

PRODUCT DATASHEET C13749_HB-2X2-O

HB-2X2-O

~20° + 115° oval beam for aisle lighting

SPECIFICATION:

Dimensions	50.0 x 50.0 mm
Height	10.6 mm
Fastening	glue, pin, screw
ROHS compliant	yes 🛈



MATERIALS:

Component HB-2X2-O

Type Multi-lens

Material	Colour	Finish
PMMA	clear	

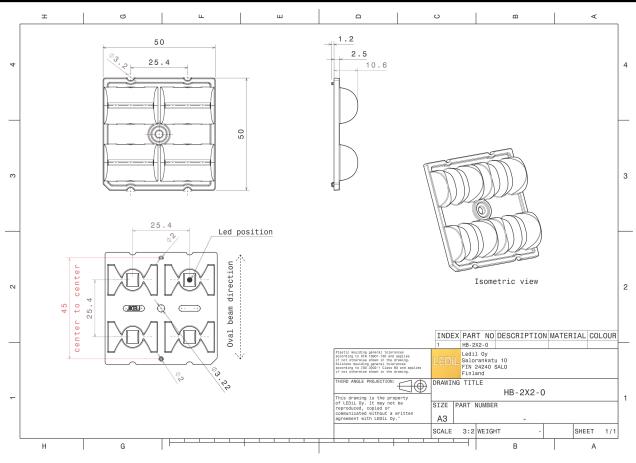
ORDERING INFORMATION:

Component
C13749_HB-2X2-O
» Box size: 480 x 280 x 300 mm

Qty in box	MOQ	MPQ	Box weight (kg)
800	160	160	10.4

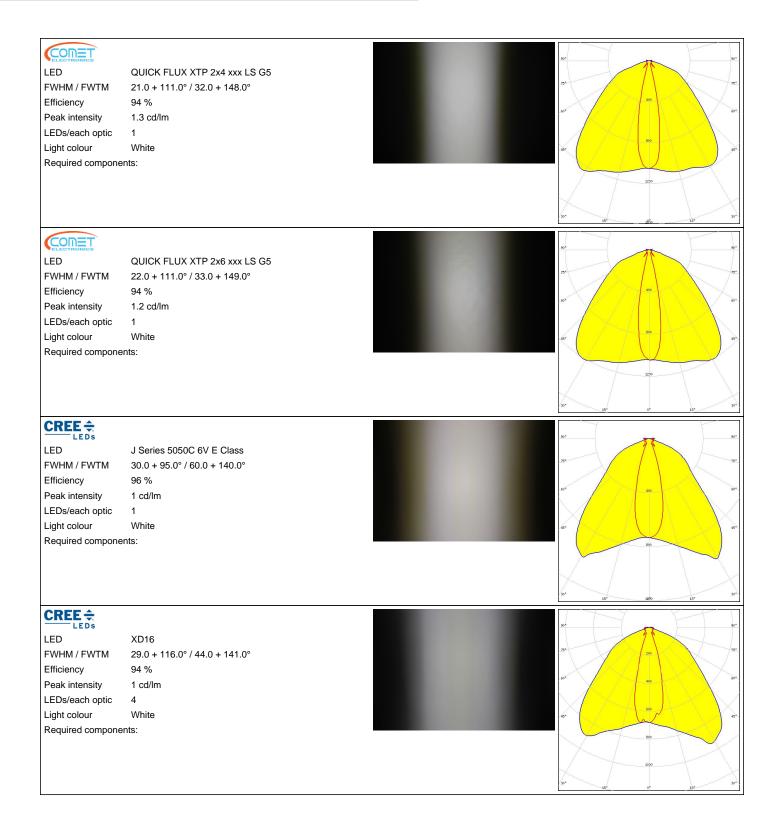


PRODUCT DATASHEET C13749_HB-2X2-O



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







		80*
LED	XD16	
FWHM / FWTM	19.0 + 127.0° / 28.0 + 141.0°	78
Efficiency	93 %	
Peak intensity	1.4 cd/lm	50 ⁴
LEDs/each optic	1	
Light colour	White	
Required compone		
		1229
		200
		30" 22 ³ (³
		84
LED	XHP35 HD	
FWHM / FWTM	29.0 + 117.0° / 48.0 + 148.0°	734 200
Efficiency	94 %	
Peak intensity	0.9 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone		
		80
		1000
		20° 12 ³ (¹)
		80*
LEDS		
LED	XM-L	
	XM-L 28.0 + 108.0° / 45.0 + 142.0°	371
LED FWHM / FWTM		24
LED FWHM / FWTM Efficiency	28.0 + 108.0° / 45.0 + 142.0°	29 61 ^x - 40
LED FWHM / FWTM Efficiency Peak intensity	28.0 + 108.0° / 45.0 + 142.0° 94 %	27- 81 ⁴ - 40
LED FWHM / FWTM Efficiency	28.0 + 108.0° / 45.0 + 142.0° 94 % 1 cd/lm	234 634 469
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	28.0 + 108.0° / 45.0 + 142.0° 94 % 1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	28.0 + 108.0° / 45.0 + 142.0° 94 % 1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	28.0 + 108.0° / 45.0 + 142.0° 94 % 1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	28.0 + 108.0° / 45.0 + 142.0° 94 % 1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	28.0 + 108.0° / 45.0 + 142.0° 94 % 1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	28.0 + 108.0° / 45.0 + 142.0° 94 % 1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	28.0 + 108.0° / 45.0 + 142.0° 94 % 1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	28.0 + 108.0° / 45.0 + 142.0° 94 % 1 cd/lm 1 White ents:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	28.0 + 108.0° / 45.0 + 142.0° 94 % 1 cd/lm 1 White ents:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	28.0 + 108.0° / 45.0 + 142.0° 94 % 1 cd/lm 1 White ents: XM-L2 30.0 + 106.0° / 48.0 + 143.0°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone CREECS LED FWHM / FWTM Efficiency	28.0 + 108.0° / 45.0 + 142.0° 94 % 1 cd/lm 1 White ents: XM-L2 30.0 + 106.0° / 48.0 + 143.0° 94 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone Equired compone CREECS LED FWHM / FWTM Efficiency Peak intensity	28.0 + 108.0° / 45.0 + 142.0° 94 % 1 cd/lm 1 White ents: XM-L2 30.0 + 106.0° / 48.0 + 143.0° 94 % 1 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone Equired compone Efficiency Peak intensity LEDs/each optic	28.0 + 108.0° / 45.0 + 142.0° 94 % 1 cd/lm 1 White ents: XM-L2 30.0 + 106.0° / 48.0 + 143.0° 94 % 1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone CREEES LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	28.0 + 108.0° / 45.0 + 142.0° 94 % 1 cd/lm 1 White ents: XM-L2 30.0 + 106.0° / 48.0 + 143.0° 94 % 1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone CREEES LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	28.0 + 108.0° / 45.0 + 142.0° 94 % 1 cd/lm 1 White ents: XM-L2 30.0 + 106.0° / 48.0 + 143.0° 94 % 1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone CREEES LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	28.0 + 108.0° / 45.0 + 142.0° 94 % 1 cd/lm 1 White ents: XM-L2 30.0 + 106.0° / 48.0 + 143.0° 94 % 1 cd/lm 1 White	



		907
LED	XP-G	
FWHM / FWTM	26.0 + 115.0° / 44.0 + 158.0°	
Efficiency	94 %	
Peak intensity	1.1 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone		
		120
		34* <u>15</u> 5 0 ⁴ 15 ⁴
CREE ≑		
LED LEDS	XP-G2	»",
EED FWHM / FWTM	xF-62 27.0 + 112.0° / 42.0 + 146.0°	794
Efficiency	94 %	
Peak intensity	94 % 1.2 cd/lm	
LEDs/each optic	1	
Light colour	ı White	
Required component		
Required component		120
		30** 25 ³ 60 ⁴ 12 ⁴
CREE ≑		
		35
LED	XP-L HD	20
LED FWHM / FWTM	29.0 + 117.0° / 48.0 + 144.0°	90 ⁺ 20
LED FWHM / FWTM Efficiency	29.0 + 117.0° / 48.0 + 144.0° 94 %	
LED FWHM / FWTM Efficiency Peak intensity	29.0 + 117.0° / 48.0 + 144.0° 94 % 0.9 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	29.0 + 117.0° / 48.0 + 144.0° 94 % 0.9 cd/lm 1	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	29.0 + 117.0° / 48.0 + 144.0° 94 % 0.9 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	29.0 + 117.0° / 48.0 + 144.0° 94 % 0.9 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	29.0 + 117.0° / 48.0 + 144.0° 94 % 0.9 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	29.0 + 117.0° / 48.0 + 144.0° 94 % 0.9 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	29.0 + 117.0° / 48.0 + 144.0° 94 % 0.9 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen	29.0 + 117.0° / 48.0 + 144.0° 94 % 0.9 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer	29.0 + 117.0° / 48.0 + 144.0° 94 % 0.9 cd/lm 1 White nts:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer	29.0 + 117.0° / 48.0 + 144.0° 94 % 0.9 cd/lm 1 White nts:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component CREECS LED FWHM / FWTM	29.0 + 117.0° / 48.0 + 144.0° 94 % 0.9 cd/lm 1 White nts: XP-L HI 25.0 + 123.0° / 41.0 + 143.0°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componed	29.0 + 117.0° / 48.0 + 144.0° 94 % 0.9 cd/lm 1 White nts: XP-L HI 25.0 + 123.0° / 41.0 + 143.0° 94 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Required component Efficiency Peak intensity	29.0 + 117.0° / 48.0 + 144.0° 94 % 0.9 cd/lm 1 White nts: XP-L HI 25.0 + 123.0° / 41.0 + 143.0° 94 % 1.1 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Required component Efficiency Peak intensity LEDs/each optic	29.0 + 117.0° / 48.0 + 144.0° 94 % 0.9 cd/lm 1 White nts: XP-L HI 25.0 + 123.0° / 41.0 + 143.0° 94 % 1.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component CREECS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	29.0 + 117.0° / 48.0 + 144.0° 94 % 0.9 cd/lm 1 White nts: XP-L HI 25.0 + 123.0° / 41.0 + 143.0° 94 % 1.1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Required component Efficiency Peak intensity LEDs/each optic	29.0 + 117.0° / 48.0 + 144.0° 94 % 0.9 cd/lm 1 White nts: XP-L HI 25.0 + 123.0° / 41.0 + 143.0° 94 % 1.1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Required component Efficiency Peak intensity LEDs/each optic Light colour	29.0 + 117.0° / 48.0 + 144.0° 94 % 0.9 cd/lm 1 White nts: XP-L HI 25.0 + 123.0° / 41.0 + 143.0° 94 % 1.1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Required component Efficiency Peak intensity LEDs/each optic Light colour	29.0 + 117.0° / 48.0 + 144.0° 94 % 0.9 cd/lm 1 White nts: XP-L HI 25.0 + 123.0° / 41.0 + 143.0° 94 % 1.1 cd/lm 1 White	



CREE ÷		
CREE ÷		80* 90*
LED	XP-L2	
FWHM / FWTM	28.0 + 117.0° / 47.0 + 150.0°	
Efficiency	94 %	657 600
Peak intensity	0.9 cd/lm	
LEDs/each optic	1	
Light colour	White	45° (
Required compone	nts:	30
		1000
		30° 15° 30°
	EDS	81°
LED	LUXEON 5050 Round LES	
FWHM / FWTM	29.0 + 114.0° / 51.0 + 147.0°	754 200 755
Efficiency	94 %	
Peak intensity	0.9 cd/lm	60° 60°
LEDs/each optic	1	
Light colour	White	45°
Required compone	nts:	
		X/T/X
		1000
<i>M</i>		30° 15° 1690 15° 30°
🖉 LUMIL	EDS	90* 90*
LED	LUXEON MZ	
FWHM / FWTM	28.0 + 103.0° / 43.0 + 14.0°	75
Efficiency	94 %	400
Peak intensity	1.1 cd/lm	
LEDs/each optic	1	
Light colour	White	45* 800
Required compone	nts:	
		30* <u>15</u> * 0* 15* 30*
	EDS	
LED	LUXEON R	
FWHM / FWTM	25.0 + 105.0° / 44.0 + 148.0°	
Efficiency	94 %	
Peak intensity	1.2 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone		



🙆 LUMIL	EDS	90 ⁴
LED	LUXEON Rebel ES	
FWHM / FWTM	25.0 + 106.0° / 42.0 + 150.0°	
Efficiency	94 %	
Peak intensity	1.2 cd/lm	69 ²
LEDs/each optic	1	
Light colour	White	
Required compone		
		30 ⁴ 127 1280 127
LUMIL	EDS	
LED	LUXEON T	
FWHM / FWTM	26.0 + 110.0° / 41.0 + 145.0°	724
Efficiency	94 %	
Peak intensity	1.2 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required component		
Required component		
		30* 1 <u>6</u> 0 13*
	EDS	
		8*
LED	LUXEON TX	814
LED FWHM / FWTM	LUXEON TX 24.0 + 118.0° / 42.0 + 146.0°	
LED FWHM / FWTM Efficiency	LUXEON TX 24.0 + 118.0° / 42.0 + 146.0° 94 %	50°
LED FWHM / FWTM Efficiency Peak intensity	LUXEON TX 24.0 + 118.0° / 42.0 + 146.0° 94 % 1.1 cd/lm	51°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LUXEON TX 24.0 + 118.0° / 42.0 + 146.0° 94 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON TX 24.0 + 118.0° / 42.0 + 146.0° 94 % 1.1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LUXEON TX 24.0 + 118.0° / 42.0 + 146.0° 94 % 1.1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON TX 24.0 + 118.0° / 42.0 + 146.0° 94 % 1.1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON TX 24.0 + 118.0° / 42.0 + 146.0° 94 % 1.1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON TX 24.0 + 118.0° / 42.0 + 146.0° 94 % 1.1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON TX 24.0 + 118.0° / 42.0 + 146.0° 94 % 1.1 cd/lm 1 White nts:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen	LUXEON TX 24.0 + 118.0° / 42.0 + 146.0° 94 % 1.1 cd/lm 1 White nts:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	LUXEON TX 24.0 + 118.0° / 42.0 + 146.0° 94 % 1.1 cd/lm 1 White hts:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	LUXEON TX 24.0 + 118.0° / 42.0 + 146.0° 94 % 1.1 cd/lm 1 White hts:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Model of the second seco	LUXEON TX 24.0 + 118.0° / 42.0 + 146.0° 94 % 1.1 cd/lm 1 White nts: EDS LUXEON V 26.0 + 108.0° / 44.0 + 141.0°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Methods of the second se	LUXEON TX 24.0 + 118.0° / 42.0 + 146.0° 94 % 1.1 cd/lm 1 White nts: EDS LUXEON V 26.0 + 108.0° / 44.0 + 141.0° 94 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Required component Efficiency Peak intensity	LUXEON TX 24.0 + 118.0° / 42.0 + 146.0° 94 % 1.1 cd/lm 1 White nts: EDS LUXEON V 26.0 + 108.0° / 44.0 + 141.0° 94 % 1 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Required component Efficiency Peak intensity LEDs/each optic	LUXEON TX 24.0 + 118.0° / 42.0 + 146.0° 94 % 1.1 cd/lm 1 White nts: EDS LUXEON V 26.0 + 108.0° / 44.0 + 141.0° 94 % 1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Composition Required component Efficiency Peak intensity LEDs/each optic Light colour	LUXEON TX 24.0 + 118.0° / 42.0 + 146.0° 94 % 1.1 cd/lm 1 White nts: EDS LUXEON V 26.0 + 108.0° / 44.0 + 141.0° 94 % 1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Composition Required component Efficiency Peak intensity LEDs/each optic Light colour	LUXEON TX 24.0 + 118.0° / 42.0 + 146.0° 94 % 1.1 cd/lm 1 White nts: EDS LUXEON V 26.0 + 108.0° / 44.0 + 141.0° 94 % 1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Composition Required component Efficiency Peak intensity LEDs/each optic Light colour	LUXEON TX 24.0 + 118.0° / 42.0 + 146.0° 94 % 1.1 cd/lm 1 White nts: EDS LUXEON V 26.0 + 108.0° / 44.0 + 141.0° 94 % 1 cd/lm 1 White	



	INUS		V M
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	SST-10-B130 18.0 + 104.0° / 25.0 + 144.0° 97 % 1.6 cd/lm 1 Deep Red	20. 62. 10. 10. 10. 10. 10. 10. 10. 10. 10. 10	400 400 500 500 500 500 500 500
Your solut LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	RecLED 122x50mm 1900lm 730 2x4 Opt G1 23.0 + 99.5° / 32.5 + 145.0° 97 % 1.2 cd/lm 1 White	57 57 57	
ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	NCSxx19B 23.0 + 113.0° / 39.0 + 146.0° 94 % 1.4 cd/lm 1 White	90° 33 65 67	400 400 000 120 120 120
ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	NVSW219D 25.0 + 107.0° / 37.0 + 137.0° 94 % 1.2 cd/lm 1 White		12 ⁵ 0 ⁵ 12 ⁵

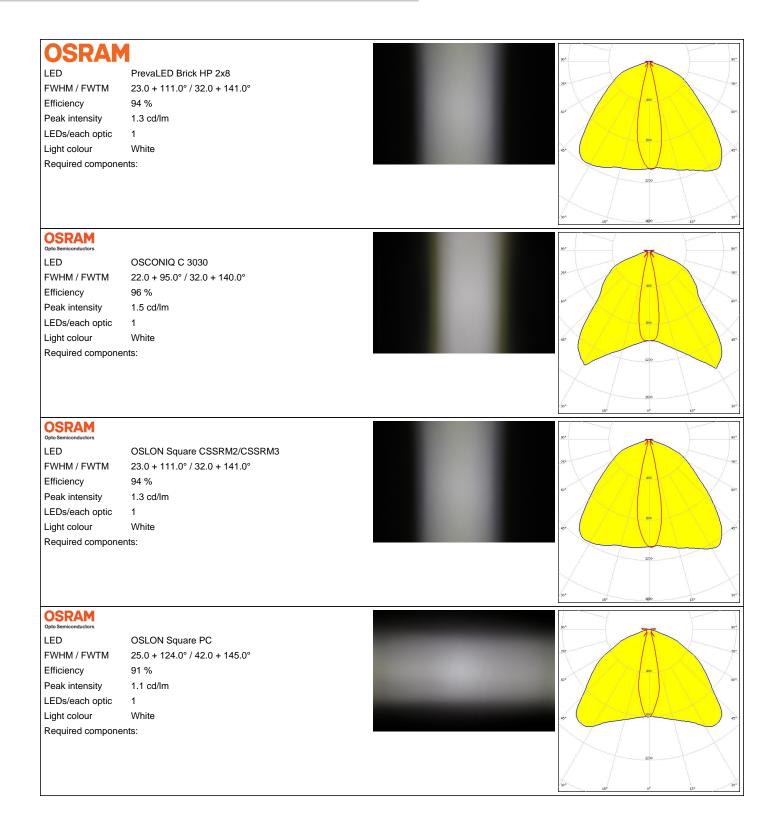


ØNICHI/		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	NVSW319B 25.0 + 113.0° / 41.0 + 144.0° 94 % 1.1 cd/lm 1 White	
ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	NVSW3x9A 24.0 + 119.0° / 38.0 + 144.0° 94 % 1.1 cd/lm 1 White	
ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	NVSW3x9A 25.0 + 134.0° / 43.0 + 147.0° 93 % 0.4 cd/lm 1 White	
EED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	NVSxE21A 17.0 + 125.0° / 27.0 + 139.0° 94 % 1.7 cd/lm 1 White	
		200

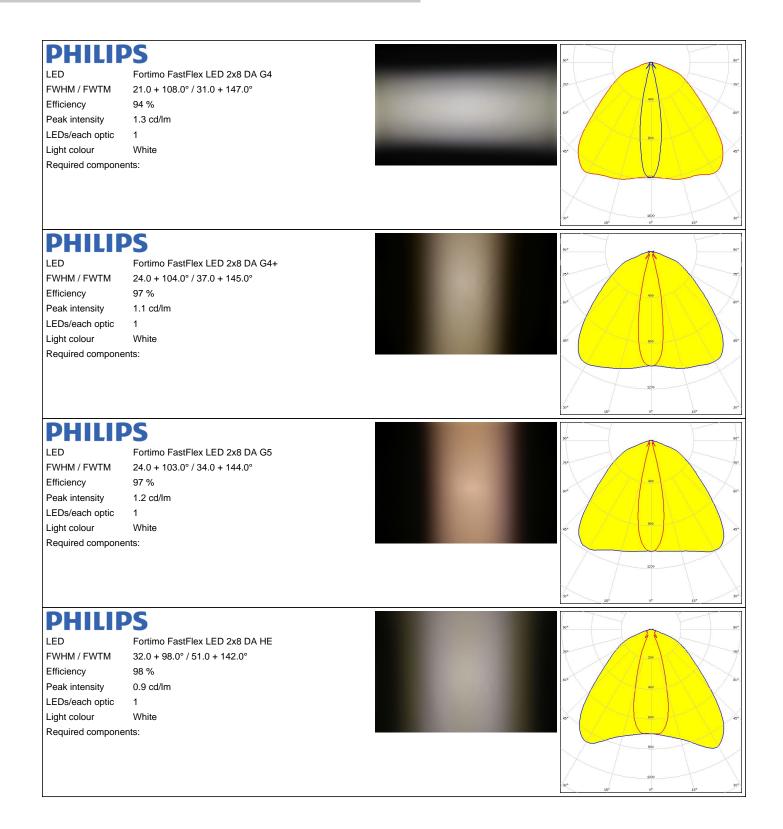


ØNICHI/		90* 90'
LED	NVSxx19A	
FWHM / FWTM	24.0 + 105.0° / 44.0 + 148.0°	75°
Efficiency	94 %	
Peak intensity	1.2 cd/lm	50 ⁴ 60
LEDs/each optic	1	
Light colour	White	45'
Required compone		140 ¹
		1230
		30° 15 ⁵ 0 ⁶ 15° 30°
ØNICHI/		90*
LED	NVSxx19B/NVSxx19C	
FWHM / FWTM	26.0 + 108.0° / 41.0 + 145.0°	75°
Efficiency	94 %	400
Peak intensity	1.2 cd/lm	50* 60*
LEDs/each optic	1	
Light colour	White	451
Required compone		
		1200
		\times
		 30* <u>15</u> * <u>1030</u> <u>15</u> * 30*
ØNICHI/		90* 90
LED	NWSx229A	
FWHM / FWTM	27.0 + 118.0° / 43.0 + 143.0°	75* 75
Efficiency	94 %	
Peak intensity	1 cd/lm	60* 60*
LEDs/each optic	1	
Light colour	White	45°
Required compone	nts:	
		\times / \times
		30* 1220 30*
OSRAN	4	155° 0° 15°
		90* 90°
LED		
	PL-BRICK HP 3800 2x8 SSG	
FWHM / FWTM	26.0 + 102.0° / 37.0 + 139.0°	77.
Efficiency	26.0 + 102.0° / 37.0 + 139.0° 97 %	27 ³ 400
Efficiency Peak intensity	26.0 + 102.0° / 37.0 + 139.0° 97 % 1.2 cd/lm	20 Ex
Efficiency Peak intensity LEDs/each optic	26.0 + 102.0° / 37.0 + 139.0° 97 % 1.2 cd/lm 1	er er
Efficiency Peak intensity LEDs/each optic Light colour	26.0 + 102.0° / 37.0 + 139.0° 97 % 1.2 cd/lm 1 White	2°
Efficiency Peak intensity LEDs/each optic	26.0 + 102.0° / 37.0 + 139.0° 97 % 1.2 cd/lm 1 White	65 ⁴
Efficiency Peak intensity LEDs/each optic Light colour	26.0 + 102.0° / 37.0 + 139.0° 97 % 1.2 cd/lm 1 White	65 ⁴
Efficiency Peak intensity LEDs/each optic Light colour	26.0 + 102.0° / 37.0 + 139.0° 97 % 1.2 cd/lm 1 White	65 ⁴
Efficiency Peak intensity LEDs/each optic Light colour	26.0 + 102.0° / 37.0 + 139.0° 97 % 1.2 cd/lm 1 White	65 ⁴

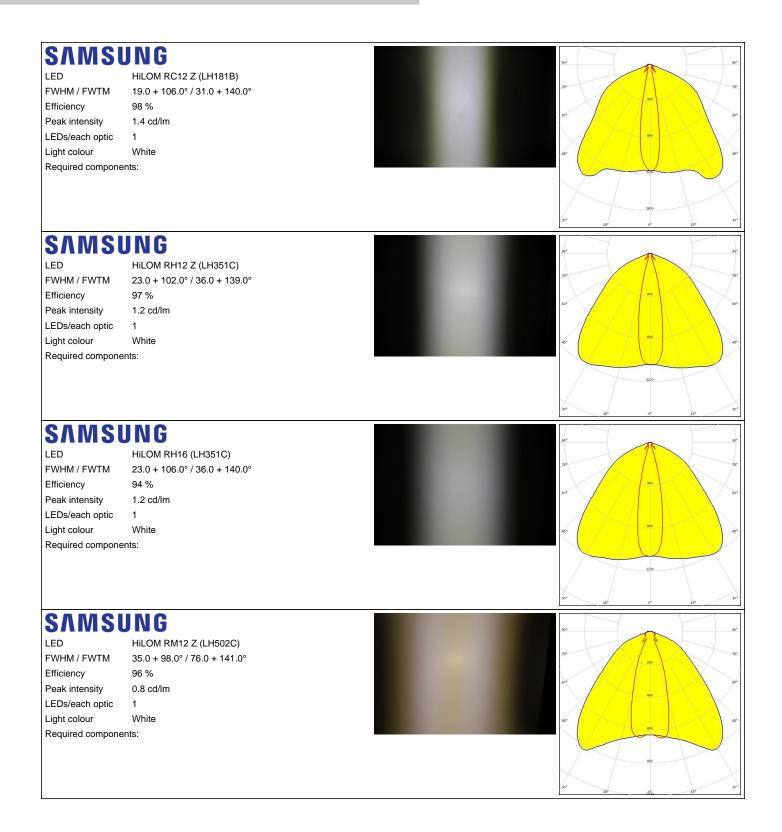














SAMSI		90°
LED	LH351B	
FWHM / FWTM	23.0 + 113.0° / 35.0 + 141.0°	
Efficiency	94 %	60*
Peak intensity	1.2 cd/lm	
LEDs/each optic	1	
Light colour	White	é.
Required compone	ints:	
		1200
		30° 15° 0° 15° 30°
S ΛΜS	ING	
LED	LH351C	20
FWHM / FWTM	24.0 + 111.0° / 37.0 + 141.0°	721 721
Efficiency	94 %	
Peak intensity	1.1 cd/lm	60° / / / / / / / / / / / / / / / / / / /
LEDs/each optic	1	
Light colour	White	
Required compone		
		1200
i		30° 15 ⁵ 0° 15° 30°
l		
SЛМSI	JNG	50° 50°
	J N G LH351D	90°
		29°
LED FWHM / FWTM Efficiency	LH351D	
LED FWHM / FWTM Efficiency Peak intensity	LH351D 27.0 + 116.0° / 44.0 + 144.0°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LH351D 27.0 + 116.0° / 44.0 + 144.0° 94 % 1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH351D 27.0 + 116.0° / 44.0 + 144.0° 94 % 1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LH351D 27.0 + 116.0° / 44.0 + 144.0° 94 % 1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH351D 27.0 + 116.0° / 44.0 + 144.0° 94 % 1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH351D 27.0 + 116.0° / 44.0 + 144.0° 94 % 1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH351D 27.0 + 116.0° / 44.0 + 144.0° 94 % 1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LH351D 27.0 + 116.0° / 44.0 + 144.0° 94 % 1 cd/lm 1 White Ints:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LH351D 27.0 + 116.0° / 44.0 + 144.0° 94 % 1 cd/lm 1 White Ints:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LH351D 27.0 + 116.0° / 44.0 + 144.0° 94 % 1 cd/lm 1 White Ints:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LH351D 27.0 + 116.0° / 44.0 + 144.0° 94 % 1 cd/lm 1 White Ints: JNG LH351Z 26.0 + 117.0° / 42.0 + 141.0°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone SAMSU LED FWHM / FWTM Efficiency	LH351D 27.0 + 116.0° / 44.0 + 144.0° 94 % 1 cd/lm 1 White Ints: UNG LH351Z 26.0 + 117.0° / 42.0 + 141.0° 94 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone SANSU LED FWHM / FWTM Efficiency Peak intensity	LH351D 27.0 + 116.0° / 44.0 + 144.0° 94 % 1 cd/lm 1 White Ints: UNG LH351Z 26.0 + 117.0° / 42.0 + 141.0° 94 % 1.1 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone SANSU LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LH351D $27.0 + 116.0^{\circ} / 44.0 + 144.0^{\circ}$ 94 % 1 cd/lm 1 White ints: JNG LH351Z $26.0 + 117.0^{\circ} / 42.0 + 141.0^{\circ}$ 94 % 1.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone SANNSU LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH351D $27.0 + 116.0^{\circ} / 44.0 + 144.0^{\circ}$ 94 % 1 cd/lm 1 White ints: JNG LH351Z 26.0 + 117.0^{\circ} / 42.0 + 141.0^{\circ} 94 % 1.1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone SANSU LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LH351D $27.0 + 116.0^{\circ} / 44.0 + 144.0^{\circ}$ 94 % 1 cd/lm 1 White ints: JNG LH351Z 26.0 + 117.0^{\circ} / 42.0 + 141.0^{\circ} 94 % 1.1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone SANNSU LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH351D $27.0 + 116.0^{\circ} / 44.0 + 144.0^{\circ}$ 94 % 1 cd/lm 1 White ints: JNG LH351Z 26.0 + 117.0^{\circ} / 42.0 + 141.0^{\circ} 94 % 1.1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone SAMSSU LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH351D $27.0 + 116.0^{\circ} / 44.0 + 144.0^{\circ}$ 94 % 1 cd/lm 1 White ints: JNG LH351Z 26.0 + 117.0^{\circ} / 42.0 + 141.0^{\circ} 94 % 1.1 cd/lm 1 White	



		90*
LED	LED-Pa-L15c2W11c2-xxx-C050-01	
FWHM / FWTM	22.0 + 105.0° / 36.0 + 142.0°	750 7
Efficiency	98 %	400
Peak intensity	1.3 cd/lm	504 6
LEDs/each optic	1	
Light colour	White	457
Required compone		
		12200
		30° 1650 3 15° 0° 15°
SEOUL SEMICONDUCTOR		90 ⁺
LED	Z5M3	
FWHM / FWTM	23.0 + 113.0° / 39.0 + 146.0°	75*
Efficiency	94 %	400
Peak intensity	1.1 cd/lm	60°
LEDs/each optic	1	
Light colour	White	45+
Required compone		
		1200
		30° 30° 10° 3
SEOUL SEMICONDUCTOR		90*
LED	Z5M4	
FWHM / FWTM	22.0 + 97.0° / 35.0 + 135.0°	25*
Efficiency	98 %	400
Peak intensity	1.3 cd/lm	601 ⁴ 0
LEDs/each optic	1	
Light colour	White	45
Required compone	nts:	
		12200
		30*
		15 ⁵ 1690 10 ⁺
SEOUL SEMICONDUCTOR		90° 9
LED	Z8Y22	36
FWHM / FWTM	21.0 + 121.0° / 99.0 + 140.0°	750
Efficiency	94 %	400
Peak intensity	1.2 cd/lm	ee.
LEDs/each optic	1	
		45+ 000
Light colour	White	/43*
Light colour Required compone		



SEOUL SEOUL SEMICONDUCTOR			90°		90
LED	Z8Y22P			The	
FWHM / FWTM	23.0 + 121.0° / 34.0 + 150.0°		25*	$\langle \rangle X$;
Efficiency	94 %			400	\sim
Peak intensity	1.1 cd/lm		608		
LEDs/each optic	1				X
Light colour	White		67°		
Required compone					
					<u> </u>
				1200	
			30° 13 ⁵	0° 15°	30
TOSHIBA Leading Innovation >>>					
LED	TL1L4				
FWHM / FWTM	24.0 + 119.0° / 39.0 + 140.0°				
Efficiency	89 %				
Peak intensity	1.1 cd/lm				
LEDs/each optic	1				
Light colour	White				
Required compone	ents:				
	JIC		 		
LED FWHM / FWTM	RLE 2x4 2000lm HP EXC2 OTD 22.0 + 113.0° / 30.0 + 149.0° 94 %		 		
TRIDON LED FWHM / FWTM Efficiency Peak intensity	RLE 2x4 2000lm HP EXC2 OTD 22.0 + 113.0° / 30.0 + 149.0°		 		
LED FWHM / FWTM Efficiency Peak intensity	RLE 2x4 2000lm HP EXC2 OTD 22.0 + 113.0° / 30.0 + 149.0° 94 %	 			
LED FWHM / FWTM Efficiency	RLE 2x4 2000lm HP EXC2 OTD 22.0 + 113.0° / 30.0 + 149.0° 94 % 1.3 cd/lm				
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	RLE 2x4 2000lm HP EXC2 OTD 22.0 + 113.0° / 30.0 + 149.0° 94 % 1.3 cd/lm 1 White				
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	RLE 2x4 2000lm HP EXC2 OTD 22.0 + 113.0° / 30.0 + 149.0° 94 % 1.3 cd/lm 1 White				
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	RLE 2x4 2000lm HP EXC2 OTD 22.0 + 113.0° / 30.0 + 149.0° 94 % 1.3 cd/lm 1 White ents:		55		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	RLE 2x4 2000lm HP EXC2 OTD 22.0 + 113.0° / 30.0 + 149.0° 94 % 1.3 cd/lm 1 White ents:		95	7	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	RLE 2x4 2000lm HP EXC2 OTD 22.0 + 113.0° / 30.0 + 149.0° 94 % 1.3 cd/lm 1 White ents:		59° 		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	RLE 2x4 2000lm HP EXC2 OTD 22.0 + 113.0° / 30.0 + 149.0° 94 % 1.3 cd/lm 1 White ents:		99 ⁴	40	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone TRIDON LED FWHM / FWTM Efficiency Peak intensity	RLE 2x4 2000lm HP EXC2 OTD 22.0 + 113.0° / 30.0 + 149.0° 94 % 1.3 cd/lm 1 White ents: RLE 2x8 4000lm HP EXC2 OTD 22.0 + 113.0° / 30.0 + 149.0°		<u>9</u> 3*	45	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone TRIDON LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	RLE 2x4 2000lm HP EXC2 OTD 22.0 + 113.0° / 30.0 + 149.0° 94 % 1.3 cd/lm 1 White ents:		80°	400	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone TRIDON LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	RLE 2x4 2000lm HP EXC2 OTD 22.0 + 113.0° / 30.0 + 149.0° 94 % 1.3 cd/lm 1 White ents:		6° 5°	400	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone TRIDON LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	RLE 2x4 2000lm HP EXC2 OTD 22.0 + 113.0° / 30.0 + 149.0° 94 % 1.3 cd/lm 1 White ents:		6°*	450	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone TRIDON LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	RLE 2x4 2000lm HP EXC2 OTD 22.0 + 113.0° / 30.0 + 149.0° 94 % 1.3 cd/lm 1 White ents:		67° 67°	45	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone TRIDON LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	RLE 2x4 2000lm HP EXC2 OTD 22.0 + 113.0° / 30.0 + 149.0° 94 % 1.3 cd/lm 1 White ents:		6°. 2°.	400	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone TREDON ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	RLE 2x4 2000lm HP EXC2 OTD 22.0 + 113.0° / 30.0 + 149.0° 94 % 1.3 cd/lm 1 White ents:				



TRIDONIC LED RLE G1 49x121mm 2000lm xxx EXC OTD FWHM / FWTM 23.0 + 104.0° / 31.0 + 144.0° Efficiency 94 % Peak intensity 1.3 cd/lm LEDs/each optic 1 Light colour White Required components: Image: Component state st	97
FWHM / FWTM 23.0 + 104.0° / 31.0 + 144.0° Efficiency 94 % Peak intensity 1.3 cd/lm LEDs/each optic 1 Light colour White Required components: 500 TRIDONIC LED RLE G1 49x133mm 2000lm xxx EXC OTD FWHM / FWTM 23.0 + 104.0° / 31.0 + 144.0° Efficiency 94 % Peak intensity 1.3 cd/lm LEDs/each optic 1	<u>19</u> 30°
Efficiency 94 % Peak intensity 1.3 cd/m LEDs/each optic 1 Light colour White Required components: Image: Component State Sta	
Peak intensity 1.3 cd/lm LEDs/each optic 1 Light colour White Required components: 1 TRIDONIC LED RLE G1 49x133mm 2000lm xxx EXC OTD FWHM / FWTM 23.0 + 104.0° / 31.0 + 144.0° Efficiency 94 % Peak intensity 1.3 cd/lm LEDs/each optic 1	<u>19</u> 30°
LEDs/each optic 1 Light colour White Required components: TRIDONIC LED RLE G1 49x133mm 2000lm xxx EXC OTD FWHM / FWTM 23.0 + 104.0° / 31.0 + 144.0° Efficiency 94 % Peak intensity 1.3 cd/lm LEDs/each optic 1	
Light colour White Required components: TRIDONIC LED RLE G1 49x133mm 2000lm xxx EXC OTD FWHM / FWTM 23.0 + 104.0° / 31.0 + 144.0° Efficiency 94 % Peak intensity 1.3 cd/lm LEDs/each optic 1	
Required components:	
Image: Descent optic descent for the second descent descent descent for the second descent descent descent	30 ⁻
TRIDONIC LED RLE G1 49x133mm 2000lm xxx EXC OTD FWHM / FWTM 23.0 + 104.0° / 31.0 + 144.0° Efficiency 94 % Peak intensity 1.3 cd/lm LEDs/each optic 1	<u>1</u> 5 30*
LED RLE G1 49x133mm 2000lm xxx EXC OTD FWHM / FWTM 23.0 + 104.0° / 31.0 + 144.0° Efficiency 94 % Peak intensity 1.3 cd/lm LEDs/each optic 1	
LED RLE G1 49x133mm 2000lm xxx EXC OTD FWHM / FWTM 23.0 + 104.0° / 31.0 + 144.0° Efficiency 94 % Peak intensity 1.3 cd/lm LEDs/each optic 1	30°
LED RLE G1 49x133mm 2000lm xxx EXC OTD FWHM / FWTM 23.0 + 104.0° / 31.0 + 144.0° Efficiency 94 % Peak intensity 1.3 cd/lm LEDs/each optic 1	90°
LED RLE G1 49x133mm 2000lm xxx EXC OTD FWHM / FWTM 23.0 + 104.0° / 31.0 + 144.0° Efficiency 94 % Peak intensity 1.3 cd/lm LEDs/each optic 1	
FWHM / FWTM 23.0 + 104.0° / 31.0 + 144.0° Efficiency 94 % Peak intensity 1.3 cd/lm LEDs/each optic 1	75.
Efficiency 94 % Peak intensity 1.3 cd/lm LEDs/each optic 1	
Peak intensity 1.3 cd/lm LEDs/each optic 1	
LEDs/each optic 1	604
	45*
Required components:	
200	\sim
Of the second seco	(λ)
	$\setminus X$
	15*
TRIDONIC	90*
LED RLE G1 49x223mm 4000lm xxx EXC OTD	
FWHM / FWTM 23.0 + 104.0° / 31.0 + 144.0°	75*
Efficiency 94 %	
Peak intensity 1.3 cd/lm	
LEDs/each optic 1	
Light colour White	65°
Required components:	
200	
×*	18ª 30°
TRIDONIC	
	90*
LED RLE G1 49x245mm 4000lm xxx EXC OTD	75*
FWHM / FWTM 23.0 + 104.0° / 31.0 + 144.0°	
Efficiency 94 %	- ave
Peak intensity 1.3 cd/lm	
LEDs/each optic 1	
Light colour White	620
Required components:	
305	
	$\langle \rangle$
20°	15° 30°



LED	J Series 5050 Round LES	
FWHM / FWTM	30.0 + 97.0° / 51.0 + 141.0°	75°
Efficiency	94 %	
Peak intensity	1 cd/lm	50* 60*
LEDs/each optic	1	
Light colour	White	- 63+
Required components:		
		30 ⁺ 15 ³ 0 ⁰ 15 ⁺ 30 ⁺
		90* 90*
LED	XHP35 HI	
FWHM / FWTM	101.0 + 27.0° / 145.0 + 44.0°	78
Efficiency	94 %	400 60*
Peak intensity	1.2 cd/lm	
LEDs/each optic	1	
Light colour	White	45* 000 45*
Required components:		
		1700
		13 ⁵ 0 ⁶ 15*
		90* 90*
LED	XHP50.3 HI	
FWHM / FWTM	28.0 + 100.0° / 44.0 + 144.0°	75* 200 75*
Efficiency	95 %	
Peak intensity	0.9 cd/lm	60* 60*
LEDs/each optic	1	
Light colour	White	57
Required components:		
		9/0
		1000
		30* <u>15</u> ⁵ 0 ⁶ 15 [*] 30 [*]
CREE ≑		90* 90*
LEDS	VD E2	
	XP-E2	75' 25'
FWHM / FWTM	93.0 + 18.0° / 141.0 + 30.0°	400
Efficiency	94 %	50° - 60°
Peak intensity	1.6 cd/lm	
LEDs/each optic	1	500 510
Light colour	White	²
Required components:		220 Jan 199
		304 500 31*



		a.t
LED	XP-G2	
FWHM / FWTM	21.0 + 98.0° / 33.0 + 141.0°	754
Efficiency	91 %	400
Peak intensity	1.2 cd/lm	604 604
LEDs/each optic	1	
Light colour	' White	
Required components:	White	45
required components.		
Protective plate	e, glass	
		30° 15° 30°
		90° 50 90°
LED	XP-G2 HE	
FWHM / FWTM	28.0 + 103.0° / 41.0 + 144.0°	75°
Efficiency	94 %	
Peak intensity	1 cd/lm	60* 64*
LEDs/each optic	1	
Light colour	White	er er
Required components:		
		\times / \times
		1200
		135 0° 13° 30
		90° 90°
LED	XP-G3	
FWHM / FWTM	103.0 + 29.0° / 146.0 + 49.0°	75° 75°
Efficiency	94 %	400
Peak intensity	1.1 cd/lm	.60* 60*
LEDs/each optic	1	
Light colour	White	45* 000 43*-
Required components:		
		20° 20°
CREE ≑		12 ⁵ 0 ⁶ 12 ⁶
LEDS		90* 90*
LED	XP-G4	
FWHM / FWTM	24.0 + 100.0° / 36.0 + 128.0°	74-
Efficiency	97 %	50 ⁴
Peak intensity	1.2 cd/lm	
LEDs/each optic	1	
Light colour	White	45°
Required components:		
		100



			90*	90*
LED	XP-G4			
FWHM / FWTM	24.0 + 95.0° / 36.0 + 127.0°		734	785
Efficiency	87 %			
Peak intensity	1.1 cd/lm		604 400	60*
LEDs/each optic	1			
Light colour	White		45+	454
Required components				
Protective pl	ate, glass			
			30* 120	
			/30* 120 15 ⁵ 0 ⁶	30* 15*
			90*	90*
LED	XP-L HD		1	
FWHM / FWTM	26.0 + 103.0° / 42.0 + 140.0	٥	759 200	785
Efficiency	88 %			
Peak intensity	0.9 cd/lm		- 400	60*
LEDs/each optic	1			
Light colour	White		45*	
Required components	3:			
Protective pl	ate, glass		100	t
			30*	30*
CREE ≑				
LEDS			90*	90*
LED				
LED FWHM / FWTM	XP-L HI 22.0 + 98.0° / 34.0 + 140.0°		734	78"
FWHM / FWTM	22.0 + 98.0° / 34.0 + 140.0°		79	
FWHM / FWTM Efficiency	22.0 + 98.0° / 34.0 + 140.0° 88 %		330 60 ⁴	667
FWHM / FWTM Efficiency Peak intensity	22.0 + 98.0° / 34.0 + 140.0° 88 % 1.2 cd/lm		974	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic	22.0 + 98.0° / 34.0 + 140.0° 88 % 1.2 cd/lm 1			
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	22.0 + 98.0° / 34.0 + 140.0° 88 % 1.2 cd/lm 1 White		373 63 ⁴ 62 ⁴ 64	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic	22.0 + 98.0° / 34.0 + 140.0° 88 % 1.2 cd/lm 1 White		997 60° 60° 60°	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	22.0 + 98.0° / 34.0 + 140.0° 88 % 1.2 cd/lm 1 White S:			
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components	22.0 + 98.0° / 34.0 + 140.0° 88 % 1.2 cd/lm 1 White S:			
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components Protective pl	22.0 + 98.0° / 34.0 + 140.0° 88 % 1.2 cd/lm 1 White S:			
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components Protective pl	22.0 + 98.0° / 34.0 + 140.0° 88 % 1.2 cd/lm 1 White S:			
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components Protective pl	22.0 + 98.0° / 34.0 + 140.0° 88 % 1.2 cd/lm 1 White S:			
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components Protective pl CREE	22.0 + 98.0° / 34.0 + 140.0° 88 % 1.2 cd/lm 1 White s: ate, glass	•		
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components Protective pl CREEES LED FWHM / FWTM Efficiency	22.0 + 98.0° / 34.0 + 140.0° 88 % 1.2 cd/lm 1 White s: ate, glass XP-L2 28.0 + 100.0° / 46.0 + 140.0 87 %	•		
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components Protective pl CREE LED FWHM / FWTM Efficiency Peak intensity	22.0 + 98.0° / 34.0 + 140.0° 88 % 1.2 cd/lm 1 White s: ate, glass XP-L2 28.0 + 100.0° / 46.0 + 140.0	•		
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components Protective pl CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	22.0 + 98.0° / 34.0 + 140.0° 88 % 1.2 cd/lm 1 White 3: ate, glass XP-L2 28.0 + 100.0° / 46.0 + 140.0 87 % 0.9 cd/lm 1	•		
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components Protective pl CREE ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	22.0 + 98.0° / 34.0 + 140.0° 88 % 1.2 cd/lm 1 White s: ate, glass XP-L2 28.0 + 100.0° / 46.0 + 140.0 87 % 0.9 cd/lm 1 White	•		2 22" 23"
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components Protective pl CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	22.0 + 98.0° / 34.0 + 140.0° 88 % 1.2 cd/lm 1 White s: ate, glass XP-L2 28.0 + 100.0° / 46.0 + 140.0 87 % 0.9 cd/lm 1 White	0		2 12 ⁴ 32 ⁴
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components Protective pl CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components	22.0 + 98.0° / 34.0 + 140.0° 88 % 1.2 cd/lm 1 White S: ate, glass XP-L2 28.0 + 100.0° / 46.0 + 140.0 87 % 0.9 cd/lm 1 White S:	0		2 13 ⁴ 3 ³⁴
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components Protective pl CREE ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	22.0 + 98.0° / 34.0 + 140.0° 88 % 1.2 cd/lm 1 White S: ate, glass XP-L2 28.0 + 100.0° / 46.0 + 140.0 87 % 0.9 cd/lm 1 White S:	•		2 13 ⁴ 3 ²
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components Protective pl CREEES LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components	22.0 + 98.0° / 34.0 + 140.0° 88 % 1.2 cd/lm 1 White S: ate, glass XP-L2 28.0 + 100.0° / 46.0 + 140.0 87 % 0.9 cd/lm 1 White S:	•		2 13 ⁴ 3 ³⁴



LED FWHM / FWTM Efficiency LEDs/each optic Light colour Required components	XQ-E HI 96.0 + 14.0° / 144.0 + 25.0° % 1 White	
		90° 90°
		72'
LED FWHM / FWTM	XT-E HE 100.0 + 24.0°	
Efficiency	94 %	60 ¹ 400
LEDs/each optic	94 % 1	
Light colour	White	
Required components		
rtoquirou componento		
		30° 12 ³ 0° 12 ⁴ 31°
UMILE	DS	
LED	LUXEON 5050 HE	N°
FWHM / FWTM	30.0 + 98.0° / 52.0 + 140.0°	751 752
Efficiency	87 %	
Peak intensity	0.9 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required components		
Protective pla	ite, glass	
		30*
	DS	22° 4° 25°
LED	LUXEON 5050 Round LES	
FWHM / FWTM	30.0 + 96.0° / 48.0 + 140.0°	72* 200
Efficiency	88 %	
Peak intensity	0.9 cd/lm	50°
LEDs/each optic	1	
Light colour	White	47 - <u>60 - 61</u> - 7
Required components		
Protective pla	ate, glass	\times



UMILE	DS	90°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components	LUXEON 5050 Square LES 30.0 + 98.0° / 50.0 + 142.0° 95 % 0.9 cd/lm 1 White	
	DS	12 ³ 4 ³ 13 ³
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components	LUXEON 5050 Square LES 30.0 + 96.0° / 52.0 + 140.0° 84 % 0.8 cd/lm 1 White	90° 900 72° 200 61° 400 62° 600
Protective pl	ate, glass	00
	DS .	22 ³ 0 ⁴ 2 ³
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components	LUXEON IR Domed 150 (L1I0-0xxx150000000) 16.0 + 98.0° / 28.0 + 149.0° 94 % 1.4 cd/lm 1 White	
UMILE	DS	99'
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components	LUXEON IR Domed 90 (L110-0xxx090000000) 20.0 + 86.0° / 29.0 + 128.0° 95 % 1.6 cd/lm 1 White	



COMILEC	DS S	90* 9
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON XR-HL2X (L2H2-xxxxxMLU010) 28.0 + 102.0° / 42.0 + 140.0° 96 % 1 cd/lm 1 White	
	5	THY EF
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON XR-HL2X (L2H2-xxxxxMLU010) 28.0 + 100.0° / 42.0 + 138.0° 86 % 0.9 cd/lm 1 White	5°* 9 200 6°* 400 6° 600 6°
Protective plate	e, glass	2000 2000
MST Your solutions		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	RecLED 122x50mm 1900lm 730 2x4 Opt G1 24.0 + 97.0° / 34.0 + 141.0° 86 % 1.1 cd/lm 1 White	
Protective plate	e, glass	50° 120 10° 120 2
MICHIΛ		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	NV4WB35AM 28.0 + 100.0° / 42.0 + 144.0° 95 % 1 cd/lm 1 White	5°* 5 5°* 600 6 6°* 600 6 6°* 6 600 6 6°* 6 600 6 6°* 6 6
		20° 12° 22° 13° 3



OSRAM Opto Semiconductors		0.4
LED	OSCONIQ C 2424	
FWHM / FWTM	18.0 + 96.0° / 30.0 + 141.0°	730 772
Efficiency	96 %	400
Peak intensity	1.5 cd/lm	50° 63°.
LEDs/each optic	1	200
Light colour	White	47°
Required components:		
		1220
		X
		1690
		(30* 30* 30* 30* 15*
OSRAM Opto Semiconductors		50° 90°
LED	OSCONIQ P 3030	
FWHM / FWTM	14.0 + 92.0° / 28.0 + 142.0°	73.
Efficiency	95 %	60° 50°
Peak intensity	1.6 cd/lm	
LEDs/each optic	1	
Light colour	White	ar ar
Required components:		
		30° 30° 30°
OSRAM		
OSRAM Opto Semiconductors		89°
Opto Semiconductors	OSCONIQ P 3737 (2W version)	90 ⁺ 90 ⁺ 90 ⁺
Opto Semiconductors LED FWHM / FWTM	99.0 + 19.0° / 142.0 + 31.0°	90 ⁻ 70 ⁺ 70 ⁺ 70 ⁺ 90
opto Semiconductors LED FWHM / FWTM Efficiency	99.0 + 19.0° / 142.0 + 31.0° 94 %	15° c ⁴ 15° 99* 99* 99* 400 400 60*
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	99.0 + 19.0° / 142.0 + 31.0° 94 % 1.3 cd/lm	400
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	99.0 + 19.0° / 142.0 + 31.0° 94 % 1.3 cd/lm 1	400 60°.
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	99.0 + 19.0° / 142.0 + 31.0° 94 % 1.3 cd/lm	400 60*.
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	99.0 + 19.0° / 142.0 + 31.0° 94 % 1.3 cd/lm 1	409 604 604 604 604 604 604 604 604 604 604
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	99.0 + 19.0° / 142.0 + 31.0° 94 % 1.3 cd/lm 1	409 604 604 604 604 604 604 604 604 604 604
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	99.0 + 19.0° / 142.0 + 31.0° 94 % 1.3 cd/lm 1	400 60°.
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	99.0 + 19.0° / 142.0 + 31.0° 94 % 1.3 cd/lm 1	409 604 604 604 604 604 604 604 604 604 604
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	99.0 + 19.0° / 142.0 + 31.0° 94 % 1.3 cd/lm 1	400 60°.
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDS/each optic Light colour Required components:	99.0 + 19.0° / 142.0 + 31.0° 94 % 1.3 cd/lm 1 White	409 604 604 604 604 604 604 604 604 604 604
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED	99.0 + 19.0° / 142.0 + 31.0° 94 % 1.3 cd/lm 1 White OSCONIQ P 3737 (3W version)	409 604 604 604 604 604 604 604 604 604 604
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM	99.0 + 19.0° / 142.0 + 31.0° 94 % 1.3 cd/lm 1 White OSCONIQ P 3737 (3W version) 100.0 + 30.0° / 144.0 + 51.0°	400 400 400 000 000 000 000 000
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency	99.0 + 19.0° / 142.0 + 31.0° 94 % 1.3 cd/lm 1 White OSCONIQ P 3737 (3W version) 100.0 + 30.0° / 144.0 + 51.0° 94 %	409 604 604 604 604 604 604 604 604 604 604
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	99.0 + 19.0° / 142.0 + 31.0° 94 % 1.3 cd/lm 1 White OSCONIQ P 3737 (3W version) 100.0 + 30.0° / 144.0 + 51.0°	400 400 400 000 000 000 000 000
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	99.0 + 19.0° / 142.0 + 31.0° 94 % 1.3 cd/lm 1 White OSCONIQ P 3737 (3W version) 100.0 + 30.0° / 144.0 + 51.0° 94 % 1 cd/lm 1	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	99.0 + 19.0° / 142.0 + 31.0° 94 % 1.3 cd/lm 1 White OSCONIQ P 3737 (3W version) 100.0 + 30.0° / 144.0 + 51.0° 94 % 1 cd/lm	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	99.0 + 19.0° / 142.0 + 31.0° 94 % 1.3 cd/lm 1 White OSCONIQ P 3737 (3W version) 100.0 + 30.0° / 144.0 + 51.0° 94 % 1 cd/lm 1	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	99.0 + 19.0° / 142.0 + 31.0° 94 % 1.3 cd/lm 1 White OSCONIQ P 3737 (3W version) 100.0 + 30.0° / 144.0 + 51.0° 94 % 1 cd/lm 1	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	99.0 + 19.0° / 142.0 + 31.0° 94 % 1.3 cd/lm 1 White OSCONIQ P 3737 (3W version) 100.0 + 30.0° / 144.0 + 51.0° 94 % 1 cd/lm 1	



OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	OSCONIQ P 3737 Flat 22.0 + 98.0° / 35.0 + 142.0° 96 % 1.2 cd/lm 1 White	
OSRAM		TY FT
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	OSCONIQ S 5050 32.0 + 99.0° / 52.0 + 143.0° 96 % 0.8 cd/lm 1 White	
OSRAM Opto Semiconductors		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate	OSCONIQ S 5050 32.0 + 98.0° / 53.0 + 140.0° 85 % 0.8 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 23.0 + 101.0° / 33.0 + 140.0° 85 % 1.1 cd/lm 1 White	9° 75 6° 6° 6° 6° 6° 6° 6° 6° 6° 6° 6° 6°



OCDAM		
OSRAM Opto Semiconductors		90* 90*
LED	OSLON Square Flat	75
FWHM / FWTM	16.0 + 90.0° / 30.0 + 140.0°	
Efficiency	96 %	600
Peak intensity	1.6 cd/lm	
LEDs/each optic	1	
Light colour	White	er Contraction of the second sec
Required components:		
		30* 305
OSRAM		90° 90°
Opto Semiconductors		90° 90°
LED	OSTAR Projection Compact (KW.CSLNM1.TG)	73. 75.
FWHM / FWTM	16.0 + 89.0° / 28.0 + 140.0°	400
Efficiency	96 %	60 ¹ 60 ¹
Peak intensity	1.7 cd/lm	
LEDs/each optic	1	
Light colour	White	1220
Required components:		
		ter -
		30°
		15° 0° 15°
PHILIPS		90° 90°
		99°
	Fortimo FastFlex LED 2x8 DAX G4 103.0 + 29.0° / 146.0 + 49.0°	90° 90° 90° 90° 90° 90° 90° 90° 90° 90°
LED	Fortimo FastFlex LED 2x8 DAX G4	99° 99° 99° 99° 99°
LED FWHM / FWTM	Fortimo FastFlex LED 2x8 DAX G4 103.0 + 29.0° / 146.0 + 49.0°	60°
LED FWHM / FWTM Efficiency	Fortimo FastFlex LED 2x8 DAX G4 103.0 + 29.0° / 146.0 + 49.0° 94 %	90° 92° 92° 92° 92° 92° 92° 92° 92° 92° 92
LED FWHM / FWTM Efficiency Peak intensity	Fortimo FastFlex LED 2x8 DAX G4 103.0 + 29.0° / 146.0 + 49.0° 94 % 1.1 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Fortimo FastFlex LED 2x8 DAX G4 103.0 + 29.0° / 146.0 + 49.0° 94 % 1.1 cd/lm 1	er er
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Fortimo FastFlex LED 2x8 DAX G4 103.0 + 29.0° / 146.0 + 49.0° 94 % 1.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Fortimo FastFlex LED 2x8 DAX G4 103.0 + 29.0° / 146.0 + 49.0° 94 % 1.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Fortimo FastFlex LED 2x8 DAX G4 103.0 + 29.0° / 146.0 + 49.0° 94 % 1.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Fortimo FastFlex LED 2x8 DAX G4 103.0 + 29.0° / 146.0 + 49.0° 94 % 1.1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Fortimo FastFlex LED 2x8 DAX G4 103.0 + 29.0° / 146.0 + 49.0° 94 % 1.1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Fortimo FastFlex LED 2x8 DAX G4 103.0 + 29.0° / 146.0 + 49.0° 94 % 1.1 cd/lm 1 White G HiLOM RM12 Z (LH502C)	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: SAMSUN LED FWHM / FWTM	Fortimo FastFlex LED 2x8 DAX G4 103.0 + 29.0° / 146.0 + 49.0° 94 % 1.1 cd/lm 1 White G HILOM RM12 Z (LH502C) 36.0 + 98.0° / 78.0 + 140.0°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: SAMSUN LED FWHM / FWTM Efficiency	Fortimo FastFlex LED 2x8 DAX G4 103.0 + 29.0° / 146.0 + 49.0° 94 % 1.1 cd/lm 1 White G HiLOM RM12 Z (LH502C) 36.0 + 98.0° / 78.0 + 140.0° 89 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: SAMSUN LED FWHM / FWTM Efficiency Peak intensity	Fortimo FastFlex LED 2x8 DAX G4 103.0 + 29.0° / 146.0 + 49.0° 94 % 1.1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: SAMSUN LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Fortimo FastFlex LED 2x8 DAX G4 103.0 + 29.0° / 146.0 + 49.0° 94 % 1.1 cd/lm 1 White HILOM RM12 Z (LH502C) 36.0 + 98.0° / 78.0 + 140.0° 89 % 0.8 cd/lm 1	
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	Fortimo FastFlex LED 2x8 DAX G4 103.0 + 29.0° / 146.0 + 49.0° 94 % 1.1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: SAMSUN LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Fortimo FastFlex LED 2x8 DAX G4 103.0 + 29.0° / 146.0 + 49.0° 94 % 1.1 cd/lm 1 White HILOM RM12 Z (LH502C) 36.0 + 98.0° / 78.0 + 140.0° 89 % 0.8 cd/lm 1	
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	Fortimo FastFlex LED 2x8 DAX G4 103.0 + 29.0° / 146.0 + 49.0° 94 % 1.1 cd/lm 1 White HILOM RM12 Z (LH502C) 36.0 + 98.0° / 78.0 + 140.0° 89 % 0.8 cd/lm 1 White	
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 Required components:	Fortimo FastFlex LED 2x8 DAX G4 103.0 + 29.0° / 146.0 + 49.0° 94 % 1.1 cd/lm 1 White HILOM RM12 Z (LH502C) 36.0 + 98.0° / 78.0 + 140.0° 89 % 0.8 cd/lm 1 White	



SECOND SECONDUCTOR LED	MJT 5050	97 97 75 97
FWHM / FWTM	32.0 + 98.0° / 52.0 + 142.0°	
Efficiency	94 %	404
Peak intensity	0.8 cd/lm	400
LEDs/each optic	1	
Light colour	White	45+ 600
Required components:		
		500 500 13 ³ 5 <u>600</u> 13 ⁴ 30 ⁴
SEQUE SEQUE SEMICONDUCTOR		
LED	SEOUL DC 5050 6V	7
FWHM / FWTM	33.0 + 98.0° / 58.0 + 143.0°	75* 70*
Efficiency	94 %	
Peak intensity	0.9 cd/lm	60*
LEDs/each optic	1	
Light colour	White	5*
Required components:		
		800
		30* 1000 int 30*
		90* 90*
SEOUL SEMICONDUCTOR	Z5M1/Z5M2	87
seoul semiconductor LED	Z5M1/Z5M2 22.0 + 97.0° / 34.0 + 142.0°	24
seoul semiconductor LED FWHM / FWTM	22.0 + 97.0° / 34.0 + 142.0°	97
seoul semiconductor LED FWHM / FWTM Efficiency	22.0 + 97.0° / 34.0 + 142.0° 94 %	997 997 997 997 997 997 997 997 997 997
seoul semiconductor LED FWHM / FWTM Efficiency Peak intensity	22.0 + 97.0° / 34.0 + 142.0°	99 ⁴ 99 ⁴ 9
seoul semiconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	22.0 + 97.0° / 34.0 + 142.0° 94 % 1.2 cd/lm	90° 90° 73° 60° 60°
seoul semiconductor LED FWHM / FWTM Efficiency Peak intensity	22.0 + 97.0° / 34.0 + 142.0° 94 % 1.2 cd/lm 1	er er
SEDUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	22.0 + 97.0° / 34.0 + 142.0° 94 % 1.2 cd/lm 1	er er
SEDUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	22.0 + 97.0° / 34.0 + 142.0° 94 % 1.2 cd/lm 1	er er
SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	22.0 + 97.0° / 34.0 + 142.0° 94 % 1.2 cd/lm 1	ar ar
SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	22.0 + 97.0° / 34.0 + 142.0° 94 % 1.2 cd/lm 1	ar ar
SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: SEOUL SEMICONDUCTOR	22.0 + 97.0° / 34.0 + 142.0° 94 % 1.2 cd/lm 1 White	ar ar
SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: SEOUL SEMICONDUCTOR LED	22.0 + 97.0° / 34.0 + 142.0° 94 % 1.2 cd/lm 1 White	ar ar
SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency	22.0 + 97.0° / 34.0 + 142.0° 94 % 1.2 cd/lm 1 White Z5M5 26.0 + 103.0° / 38.0 + 140.0°	er er
SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity	22.0 + 97.0° / 34.0 + 142.0° 94 % 1.2 cd/lm 1 White Z5M5 26.0 + 103.0° / 38.0 + 140.0° 96 %	ar ar
SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	22.0 + 97.0° / 34.0 + 142.0° 94 % 1.2 cd/lm 1 White Z5M5 26.0 + 103.0° / 38.0 + 140.0° 96 % 1.1 cd/lm	
SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity	22.0 + 97.0° / 34.0 + 142.0° 94 % 1.2 cd/lm 1 White Z5M5 26.0 + 103.0° / 38.0 + 140.0° 96 % 1.1 cd/lm 1	
SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	22.0 + 97.0° / 34.0 + 142.0° 94 % 1.2 cd/lm 1 White Z5M5 26.0 + 103.0° / 38.0 + 140.0° 96 % 1.1 cd/lm 1	



seoul semiconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components	Z5M5 26.0 + 100.0° / 40.0 + 138.0° 85 % 0.9 cd/lm 1 White s:	
Protective pl	ate, glass	
scoul SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components	Z8Y22T 21.0 + 96.0° / 33.0 + 141.0° 94 % 1.2 cd/lm 1 White	
TRIDON LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components	RLE 2x8 4000lm HP EXC2 OTD 22.0 + 100.0° / 32.0 + 142.0° 84 % 1 cd/lm 1 White	
Protective pl	ate, glass	



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:

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