FWHM / FWTM	ents: UNG LH351B		
Light colour Required compone SAMSI LED FWHM / FWTM Efficiency Peak intensity	ents: UNG LH351B 62.0° / 92.0°		
Light colour Required compone SAMSI LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	ents: UNG LH351B 62.0° / 92.0° 86 %		
Light colour Required compone SAMSI LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	ents: UNG LH351B 62.0° / 92.0° 86 % 0.8 cd/lm 1 White		×
Light colour Required compone SAMSI LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	ents: UNG LH351B 62.0° / 92.0° 86 % 0.8 cd/lm 1 White		×
Light colour Required compone SAMSI LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	ents: UNG LH351B 62.0° / 92.0° 86 % 0.8 cd/lm 1 White		
Light colour Required compone SAMSI LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	ents: UNG LH351B 62.0° / 92.0° 86 % 0.8 cd/lm 1 White		



СЛЛАСІ		
<u>SNMS</u> Ι		90 ⁴
LED	LH351C	7.
FWHM / FWTM	62.0° / 94.0°	
Efficiency	93 %	
Peak intensity	0.8 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone	nts.	
		80
		30° 0° 15° 8
SNMSL	JNG	90 ²
LED	LH351D	
FWHM / FWTM	62.0° / 99.0°	7
Efficiency	91 %	
Peak intensity	0.8 cd/lm	
LEDs/each optic	1	
Light colour	White	e-
Required compone	nts:	
		30* 2657 30
сллсі		
<u> </u> S ΛΜSL		90 ⁺
LED	LH508A	72
FWHM / FWTM	60.0° / 97.0°	
Efficiency	93 %	
Peak intensity	0.8 cd/lm	
LEDs/each optic	1	
Light colour	White	
	White	
Light colour	White	
Light colour	White	
Light colour	White	
Light colour Required compone	White	
Light colour Required compone	White nts:	260 267 137 0 0 137 0 0 12 ⁿ 30
Light colour Required compone	White nts: LED-Pa-L15c2W11c2-xxx-C050-01	
Light colour Required compone	White nts: LED-Pa-L15c2W11c2-xxx-C050-01 64.0° / 98.0°	
Light colour Required compone	White nts: LED-Pa-L15c2W11c2-xxx-C050-01 64.0° / 98.0° 95 %	
Light colour Required compone	White nts: LED-Pa-L15c2W11c2-xxx-C050-01 64.0° / 98.0° 95 % 0.8 cd/lm	
Light colour Required compone	White nts: LED-Pa-L15c2W11c2-xxx-C050-01 64.0° / 98.0° 95 % 0.8 cd/lm 1	
Light colour Required compone	White nts: LED-Pa-L15c2W11c2-xxx-C050-01 64.0° / 98.0° 95 % 0.8 cd/lm 1 White	
Light colour Required compone	White nts: LED-Pa-L15c2W11c2-xxx-C050-01 64.0° / 98.0° 95 % 0.8 cd/lm 1 White	
Light colour Required compone	White nts: LED-Pa-L15c2W11c2-xxx-C050-01 64.0° / 98.0° 95 % 0.8 cd/lm 1 White	
Light colour Required compone	White nts: LED-Pa-L15c2W11c2-xxx-C050-01 64.0° / 98.0° 95 % 0.8 cd/lm 1 White	



		50 ⁴ 50 ⁴
LED	2x2 Y22 module - SMJQ-D48W16AA-XX	
FWHM / FWTM	55.0° / 98.0°	78 78
Efficiency	92 %	
Peak intensity	0.8 cd/lm	90 ⁻
LEDs/each optic	1	
Light colour	White	gr (
Required compone		
		250 q ^a 150
SEOUL		59° 59°
SEOUL SEMICONDUCTOR	Z5M3	
		77
FWHM / FWTM Efficiency	62.0° / 96.0° 94 %	
Peak intensity	0.8 cd/lm	60° 60°
	1	
LEDs/each optic Light colour	ı White	
Required compone		
Required compone	ans.	
		80
		36°
SEOUL		90° 90°
SEOUL SEMICONDUCTOR	Z5M4	
FWHM / FWTM	251VI4 64.0° / 92.0°	73
Efficiency	95 %	
Peak intensity	0.8 cd/lm	EV. EV.
LEDs/each optic	1	
Light colour	White	or or
Required compone		
required compone		
		00
		36° 23° 0° 13°
SEOUL		MI
SEOUL SEMICONDUCTOR	70///0	
LED	Z8Y19	
FWHM / FWTM	55.0° / 98.0°	
Efficiency	92 %	101
Peak intensity	0.8 cd/lm	
LEDs/each optic	4	
Light colour	White	
Required compone	ents:	
		201
		10



Peak intensity	92 % 0.8 cd/lm 4	57
	↔ White	•••
Required component		
SEOUL		50° 50°
EEOUL SEMICONDUCTOR	Z8Y22P	
	59.0° / 94.0°	73* 75*
	92 %	200
,	0.9 cd/lm	
	1	
	White	g* @*
Required component	s:	
		30° 30° 30° 30°
TRIDON	IC	90° 90°
LED	RLE 2x4 2000lm HP EXC2 OTD	
FWHM / FWTM	61.0° / 95.0°	200
•	89 %	50* 50*
	0.8 cd/lm	
	1	
5	White	
Required component Protective p		
TRIDON	IC	
	RLE 2x4 2000lm HP EXC2 OTD	
	61.0° / 96.0°	
	94 %	
	0.9 cd/lm	
	1	
Light colour Required component	White	



TRIDO	NIC	511
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	RLE 2x8 4000lm HP EXC2 OTD 61.0° / 96.0° 94 % 0.9 cd/lm 1 White	
TRIDO		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	RLE G1 49x121mm 2000lm xxx EXC OTD 61.0° / 96.0° 94 % 0.8 cd/lm 1 White	
		-10.4° -10.4° -4
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	RLE G1 49x133mm 2000lm xxx EXC OTD 61.0° / 96.0° 94 % 0.8 cd/lm 1 White ents:	
TRIDON LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	RLE G1 49x223mm 4000lm xxx EXC OTD 61.0° / 96.0° 94 % 0.8 cd/lm 1 White	



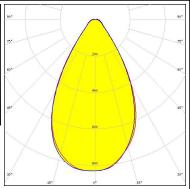
TRIDONIC

LED

FWHM / FWTM61Efficiency94Peak intensity0.4LEDs/each optic1Light colourWRequired components:

RLE G1 49x245mm 4000lm xxx EXC OTD 61.0° / 96.0° 94 % 0.8 cd/lm 1 White







		90° 90°
LED	XP-G2 HE	
FWHM / FWTM	73.0° / 97.0°	75.
Efficiency	95 %	
Peak intensity	0.7 cd/lm	60°
LEDs/each optic	1	
Light colour	White	400
Required components:		
		30.
		15%
		90* 90*
LED	XP-L HD	75
FWHM / FWTM	72.0° / 94.0°	
Efficiency	90 %	50°
Peak intensity	0.7 cd/lm	
LEDs/each optic	1	460
Light colour	White	42 42
Required components:		
Drotostivo plati		exe
Protective plate	a, glass	
		30° 30° 30°
		90* 90*
LED	XP-L HI 70.0° / 90.0°	
LED FWHM / FWTM	70.0° / 90.0°	
LED FWHM / FWTM Efficiency	70.0° / 90.0° 91 %	
LED FWHM / FWTM Efficiency Peak intensity	70.0° / 90.0° 91 % 0.8 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	70.0° / 90.0° 91 % 0.8 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	70.0° / 90.0° 91 % 0.8 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	70.0° / 90.0° 91 % 0.8 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	70.0° / 90.0° 91 % 0.8 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	70.0° / 90.0° 91 % 0.8 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate	70.0° / 90.0° 91 % 0.8 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	70.0° / 90.0° 91 % 0.8 cd/lm 1 White	50 60 60 60 60 60 60 60 60 60 6
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate	70.0° / 90.0° 91 % 0.8 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate	70.0° / 90.0° 91 % 0.8 cd/lm 1 White	50 60 60 60 60 60 60 60 60 60 6
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate	70.0° / 90.0° 91 % 0.8 cd/lm 1 White a, glass	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate Protective plate LED FWHM / FWTM Efficiency Peak intensity	70.0° / 90.0° 91 % 0.8 cd/lm 1 White e, glass XP-L HI 70.0° / 90.0°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate Protective plate LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	70.0° / 90.0° 91 % 0.8 cd/lm 1 White e, glass XP-L HI 70.0° / 90.0° 96 % 0.8 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate Protective plate LED FWHM / FWTM Efficiency Peak intensity	70.0° / 90.0° 91 % 0.8 cd/lm 1 White e, glass XP-L HI 70.0° / 90.0° 96 % 0.8 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate Protective plate LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	70.0° / 90.0° 91 % 0.8 cd/lm 1 White e, glass XP-L HI 70.0° / 90.0° 96 % 0.8 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate Protective plate LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	70.0° / 90.0° 91 % 0.8 cd/lm 1 White e, glass XP-L HI 70.0° / 90.0° 96 % 0.8 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate Protective plate LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	70.0° / 90.0° 91 % 0.8 cd/lm 1 White e, glass XP-L HI 70.0° / 90.0° 96 % 0.8 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate Protective plate LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	70.0° / 90.0° 91 % 0.8 cd/lm 1 White e, glass XP-L HI 70.0° / 90.0° 96 % 0.8 cd/lm 1	



		
		50* 50
LED	XP-L2	
FWHM / FWTM	74.0° / 98.0°	75 75
Efficiency	89 %	200
Peak intensity	0.7 cd/lm	60°
LEDs/each optic	1	
Light colour	White	450 43°
Required components:		
Protective plate	e, glass	<u></u>
		30° 33° 33°
		90*
LED	XT-E	
FWHM / FWTM	69.0° / 90.0°	73*
Efficiency	94 %	50 ⁵
Peak intensity	0.8 cd/lm	
LEDs/each optic	1	400
Light colour	White	42. 42.
Required components:		
		30* 800 30*
A		(15 ³ 0 ⁶ 15 ⁵
	05	90° 90°
LED	LUXEON 3535L	75* 75*
FWHM / FWTM	66.0° / 89.0°	200
Efficiency	94 %	60° 60'
Peak intensity	0.9 cd/lm	
LEDs/each optic	1	
Light colour	White	42.
Required components:		
		800
		30° 25° 0° 15°
)S	90°
LED	LUXEON MZ	
FWHM / FWTM	66.0° / 90.0°	75* 75*
Efficiency	94 %	
Peak intensity	0.9 cd/lm	■ 60* 60*
LEDs/each optic	1	
Light colour	White	
Required components:		
		200
		300



ΜΝΙCΗΙΛ		90° 90°
LED	NV4WB35AM	
FWHM / FWTM	69.0° / 90.0°	75 75
Efficiency	95 %	
Peak intensity	0.8 cd/lm	60 ⁴ '60'
LEDs/each optic	1	400
Light colour	White	424 43
Required components:		
		30° 30'
~		
MNICHIA		90* 90*
LED	NVSxx19B/NVSxx19C	75*
FWHM / FWTM	70.0° / 90.0°	200
Efficiency	95 %	60° 60°
Peak intensity	0.8 cd/lm	
LEDs/each optic	1	400
Light colour	White	a., a.,
Required components:		
		30° 30°
OSDAM		30 ⁴ 33 ⁵ 0 ⁴ 35 ⁵
OSRAM Opto Semiconductors		90° 100 100 100 100 100 100 100 100 100 1
OSRAM Opto Semiconductors LED	OSCONIQ C 2424	90° 155° 0° 155° 300
Opto Semiconductors	OSCONIQ C 2424 66.0 + 68.0° / 82.0°	20 ¹ 20 ² 0 ² 10 ² 00
opto Semiconductors LED FWHM / FWTM Efficiency		
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	66.0 + 68.0° / 82.0°	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	66.0 + 68.0° / 82.0° 96 % 0.9 cd/lm 1	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	66.0 + 68.0° / 82.0° 96 % 0.9 cd/lm	55 ¹ 0 15 ¹ 0 15 ¹ 15
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	66.0 + 68.0° / 82.0° 96 % 0.9 cd/lm 1	200
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	66.0 + 68.0° / 82.0° 96 % 0.9 cd/lm 1	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	66.0 + 68.0° / 82.0° 96 % 0.9 cd/lm 1	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	66.0 + 68.0° / 82.0° 96 % 0.9 cd/lm 1	200 200 200 200 00 200 00 00 00
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	66.0 + 68.0° / 82.0° 96 % 0.9 cd/lm 1	27. 200 60 5 5 60 60 60 60
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: POSRAM Opto Semiconductors	66.0 + 68.0° / 82.0° 96 % 0.9 cd/lm 1 White	27. 200 60 5 5 60 60 60 60
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED	66.0 + 68.0° / 82.0° 96 % 0.9 cd/lm 1 White	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM	66.0 + 68.0° / 82.0° 96 % 0.9 cd/lm 1 White OSCONIQ P 3030 66.0° / 88.0°	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Peak intensity LEDs/each optic Light colour Required components: LED FWHM / FWTM Efficiency	66.0 + 68.0° / 82.0° 96 % 0.9 cd/lm 1 White OSCONIQ P 3030 66.0° / 88.0° 96 %	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	66.0 + 68.0° / 82.0° 96 % 0.9 cd/lm 1 White OSCONIQ P 3030 66.0° / 88.0° 96 % 0.8 cd/lm	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	66.0 + 68.0° / 82.0° 96 % 0.9 cd/lm 1 White OSCONIQ P 3030 66.0° / 88.0° 96 % 0.8 cd/lm 1	
orlo Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	66.0 + 68.0° / 82.0° 96 % 0.9 cd/lm 1 White OSCONIQ P 3030 66.0° / 88.0° 96 % 0.8 cd/lm	
orlo Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	66.0 + 68.0° / 82.0° 96 % 0.9 cd/lm 1 White OSCONIQ P 3030 66.0° / 88.0° 96 % 0.8 cd/lm 1	
orlo Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	66.0 + 68.0° / 82.0° 96 % 0.9 cd/lm 1 White OSCONIQ P 3030 66.0° / 88.0° 96 % 0.8 cd/lm 1	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	66.0 + 68.0° / 82.0° 96 % 0.9 cd/lm 1 White OSCONIQ P 3030 66.0° / 88.0° 96 % 0.8 cd/lm 1	



OSRAM Opto Semiconductors		89, 84
LED	OSCONIQ P 3737 Flat	75* 75*
FWHM / FWTM	64.0° / 88.0°	200
Efficiency	95 %	60 ⁴ 60 ⁴
Peak intensity	0.9 cd/lm	460
LEDs/each optic	1	
Light colour	White	45° - 600
Required components:		
		30 ⁴ 35 ⁴ 1000 35 ⁴
OSRAM Opto Semiconductors		90 ⁴
LED	OSLON Square Flat	75' 75'
FWHM / FWTM	68.0° / 86.0°	200
Efficiency	95 %	50° 60°
Peak intensity	0.9 cd/lm	
LEDs/each optic	1	
Light colour	White	g. e.
Required components:		600
		~~~~~
		30. 30.
OSRAM		
Opto Semiconductors		90° 90°
LED	OSLON SSL 80	71
LED FWHM / FWTM	55.6° / 81.2°	
LED FWHM / FWTM Efficiency	55.6° / 81.2° 94 %	64 66 64
LED FWHM / FWTM Efficiency Peak intensity	55.6° / 81.2° 94 % 1.1 cd/lm	55 500 500 500 500 500 500 500 500 500
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	55.6° / 81.2° 94 % 1.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	55.6° / 81.2° 94 % 1.1 cd/lm	or
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	55.6° / 81.2° 94 % 1.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	55.6° / 81.2° 94 % 1.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	55.6° / 81.2° 94 % 1.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	55.6° / 81.2° 94 % 1.1 cd/lm 1 White	54 54 54 54 54 54 54 54 54 54
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Opto Semiconductors LED	55.6° / 81.2° 94 % 1.1 cd/lm 1 White OSTAR Projection Compact (Kx.CSLNM1.xx)	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OPTO Semiconductors LED FWHM / FWTM	55.6° / 81.2° 94 % 1.1 cd/lm 1 White	54 54 54 54 54 54 54 54 54 54
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency	55.6° / 81.2° 94 % 1.1 cd/lm 1 White OSTAR Projection Compact (Kx.CSLNM1.xx) 68.0° / 88.0° 96 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	55.6° / 81.2° 94 % 1.1 cd/lm 1 White OSTAR Projection Compact (Kx.CSLNM1.xx) 68.0° / 88.0°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	55.6° / 81.2° 94 % 1.1 cd/lm 1 White OSTAR Projection Compact (Kx.CSLNM1.xx) 68.0° / 88.0° 96 % 0.8 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	55.6° / 81.2° 94 % 1.1 cd/lm 1 White OSTAR Projection Compact (Kx.CSLNM1.xx) 68.0° / 88.0° 96 % 0.8 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	55.6° / 81.2° 94 % 1.1 cd/lm 1 White OSTAR Projection Compact (Kx.CSLNM1.xx) 68.0° / 88.0° 96 % 0.8 cd/lm 1	



<b>DHILLIPS</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Fortimo FastFlex LED 2x8 DAX G4 71.0° / 94.0° 94 % 0.8 cd/lm 1 White	57 59 59 59 59 59 59 59 59 59 59
SAMSUN LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	HiLOM RM16 Z (LH502C) 56.0° / 98.0° 88 % 0.8 cd/lm 1 White	5° 00 6° 00 5°
Protective plate <b>SAMSUN</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:		000 30- 30- 30- 30- 30- 30- 30- 30- 30-
SECOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	SEOUL DC 5050 6V 64.0° / 93.0° 94 % 0.8 cd/lm 1 White	20, 000 Pa, 20, 20, 20, 20, 20, 20, 20, 20, 20, 20



SEOUL SEOUL SEMICONDUCTOR		90 ^x 9x ^x
LED	Z8Y22T	75
FWHM / FWTM	55.0° / 83.0°	
Efficiency	94 %	99
Peak intensity	1.1 cd/lm	
LEDs/each optic	1	
Light colour	White	gr at
Required component	S:	304 125 1270 127 217



# PRODUCT DATASHEET C14606_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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Shipping locations Salo, Finland Hong Kong, China

#### Distribution Partners www.ledil.com/ where_to_buy

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