

HB-IP-2X6-O

~30° + 115° oval beam

SPECIFICATION:

Dimensions	173.0 x 71.4 mm
Height	13.1 mm
Fastening	screw
Ingress protection classes	IP67
ROHS compliant	yes 🛈



PRODUCT DATASHEET CS14597_HB-IP-2X6-O

MATERIALS:

Component HB-IP-2X6-O 2X6-SEAL25

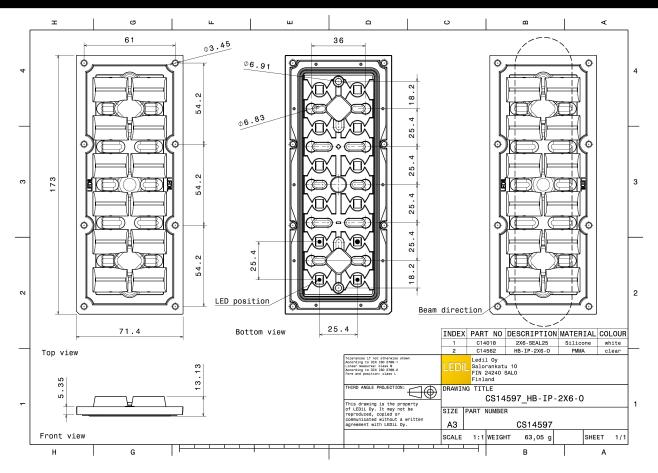
Type Multi-lens Seal

Material	Colour	Finish
PMMA	clear	
Silicone	white	

ORDERING INFORMATION:

Component		Qty in box	MOQ	MPQ	Box weight (kg)
CS14597_HB-IP-2X6-O	Multi-lens	108	36	36	8.0
» Box size: 476 x 273 x 247 mm					

PRODUCT DATASHEET CS14597_HB-IP-2X6-O



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



QUICK FLUX 2x6 LED XT xxx G5 FWHM / FWTM 113.0 + 30.0° / 148.0 + 87.0° Efficiency 90 % Peak intensity 0.7 cd/lm	20 ¹
LEDs/each optic 1 Light colour White Required components:	
CREE LED XM-L FWHM / FWTM 36.0 + 110.0° / 96.0 + 147.0° Efficiency 91 % Peak intensity 0.6 cd/lm LEDs/each optic 1 Light colour White Required components: 1	
CREE KM-L2 LED XM-L2 FWHM / FWTM 36.0 + 108.0° / 92.0 + 147.0° Efficiency 91 % Peak intensity 0.6 cd/lm LEDs/each optic 1 Light colour White Required components: 1	



		5 ¹
LED	XP-G	
FWHM / FWTM	31.0 + 117.0° / 91.0 + 149.0°	77
Efficiency	91 %	
Peak intensity	0.7 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone		
		60
		50° 00 50° 50° 50°
		50' 50'
LED	XP-G2	
FWHM / FWTM	32.0 + 116.0° / 91.0 + 149.0°	28
Efficiency	92 %	
Peak intensity	0.7 cd/lm	- m
LEDs/each optic	1	
Light colour	White	
Required compone	ents:	
		60
		80
		20 ⁴ (p ¹ 13 ⁴ 20 ⁴
		50 ⁴ 50 ⁵
LED	XP-G3	
FWHM / FWTM	33.0 + 119.0° / 100.0 + 150.0°	7° 70.
Efficiency	92 %	
Peak intensity	0.6 cd/lm	
LEDs/each optic	1	
Light colour	White	er er
Required compone	ents:	
		an
		20° 00 20°
CREE \$		
LEDS		<u>94</u>
LED	XP-L HD	
FWHM / FWTM	36.0 + 115.0° / 100.0 + 149.0°	
Efficiency	91 %	6 ¹
Peak intensity	0.6 cd/lm	
LEDs/each optic	1	
Light colour	White	er er
Required compone	ents:	
		66
		20
		25 ² 0 ⁴ 15 ⁵



		9 ⁴
LED	XP-L2	
FWHM / FWTM	118.0 + 38.0° / 151.0 + 114.0°	70
	92 %	
Efficiency		
Peak intensity	0.6 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone	nts:	
		50
		30*
CREE \$		23 ² 0 ⁴ 23 ⁴
LEDS		90'
LED	XT-E	
FWHM / FWTM	31.0 + 119.0° / 99.0 + 151.0°	20
Efficiency	92 %	
Peak intensity	0.6 cd/lm	60 ⁶
LEDs/each optic	1	
Light colour	White	
Required compone		
		60
		30* 50 15 ² 0 ³ 15 ²
LED	XT-E HE	
FWHM / FWTM	112.0 + 29.0° / 147.0 + 85.0°	784
Efficiency	90 %	
Peak intensity	0.7 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone		
	113.	
		200
		30° 13° 0° 13°
	EDS	
		51 ⁴
		77
FWHM / FWTM	30.0 + 109.0° / 89.0 + 147.0°	
Efficiency	91 %	Ex.
Peak intensity	0.7 cd/lm	
LEDs/each optic	1	
Light colour	White	67
Required compone	nts:	
		00
		.00" 15 ⁵ 0 ⁶ 10 ⁴



🙆 LUMIL		
	EDS	59* 59*
LED	LUXEON Rebel	
FWHM / FWTM	28.0 + 107.0° / 84.0 + 145.0°	
Efficiency	91 %	
Peak intensity	0.7 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required componer	nts:	
		860
<i>M</i>		25 ⁴ 25 ⁴ 0 ⁴ 25 ⁴ 3 ⁵⁰
UMIL	EDS	30* 39*
LED	LUXEON Rebel ES	
FWHM / FWTM	30.0 + 110.0° / 88.0 + 146.0°	
Efficiency	91 %	
Peak intensity	0.7 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required componer	nts:	
		200 200
	EDS	
LED	LUXEON T	
FWHM / FWTM	32.0 + 115.0° / 103.0 + 148.0°	70 70
Efficiency	91 %	
Peak intensity		an a
Feak intensity	0.6 od/lm	
	0.6 cd/lm	
LEDs/each optic	1	
LEDs/each optic Light colour	1 White	- 449
LEDs/each optic	1 White	
LEDs/each optic Light colour	1 White	6° - 40 - 6°
LEDs/each optic Light colour	1 White	
LEDs/each optic Light colour	1 White	
LEDs/each optic Light colour Required componer	1 White nts:	
LEDs/each optic Light colour Required componen	1 White nts:	
LEDs/each optic Light colour Required componen	1 White hts: EDS LUXEON TX	
LEDs/each optic Light colour Required componen LUMIL LED FWHM / FWTM	1 White hts: EDS LUXEON TX 30.0 + 111.0° / 84.0 + 147.0°	
LEDs/each optic Light colour Required componen LED FWHM / FWTM Efficiency	1 White hts: EDS LUXEON TX 30.0 + 111.0° / 84.0 + 147.0° 90 %	
LEDs/each optic Light colour Required component LED FWHM / FWTM Efficiency Peak intensity	1 White hts: EDS LUXEON TX 30.0 + 111.0° / 84.0 + 147.0° 90 % 0.7 cd/lm	
LEDs/each optic Light colour Required component Composition LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	1 White hts: EDS LUXEON TX 30.0 + 111.0° / 84.0 + 147.0° 90 % 0.7 cd/lm 1	
LEDs/each optic Light colour Required component Composed LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	1 White hts: EDS LUXEON TX 30.0 + 111.0° / 84.0 + 147.0° 90 % 0.7 cd/lm 1 White	
LEDs/each optic Light colour Required component Composition LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	1 White hts: EDS LUXEON TX 30.0 + 111.0° / 84.0 + 147.0° 90 % 0.7 cd/lm 1 White	
LEDs/each optic Light colour Required component Composed LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	1 White hts: EDS LUXEON TX 30.0 + 111.0° / 84.0 + 147.0° 90 % 0.7 cd/lm 1 White	
LEDs/each optic Light colour Required component Composed LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	1 White hts: EDS LUXEON TX 30.0 + 111.0° / 84.0 + 147.0° 90 % 0.7 cd/lm 1 White	



	EDS	
LED		
FWHM / FWTM	112.0 + 34.0° / 147.0 + 92.0°	77
Efficiency	87 %	
Peak intensity	0.6 cd/lm	- 60 ⁵
LEDs/each optic	1	
Light colour	White	40
Required compone	nts:	
		30.
	EDS	
LED	LUXEON V2	
FWHM / FWTM	113.0 + 31.0° / 147.0 + 91.0°	79
Efficiency	92 %	200
Peak intensity	0.7 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone		
		\times
		00
	FDC	**************************************
LED	LUXEON XR-TX (L2T0-xxxx012M0000)	79
FWHM / FWTM	30.0 + 115.0° / 92.0 + 148.0°	
Efficiency	91 %	
Peak intensity	0.7 cd/lm	
LEDs/each optic Light colour	1 White	
Required compone		
		60
		XTYTX
		80
		50°
UMIL	EDS	30*
LED	LUXEON Z ES	
FWHM / FWTM	25.0 + 108.0° / 73.0 + 145.0°	
Efficiency	90 %	
Peak intensity	0.8 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone	nts:	
		13 ² 0 ⁶ 13 ⁴



ELUM	INUS	50 ⁺
LED	SST-10-B130	
FWHM / FWTM	114.0 + 28.0° / 147.0 + 70.0°	79 200
Efficiency	93 %	
Peak intensity	0.8 cd/lm	
LEDs/each optic	1	
Light colour	Deep Red	
Required compone	ents:	
		800
		301
MST Your solu	tions	
LED	RecLED 146x45mm 2900lm 730 2x6 IP G1	50*
EED FWHM / FWTM	24.0 + 103.5° / 56.5 + 143.5°	724
Efficiency	24.0 + 103.5 / 50.5 + 143.5 94 %	
Peak intensity	94 /% 0.9 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone		
		50%
~ (25 ² 0 ³ 25 ³
∕∕ NICHI∕	L	50*
LED	NVSW219D	
FWHM / FWTM	106.0 + 32.0° / 145.0 + 85.0°	73
Efficiency	92 %	
Peak intensity	0.7 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone	ents:	
		30*
		90°
LED	NVSW219F	
FWHM / FWTM	112.0 + 32.0° / 147.0 + 88.0°	
Efficiency	92 %	
Peak intensity	0.7 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone	ents:	
		86
		30° 15 ³ 0° 15°

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<i><i>(</i>)</i>			
ØNICHI/			90° 90°
LED	NVSW319B		
FWHM / FWTM	34.0 + 113.0° / 91.0 + 148.0°		75* 75*
Efficiency	92 %		200
Peak intensity	0.7 cd/lm		60%
LEDs/each optic	1		
Light colour	White		45°
Required compone			
			500
			30* <u>860</u> 30* 30*
ØNICHI/	N		90* 90*
LED	NVSW3x9A	A REAL PROPERTY AND A REAL	
FWHM / FWTM	119.0 + 33.0° / 149.0 + 100.0°		751 75:
Efficiency	92 %		- 200
Peak intensity	0.6 cd/lm		604 604
LEDs/each optic	1		
Light colour	White		45°
Required compone			
			an
			\times / \setminus \times
			30° 30° 30° 30° 30°
ØNICHI/		A REAL PROPERTY AND INCOME.	90* 90*
LED	NVSW519A		
FWHM / FWTM	113.0 + 35.0° / 147.0 + 90.0°		73*
Efficiency	94 %		
Peak intensity	0.7 cd/lm		60 C
LEDs/each optic	1		400
Light colour	White		-6°
Required compone	ents:		
			\times
			30° 25 ⁵ 0° 10° 30°
ØNICHI/			
LED	NVSxE21A		
FWHM / FWTM	26.0 + 116.0° / 107.0 + 145.0°		75* 76*
Efficiency	91 %		
Peak intensity	0.7 cd/lm		60%
LEDs/each optic	0.7 cd/im 1		
LEDS/each optic	ı White	and the second se	
Required compone		the second s	6° 6*
	a no.		
			30* 15 ⁵ 0 ⁶ 15 ⁴ 30*

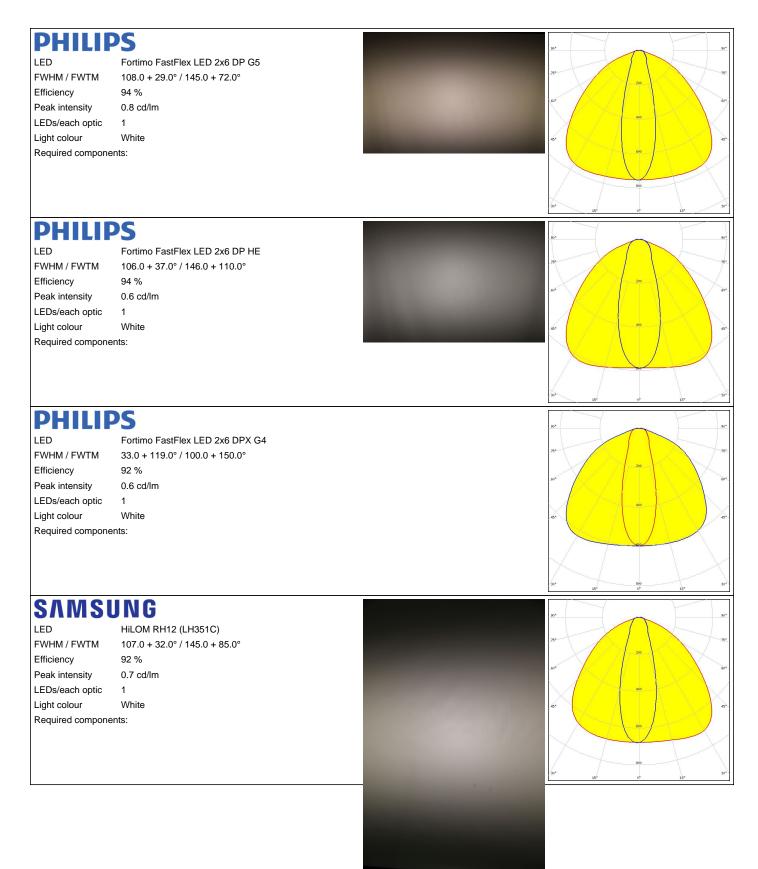


Mauguna		
ØNICHI		50*
LED	NVSxx19B/NVSxx19C	
FWHM / FWTM	31.0 + 116.0° / 100.0 + 149.0°	
Efficiency	90 %	
Peak intensity	0.6 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone	ints:	
		30* 800
		20°
LED	NVSxx19B/NVSxx19C	20
FWHM / FWTM	114.0 + 32.0° / 148.0 + 93.0°	
Efficiency	91 %	
Peak intensity	0.7 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone	nis.	
		30° 23° 01 13° 3
OSRAM Opto Semiconductors		84
Opto Semiconductors	Duris S8	
OSRAM Opto Semiconductors LED FWHM / FWTM	Duris S8 111.0 + 38.0° / 148.0 + 121.0°	
Opto Semiconductors		
Opto Semiconductors LED FWHM / FWTM	111.0 + 38.0° / 148.0 + 121.0°	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	111.0 + 38.0° / 148.0 + 121.0° 92 %	
opto Semiconductors LED FWHM / FWTM Efficiency	111.0 + 38.0° / 148.0 + 121.0° 92 % 0.9 cd/lm	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	111.0 + 38.0° / 148.0 + 121.0° 92 % 0.9 cd/lm 1 White	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	111.0 + 38.0° / 148.0 + 121.0° 92 % 0.9 cd/lm 1 White	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	111.0 + 38.0° / 148.0 + 121.0° 92 % 0.9 cd/lm 1 White	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	111.0 + 38.0° / 148.0 + 121.0° 92 % 0.9 cd/lm 1 White	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	111.0 + 38.0° / 148.0 + 121.0° 92 % 0.9 cd/lm 1 White	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	111.0 + 38.0° / 148.0 + 121.0° 92 % 0.9 cd/lm 1 White ints:	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone OSRAM Opto Semiconductors LED	111.0 + 38.0° / 148.0 + 121.0° 92 % 0.9 cd/lm 1 White Ints:	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone OSRAM Opto Semiconductors LED FWHM / FWTM	111.0 + 38.0° / 148.0 + 121.0° 92 % 0.9 cd/lm 1 White Ints: OSLON Square CSSRM2/CSSRM3 110.0 + 29.0° / 146.0 + 86.0°	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency	111.0 + 38.0° / 148.0 + 121.0° 92 % 0.9 cd/lm 1 White ints: OSLON Square CSSRM2/CSSRM3 110.0 + 29.0° / 146.0 + 86.0° 92 %	20-
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	111.0 + 38.0° / 148.0 + 121.0° 92 % 0.9 cd/lm 1 White ints: OSLON Square CSSRM2/CSSRM3 110.0 + 29.0° / 146.0 + 86.0° 92 % 0.7 cd/lm	20-
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone Corpo Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	111.0 + 38.0° / 148.0 + 121.0° 92 % 0.9 cd/lm 1 White ints: OSLON Square CSSRM2/CSSRM3 110.0 + 29.0° / 146.0 + 86.0° 92 % 0.7 cd/lm 1	25
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone OSSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	111.0 + 38.0° / 148.0 + 121.0° 92 % 0.9 cd/lm 1 White ints: OSLON Square CSSRM2/CSSRM3 110.0 + 29.0° / 146.0 + 86.0° 92 % 0.7 cd/lm 1 White	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone OSERAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	111.0 + 38.0° / 148.0 + 121.0° 92 % 0.9 cd/lm 1 White ints: OSLON Square CSSRM2/CSSRM3 110.0 + 29.0° / 146.0 + 86.0° 92 % 0.7 cd/lm 1 White	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone OSCRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	111.0 + 38.0° / 148.0 + 121.0° 92 % 0.9 cd/lm 1 White ints: OSLON Square CSSRM2/CSSRM3 110.0 + 29.0° / 146.0 + 86.0° 92 % 0.7 cd/lm 1 White	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone OSERAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	111.0 + 38.0° / 148.0 + 121.0° 92 % 0.9 cd/lm 1 White ints: OSLON Square CSSRM2/CSSRM3 110.0 + 29.0° / 146.0 + 86.0° 92 % 0.7 cd/lm 1 White	



OSRAM Opto Semiconductors		
		50 ¹
LED	OSLON Square EC	
FWHM / FWTM	30.0 + 108.0° / 87.0 + 145.0°	70
Efficiency	91 %	
Peak intensity	0.7 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone		
		80
		20° 10 ⁰ 13° 31°
OSRAM Opto Semiconductors		<u>87</u>
LED	OSLON Square PC	
FWHM / FWTM	30.0 + 111.0° / 91.0 + 146.0°	
Efficiency	92 %	
Peak intensity	0.7 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone	nts:	
		XIIIX
		30* 800
OSRAM		12° 0° 22°
Opto Semiconductors		
	OSLON SSL 80	
LED		75
FWHM / FWTM	26.0 + 92.0° / 81.0 + 143.0°	72 200
FWHM / FWTM Efficiency	26.0 + 92.0° / 81.0 + 143.0° 93 %	
FWHM / FWTM Efficiency Peak intensity	26.0 + 92.0° / 81.0 + 143.0° 93 % 0.9 cd/lm	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic	26.0 + 92.0° / 81.0 + 143.0° 93 % 0.9 cd/lm 1	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	26.0 + 92.0° / 81.0 + 143.0° 93 % 0.9 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic	26.0 + 92.0° / 81.0 + 143.0° 93 % 0.9 cd/lm 1 White	50 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	26.0 + 92.0° / 81.0 + 143.0° 93 % 0.9 cd/lm 1 White	50 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	26.0 + 92.0° / 81.0 + 143.0° 93 % 0.9 cd/lm 1 White	50 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	26.0 + 92.0° / 81.0 + 143.0° 93 % 0.9 cd/lm 1 White	50 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	26.0 + 92.0° / 81.0 + 143.0° 93 % 0.9 cd/lm 1 White nts:	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	26.0 + 92.0° / 81.0 + 143.0° 93 % 0.9 cd/lm 1 White nts:	50 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400 - 400
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	26.0 + 92.0° / 81.0 + 143.0° 93 % 0.9 cd/lm 1 White nts:	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	26.0 + 92.0° / 81.0 + 143.0° 93 % 0.9 cd/lm 1 White Ints: S Fortimo FastFlex LED 2x6 DP G4 32.0 + 116.0° / 91.0 + 149.0°	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	26.0 + 92.0° / 81.0 + 143.0° 93 % 0.9 cd/lm 1 White nts: S Fortimo FastFlex LED 2x6 DP G4 32.0 + 116.0° / 91.0 + 149.0° 92 %	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone PHILLIC LED FWHM / FWTM Efficiency Peak intensity	26.0 + 92.0° / 81.0 + 143.0° 93 % 0.9 cd/lm 1 White nts:	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone PHILLIC ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	26.0 + 92.0° / 81.0 + 143.0° 93 % 0.9 cd/lm 1 White nts:	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone PHILLIP FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	26.0 + 92.0° / 81.0 + 143.0° 93 % 0.9 cd/lm 1 White nts:	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone PHILLIC ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	26.0 + 92.0° / 81.0 + 143.0° 93 % 0.9 cd/lm 1 White nts:	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone PHILLIP FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	26.0 + 92.0° / 81.0 + 143.0° 93 % 0.9 cd/lm 1 White nts:	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone PHILLIP FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	26.0 + 92.0° / 81.0 + 143.0° 93 % 0.9 cd/lm 1 White nts:	





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ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	HiLOM RM12 ZP (LH502C) 107.0 + 37.0° / 146.0 + 111.0° 93 % 0.6 cd/lm 1 White	20 20 20 00 00 00 00 00 00 00 00
SAMSU LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LH351Z 29.0 + 104.0° / 70.0 + 144.0° 91 % 0.8 cd/lm 1 White	
SCIO LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	BALAM-VP-5250-750-36 Asymmetric 93 % 0.6 cd/lm 1 White	
SCIO LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	BALAMEC-VE-5700-740-36 107.0 + 35.0° / 145.0 + 100.0° 93 % 0.7 cd/lm 1 White	



SCIO LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	ROY-S26XPL2 (XP-L2) 116.0 + 36.0° / 150.0 + 98.0° 93 % 0.6 cd/lm 1 White	50°
SCIO LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XLE-S22C4XTEHE (XT-E HE) 112.0 + 29.0° / 147.0 + 85.0° 90 % 0.7 cd/lm 1 White	
SCIO LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XLE-S26XHP35 (XHP35 HD) 118.0 + 38.0° / 151.0 + 103.0° 91 % 0.6 cd/lm 1 White	200 200 60 ¹ 00 00 00 00 00 00 00 00 00 0
seoul seniconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	SMJQ-D36W12Mx 30.0 + 119.0° / 128.0 + 149.0° 91 % 0.6 cd/lm 1 White nts:	20° 20° 20° 20° 20° 20° 20° 20°



SEOUL			
SEOUL SEMICONDUCTOR			90* 90*
LED	SMJQ-D36W12Px	and the second	
FWHM / FWTM	121.0 + 32.0° / 151.0 + 108.0°	and the second	75* 75*
Efficiency	92 %		- 200 -
Peak intensity	0.6 cd/lm		604
LEDs/each optic	1		
Light colour	White		45°
Required compone	nts:		
		and the second se	
			670
			\times / \times \times
			30° 25 ⁵ 0° 25 ⁴ 30°
SEOUL			
SEOUL SEMICONDUCTOR		And in case of the local division of the loc	90*
LED	Z5M1/Z5M2		75* 76*
FWHM / FWTM	29.0 + 105.0° / 79.0 + 145.0°		200
Efficiency	90 %		60° 60°
Peak intensity	0.7 cd/lm		
LEDs/each optic	1		
Light colour	White		er la
Required compone	nts:		
			300 m²
			15 ⁵ 0 ⁶ 15 ⁶
SEOUL SEMICONDUCTOR			90° 90'
LED	Z5M3		
FWHM / FWTM	32.0 + 111.0° / 96.0 + 148.0°		75+ 75+
Efficiency	92 %		200
Peak intensity	0.7 cd/lm		eve eve
LEDs/each optic	1		
Light colour	White		400 - 400
Required compone			
			640
			30° 15° 30°
SEOUL			
	70//00		90*
	Z8Y22		75*
FWHM / FWTM	30.0 + 119.0° / 128.0 + 149.0°		
Efficiency	91 %		604 604
Peak intensity	0.6 cd/lm		
LEDs/each optic	1		400
Light colour	White		145°
Required compone	nts:		
			610
			30* 30*



SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	Z8Y22P 122.0 + 32.0° / 151.0 + 111.0° 92 % 0.6 cd/lm 1 White ents:	
TOSHIBA Leading Innovation >>>		90* <u>55</u> * <u>60</u> <u>25</u> * <u>97</u> *
LED	TL1L4	
FWHM / FWTM	29.0 + 107.0° / 88.0 + 144.0°	
Efficiency	87 %	an a
Peak intensity	0.7 cd/lm 1	
LEDs/each optic Light colour	ı White	
Required compone		30+ 25 ⁴ 0 ⁴
TRIDON		50*
LED	RLE 2x6 3000lm HP EXC2 OTD	
FWHM / FWTM	108.0 + 29.0° / 146.0 + 82.0°	70
Efficiency	92 %	
Peak intensity	0.7 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone	ents:	



Γ		
LED	J Series 5050 Round LES	90° 90°
FWHM / FWTM	29.0 + 96.0° / 50.0 + 141.0°	750 770
Efficiency	94 %	
Peak intensity	94 /o 0.9 cd/lm	50* 60*
LEDs/each optic	1 Militia	560
Light colour	White	45*
Required components:		
		XTITX
		1000
		30° 15° 30°
CREE ÷		
LEDs	XP-G2 HE	
FWHM / FWTM	103.0 + 28.0° / 144.0 + 42.0°	75* 78*
Efficiency	94 %	
Peak intensity	1 cd/lm	50 ⁴ 60 ⁴
LEDs/each optic	1	
Light colour	' White	
Required components:	Wilde	1 ³⁷
		1200
		30 30 30 30 30 30 30 30 30 30 30 30 30 3
	05	200 <u>129¹</u> 0 ¹ 12 ⁴ 20
	UXEON 5050 Round LES	20 ² 0 ⁴ 12 ⁴ 20
	LUXEON 5050 Round LES	201 <u>201</u> <u>01</u> <u>10</u> ¹ <u>10</u> ¹ <u>10</u>
LED FWHM / FWTM		201 <u>201</u> <u>01</u> <u>10</u> ¹ <u>10</u> ¹ <u>10</u>
LED FWHM / FWTM Efficiency	LUXEON 5050 Round LES 34.0 + 96.0° / 61.0 + 141.0°	20 <u>22¹</u> <u>0¹</u> <u>12¹</u> <u>20</u>
LED FWHM / FWTM Efficiency Peak intensity	LUXEON 5050 Round LES 34.0 + 96.0° / 61.0 + 141.0° 93 %	99* 99 72* 200 75*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LUXEON 5050 Round LES 34.0 + 96.0° / 61.0 + 141.0° 93 % 0.9 cd/lm	99* 72* 200
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON 5050 Round LES 34.0 + 96.0° / 61.0 + 141.0° 93 % 0.9 cd/lm 1	92° 73° 66° 466 66°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LUXEON 5050 Round LES 34.0 + 96.0° / 61.0 + 141.0° 93 % 0.9 cd/lm 1	92° - 92°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON 5050 Round LES 34.0 + 96.0° / 61.0 + 141.0° 93 % 0.9 cd/lm 1	92° - 92°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON 5050 Round LES 34.0 + 96.0° / 61.0 + 141.0° 93 % 0.9 cd/lm 1	92° - 92°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 5050 Round LES 34.0 + 96.0° / 61.0 + 141.0° 93 % 0.9 cd/lm 1 White	90° 90° 73° 90° 66° 400 66°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON 5050 Round LES 34.0 + 96.0° / 61.0 + 141.0° 93 % 0.9 cd/lm 1 White	92° 73° 66° 466 66°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 5050 Round LES 34.0 + 96.0° / 61.0 + 141.0° 93 % 0.9 cd/lm 1 White	92° 73° 66° 466 66°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 5050 Round LES 34.0 + 96.0° / 61.0 + 141.0° 93 % 0.9 cd/lm 1 White	92° - 92°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 5050 Round LES 34.0 + 96.0° / 61.0 + 141.0° 93 % 0.9 cd/lm 1 White Vhite	92° - 92°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 5050 Round LES 34.0 + 96.0° / 61.0 + 141.0° 93 % 0.9 cd/lm 1 White DS LUXEON 5050 Square LES 30.0 + 98.0° / 52.0 + 141.0°	92° - 92°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 5050 Round LES 34.0 + 96.0° / 61.0 + 141.0° 93 % 0.9 cd/lm 1 White S LUXEON 5050 Square LES 30.0 + 98.0° / 52.0 + 141.0° 95 %	92° 73° 66° 466 66°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: With Components: LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LUXEON 5050 Round LES 34.0 + 96.0° / 61.0 + 141.0° 93 % 0.9 cd/lm 1 White V S LUXEON 5050 Square LES 30.0 + 98.0° / 52.0 + 141.0° 95 % 0.9 cd/lm	92° - 92°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 5050 Round LES 34.0 + 96.0° / 61.0 + 141.0° 93 % 0.9 cd/lm 1 White V S LUXEON 5050 Square LES 30.0 + 98.0° / 52.0 + 141.0° 95 % 0.9 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: With Components: LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LUXEON 5050 Round LES 34.0 + 96.0° / 61.0 + 141.0° 93 % 0.9 cd/lm 1 White V S LUXEON 5050 Square LES 30.0 + 98.0° / 52.0 + 141.0° 95 % 0.9 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 5050 Round LES 34.0 + 96.0° / 61.0 + 141.0° 93 % 0.9 cd/lm 1 White V S LUXEON 5050 Square LES 30.0 + 98.0° / 52.0 + 141.0° 95 % 0.9 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 5050 Round LES 34.0 + 96.0° / 61.0 + 141.0° 93 % 0.9 cd/lm 1 White V S LUXEON 5050 Square LES 30.0 + 98.0° / 52.0 + 141.0° 95 % 0.9 cd/lm 1	



ED	NV4WB35AM 100.0 + 28.0° / 140.0 + 42.0°	2°
Efficiency	95 %	
Peak intensity	1 cd/lm	604 601
LEDs/each optic	1	
Light colour	White	45' 45'
Required components:	Wine	40°
required components.		
OSRAM		50* 220 30 ⁴
		90* 90*
LED	PrevaLED Brick HP IP 2x6	75°
FWHM / FWTM	24.0 + 97.0° / 36.0 + 141.0°	
Efficiency	95 %	604 607
Peak intensity	1.2 cd/lm	
LEDs/each optic	1	
Light colour	White	45° 65°
Required components:		
		1200
		30° 15° 30°
OSRAM Opto Semiconductors		50° 50°
LED	OSCONIQ P 3030	
FWHM / FWTM	92.0 + 14.0° / 141.0 + 28.0°	10
Efficiency	95 %	400
Peak intensity	1.5 cd/lm	
LEDs/each optic	1	
Light colour	White	43*
Required components:		
		1200
		36° 36°
OSRAM		20 ⁴ 10 ⁵ 10 ⁴ 10 ⁵ 20 ⁴
Opto Semiconductors		30 ⁴ 500 30 ⁴ 30 ⁴
Opto Semiconductors	OSCONIQ P 3737 (2W version)	20 ¹ 25 ¹ 0 ² 25 ¹ 0 ² 25 ¹ 0 ²
Opto Semiconductors LED FWHM / FWTM	32.0 + 100.0° / 44.0 + 142.0°	30 ⁴ 30 ⁵ 30 ⁴
opto Semiconductors LED FWHM / FWTM Efficiency	32.0 + 100.0° / 44.0 + 142.0° 95 %	20 ⁵ 00 00 00 00 00 00 00 00 00 00 00 00 00
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	32.0 + 100.0° / 44.0 + 142.0° 95 % 1 cd/lm	90°
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	32.0 + 100.0° / 44.0 + 142.0° 95 % 1 cd/lm 1	92 ³ 75 ⁴ 60 ⁵ 60 ⁷
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	32.0 + 100.0° / 44.0 + 142.0° 95 % 1 cd/lm	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	32.0 + 100.0° / 44.0 + 142.0° 95 % 1 cd/lm 1	92 ³ 92 ⁴ 75 ⁴ 797 60 ⁵ 60 ⁴
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	32.0 + 100.0° / 44.0 + 142.0° 95 % 1 cd/lm 1	92 ³ 92 ⁴ 75 ⁴ 797 60 ⁵ 60 ⁴
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	32.0 + 100.0° / 44.0 + 142.0° 95 % 1 cd/lm 1	92 ³ 92 ⁴ 75 ⁴ 797 60 ⁵ 60 ⁴



OSRAM		
^{opto Semiconductors} LED FWHM / FWTM Efficiency Peak intensity	OSCONIQ P 3737 (3W version) 27.0 + 100.0° / 44.0 + 143.0° 94 % 1 cd/lm	10 ² 10 ²
LEDs/each optic Light colour Required components:	1 White	45° (80)
OCDAM		20° 120 30°
OSRAM Opto Semiconductors		90*
LED FWHM / FWTM Efficiency Peak intensity	OSCONIQ P 3737 Flat 96.0 + 22.0° / 140.0 + 36.0° 96 % 1.2 cd/lm	25 ⁴ 400 69 ⁴
LEDs/each optic Light colour Required components:	1 White	6° 96 6'
SAMSUN	IG	20 ⁺ 22 ² 0 ⁺ 13 ⁺ 30 ²
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH502D 30.0 + 98.0° / 52.0 + 140.0° 96 % 0.9 cd/lm 1 White	250 250 00 ⁴ 400 00 ⁴ 600
Required components:		
seoul semiconductor LED FWHM / FWTM Efficiency	SEOUL DC 3528 20.0 + 99.0° / 36.0 + 142.0° 94 %	90° 90° 73° 400 90°
Peak intensity LEDs/each optic Light colour Required components:	1.3 cd/lm 1 White	.e7
		30, 12, 10, 10, 10, 10, 10, 10, 10, 10, 10, 10



SEOUL		
seoul semiconductor	SEOUL DC 5050 6V	90* 90
EU FWHM / FWTM	97.0 + 29.0° / 142.0 + 49.0°	750 750
	97.0 + 29.0 7 142.0 + 49.0 94 %	
Efficiency	94 % 0.9 cd/lm	60* 60
Peak intensity		
LEDs/each optic	1	
Light colour	White	6° 1 6
Required components:		
		1000
		30* 15 08 15* 30*
SEOUL		
SEOUL SEMICONDUCTOR		90* 90
LED	Z5M4	
FWHM / FWTM	24.0 + 98.0° / 34.0 + 136.0°	73%
Efficiency	96 %	400
Peak intensity	1.2 cd/lm	60°
LEDs/each optic	1	
Light colour	White	45*
Required components:		
		1200
<u> </u>		 15 ⁵ 0 ⁶ 15 ⁴
SEOUL SEMICONDUCTOR		96* 90
LED	Z8Y22T	
FWHM / FWTM	97.0 + 21.0° / 141.0 + 32.0°	754
Efficiency	94 %	400
Peak intensity	1.2 cd/lm	60* 66'
LEDs/each optic	1	
Light colour	White	45*
Required components:	-	
- 1		
		1220
		30° 15° 30