

PRODUCT DATASHEET CA16129_OLGA-W

OLGA-W

~40° wide beam with flange. Assembly with holder and installation tape.

SPECIFICATION:

Dimensions	Ø 32.0 mm
Height	19.1 mm
Fastening	tape, pin
ROHS compliant	yes 🛈



MATERIALS:

Component OLGA-W OLGA-HLD SPUTNIK-TAPE3

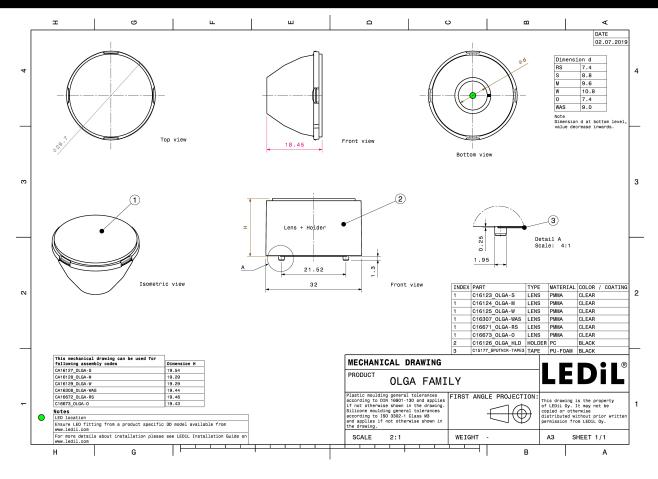
Туре	
Single lens	
Holder	
Таре	

Material	Colour	Finish
PMMA	clear	
PC	black	
Acrylic foam	black	

ORDERING INFORMATION:

Component		Qty in box	MOQ	MPQ	Box weight (kg)
CA16129_OLGA-W	Single lens	792	132	66	10.0
» Box size: 476 x 273 x 292 mm					

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



LEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XD16 32.0° / 54.0° 82 % 2.5 cd/lm 1 White	
CREE CEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XHP35 HD 42.0° / 65.0° 84 % 1.6 cd/lm 1 White ints:	
CREE C LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XHP35 HI 38.0° / 58.0° 85 % 2 cd/lm 1 White	
CREE CLEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XHP50 43.0° / 68.0° 84 % 1.5 cd/lm 1 White ints:	



		50*
LED	XHP50.2	
FWHM / FWTM	42.0° / 66.0°	75
Efficiency	84 %	
Peak intensity	1.6 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone	ents:	
		30 ⁶ 0 ⁶ 33 ⁵
		80
LED	XHP70	
FWHM / FWTM	44.0° / 70.0°	77
Efficiency	84 %	
Peak intensity	1.4 cd/lm	
LEDs/each optic	1	
Light colour	White	gr
Required compone		
		20 ⁵ 0 ⁵ 12 ⁵
CREE ≑		sector and the sector
LEDS		301
LED	XHP70.2	50 ⁴
LED FWHM / FWTM	44.0° / 71.0°	99 ⁴
LED FWHM / FWTM Efficiency	44.0° / 71.0° 83 %	90 ⁴ 97 97
LED LED FWHM / FWTM Efficiency Peak intensity	44.0° / 71.0° 83 % 1.4 cd/lm	
LEDs LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	44.0° / 71.0° 83 % 1.4 cd/lm 1	
LEDs LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	44.0° / 71.0° 83 % 1.4 cd/lm 1 White	99 75 60 60 60
LEDs LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	44.0° / 71.0° 83 % 1.4 cd/lm 1 White	50 75 60 67 60
LEDs LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	44.0° / 71.0° 83 % 1.4 cd/lm 1 White	
LEDs LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	44.0° / 71.0° 83 % 1.4 cd/lm 1 White	
LEDs LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	44.0° / 71.0° 83 % 1.4 cd/lm 1 White	
LEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	44.0° / 71.0° 83 % 1.4 cd/lm 1 White	
LEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	44.0° / 71.0° 83 % 1.4 cd/lm 1 White ents:	
LEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	44.0° / 71.0° 83 % 1.4 cd/lm 1 White ents:	
LEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	44.0° / 71.0° 83 % 1.4 cd/lm 1 White ents: XM-L3 40.0° / 62.0°	
LEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	44.0° / 71.0° 83 % 1.4 cd/lm 1 White ents: XM-L3 40.0° / 62.0° 85 %	
LEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone CREE LEDS LED FWHM / FWTM Efficiency Peak intensity	44.0° / 71.0° 83 % 1.4 cd/lm 1 White ents: XM-L3 40.0° / 62.0° 85 % 1.8 cd/lm	
LEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone CREE LEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	44.0° / 71.0° 83 % 1.4 cd/lm 1 White ents: XM-L3 40.0° / 62.0° 85 % 1.8 cd/lm 1	
LEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	44.0° / 71.0° 83 % 1.4 cd/lm 1 White ents: XM-L3 40.0° / 62.0° 85 % 1.8 cd/lm 1 White	
LEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone CREE LEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	44.0° / 71.0° 83 % 1.4 cd/lm 1 White ents: XM-L3 40.0° / 62.0° 85 % 1.8 cd/lm 1 White	
LEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	44.0° / 71.0° 83 % 1.4 cd/lm 1 White ents: XM-L3 40.0° / 62.0° 85 % 1.8 cd/lm 1 White	
LEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone CREE LEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	44.0° / 71.0° 83 % 1.4 cd/lm 1 White ents: XM-L3 40.0° / 62.0° 85 % 1.8 cd/lm 1 White	
LEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone CREE LEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	44.0° / 71.0° 83 % 1.4 cd/lm 1 White ents: XM-L3 40.0° / 62.0° 85 % 1.8 cd/lm 1 White	



		po ⁴	90°
LED	XP-E2		
FWHM / FWTM	37.0° / 57.0°	73	75*
	86 %		
Efficiency		50°	60°
Peak intensity	2.1 cd/lm		
LEDs/each optic	1		45*
Light colour	White		45*
Required compone	nts:		
			$\langle \cdot \cdot \rangle$
			$\langle \rangle$
		20	36.
		50°	90*
LED	XP-G2		
FWHM / FWTM	41.0° / 60.0°		
Efficiency	86 %		60.
Peak intensity	1.8 cd/lm		17
LEDs/each optic	1		
Light colour	White		45*
Required compone	nts:		
			$\sum_{i=1}^{n}$
			\mathbf{i}
		34	36.0
		15° 2090 15°)
		2°	90°
CREE ÷	XP-G3	80*	90°
LED	XP-G3 37.0° / 59.0°	25	90* 75*
LED FWHM / FWTM	37.0° / 59.0°	34	90° 25°
LED FWHM / FWTM Efficiency	37.0° / 59.0° 85 %	54 75 75	90* 25* 60*
LED FWHM / FWTM Efficiency Peak intensity	37.0° / 59.0° 85 % 2 cd/lm	54 77 68 50	90° 75° 60°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	37.0° / 59.0° 85 % 2 cd/lm 1	9° 9° 90 90	90* 25* 60* 45*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	37.0° / 59.0° 85 % 2 cd/lm 1 White		25. 25.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	37.0° / 59.0° 85 % 2 cd/lm 1 White	9 ⁴ 97 97 90 90	80°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	37.0° / 59.0° 85 % 2 cd/lm 1 White	54 77 54 50 67 500	81 25 25
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	37.0° / 59.0° 85 % 2 cd/lm 1 White		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	37.0° / 59.0° 85 % 2 cd/lm 1 White		25. 26. 26.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	37.0° / 59.0° 85 % 2 cd/lm 1 White		90* - 25* - 90* - 95* - 95* - 95*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	37.0° / 59.0° 85 % 2 cd/lm 1 White nts:		99*. -75* -00*.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	37.0° / 59.0° 85 % 2 cd/lm 1 White nts:		90°. 25°. 60°. 38°.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	37.0° / 59.0° 85 % 2 cd/lm 1 White nts: XP-L HI 37.0° / 56.0°		90* - 25* - 25* - 25* - 25*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	37.0° / 59.0° 85 % 2 cd/lm 1 White nts: XP-L HI 37.0° / 56.0° 86 %		99*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	37.0° / 59.0° 85 % 2 cd/lm 1 White nts: XP-L HI 37.0° / 56.0° 86 % 2.2 cd/lm		90° 90° 90°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone CREE S LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	37.0° / 59.0° 85 % 2 cd/lm 1 White nts: XP-L HI 37.0° / 56.0° 86 % 2.2 cd/lm 1		99* 99*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone CREE S LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	37.0° / 59.0° 85 % 2 cd/lm 1 White hts: XP-L HI 37.0° / 56.0° 86 % 2.2 cd/lm 1 White		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone CREE S LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	37.0° / 59.0° 85 % 2 cd/lm 1 White hts: XP-L HI 37.0° / 56.0° 86 % 2.2 cd/lm 1 White		- 25° 60°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone CREE S LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	37.0° / 59.0° 85 % 2 cd/lm 1 White hts: XP-L HI 37.0° / 56.0° 86 % 2.2 cd/lm 1 White		- 25° 60°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone CREE S LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	37.0° / 59.0° 85 % 2 cd/lm 1 White hts: XP-L HI 37.0° / 56.0° 86 % 2.2 cd/lm 1 White		- 25° 60°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	37.0° / 59.0° 85 % 2 cd/lm 1 White hts: XP-L HI 37.0° / 56.0° 86 % 2.2 cd/lm 1 White		75° 60°



		90° 90°
	VD I O	
	XP-L2	75. 75'
FWHM / FWTM	39.0° / 61.0°	
Efficiency	84%	60 ⁶ 60 ⁴
Peak intensity	1.8 cd/lm	
LEDs/each optic		
Light colour	White	
Required componer	its:	
		1630
		30° 30° 30°
		90* 90*
LED	XQ-E HD	
FWHM / FWTM	37.0° / 57.0°	75
Efficiency	81 %	
Peak intensity	2.1 cd/lm	60° 60°
LEDs/each optic	1	
Light colour	White	gg*
Required componer		
		1600
		30° 30°
	XOLE HI	
LED	XQ-E HI 34 0° / 54 0°	
LED FWHM / FWTM	34.0° / 54.0°	
LED FWHM / FWTM Efficiency	34.0° / 54.0° 85 %	
LED FWHM / FWTM Efficiency Peak intensity	34.0° / 54.0° 85 % 2.3 cd/m	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	34.0° / 54.0° 85 % 2.3 cd/m 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	34.0° / 54.0° 85 % 2.3 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	34.0° / 54.0° 85 % 2.3 cd/lm 1 White	¢.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	34.0° / 54.0° 85 % 2.3 cd/lm 1 White	¢.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	34.0° / 54.0° 85 % 2.3 cd/lm 1 White	¢.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer	34.0° / 54.0° 85 % 2.3 cd/lm 1 White	¢.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer	34.0° / 54.0° 85 % 2.3 cd/lm 1 White	¢.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer	34.0° / 54.0° 85 % 2.3 cd/lm 1 White hts:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer	34.0° / 54.0° 85 % 2.3 cd/lm 1 White hts: XT-E	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer	34.0° / 54.0° 85 % 2.3 cd/lm 1 White hts: XT-E 35.0° / 57.0°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer CREE LED FWHM / FWTM Efficiency	34.0° / 54.0° 85 % 2.3 cd/lm 1 White nts: XT-E 35.0° / 57.0° 84 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer Required componer ELED FWHM / FWTM Efficiency Peak intensity	34.0° / 54.0° 85 % 2.3 cd/lm 1 White hts: XT-E 35.0° / 57.0° 84 % 2.2 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer Required componer ELED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	34.0° / 54.0° 85 % 2.3 cd/lm 1 White hts: XT-E 35.0° / 57.0° 84 % 2.2 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer Required componer EED EWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	34.0° / 54.0° 85 % 2.3 cd/m 1 White hts: XT-E 35.0° / 57.0° 84 % 2.2 cd/m 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer Required componer ELED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	34.0° / 54.0° 85 % 2.3 cd/m 1 White hts: XT-E 35.0° / 57.0° 84 % 2.2 cd/m 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer Required componer EED EWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	34.0° / 54.0° 85 % 2.3 cd/m 1 White hts: XT-E 35.0° / 57.0° 84 % 2.2 cd/m 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer Required componer EED EWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	34.0° / 54.0° 85 % 2.3 cd/m 1 White hts: XT-E 35.0° / 57.0° 84 % 2.2 cd/m 1 White	



🤭 LUMIL	EDS	90 ⁵ 91 ³
LED	LUXEON 5050 Round LES	
FWHM / FWTM	35.0° / 58.0°	
Efficiency	86 %	
Peak intensity	2.2 cd/lm	
LEDs/each optic	1	
Light colour	White	er er
Required compone		
		30*
	EDC	10 ⁻ 10 ⁻ 10 ⁻
		90*
LED	LUXEON C	
FWHM / FWTM	31.0° / 53.0°	
Efficiency	84 %	
Peak intensity	2.7 cd/lm	
LEDs/each optic	1	
Light colour	White	4°* (***********************************
Required compone	nts:	
		2000
		30° 15' 0° 15' 30°
	EDS	90 ⁴ 9 ⁴
LED	LUXEON CZ	
FWHM / FWTM	34.0° / 53.0°	
Efficiency	86 %	
Peak intensity	2.5 cd/lm	
LEDs/each optic	1	
LEDs/each optic Light colour	1 White	e- 100
	White	e. 109
Light colour	White	¢
Light colour	White	e. 100 e.
Light colour	White	
Light colour Required compone	White nts:	
Light colour Required compone	White nts:	200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 -
Light colour Required compone	White nts: EDS LUXEON M/MX	
Light colour Required compone	White nts: EDS LUXEON M/MX 42.0° / 66.0°	200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 - 200 -
Light colour Required compone LUMIL LED FWHM / FWTM Efficiency	White nts: EDS LUXEON M/MX 42.0° / 66.0° 84 %	
Light colour Required compone LUMIL LED FWHM / FWTM Efficiency Peak intensity	White nts: EDS LUXEON M/MX 42.0° / 66.0°	
Light colour Required compone Composed LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	White nts: EDS LUXEON M/MX 42.0° / 66.0° 84 % 1.6 cd/lm 1	
Light colour Required compone LUMIL LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	White nts: EDS LUXEON M/MX 42.0° / 66.0° 84 % 1.6 cd/lm 1 White	
Light colour Required compone LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	White nts: EDS LUXEON M/MX 42.0° / 66.0° 84 % 1.6 cd/lm 1 White	
Light colour Required compone LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	White nts: EDS LUXEON M/MX 42.0° / 66.0° 84 % 1.6 cd/lm 1 White	
Light colour Required compone LUMIL LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	White nts: EDS LUXEON M/MX 42.0° / 66.0° 84 % 1.6 cd/lm 1 White	



🤭 LUMIL	.EDS	99 ⁴
LED	LUXEON MZ	
FWHM / FWTM	34.0° / 56.0°	8
Efficiency	86 %	
Peak intensity	2.4 cd/lm	
LEDs/each optic	1	
Light colour	White	ar at
Required compone		800
		30" 207 31"
A		157 0, 357
UMIL	.EDS	<u>30'*</u>
LED	LUXEON Rebel ES	NY NY
FWHM / FWTM	37.0° / 58.0°	
Efficiency	85 %	6)* 6;*
Peak intensity	2.1 cd/lm	
LEDs/each optic	1	
Light colour	White	a, a,
Required compone	ents:	
	EDS	20° 20'
LED	LUXEON TX	
FWHM / FWTM	36.0° / 57.0°	8
Efficiency	85 %	
Peak intensity	2.2 cd/lm	
LEDs/each optic	1	
Light colour	White	a.
Required compone	ents:	
		30
	EDC	
		99 ³ 99 ³
		73.
FWHM / FWTM	38.0° / 60.0°	
Efficiency	84 %	60*
Peak intensity LEDs/each optic	2 cd/lm 1	
LEDs/each optic	1 White	a. at
Required compone		
	ano.	
		30° 2000 30° 12° 0è 25°



COMIL	.EDS		90*
LED	LUXEON V2		
FWHM / FWTM	37.0° / 57.0°		
Efficiency	85 %		
Peak intensity	2.1 cd/lm		60 ¹²
LEDs/each optic	1		
Light colour	White		95-
Required compone			
			1699
			30°
		-	15° 0° 15°
UMIL	.EDS		90°
LED	LUXEON Z		
FWHM / FWTM	32.0° / 52.0°		$ \land \land$
Efficiency	85 %		60 ⁹
Peak intensity	2.7 cd/lm		
LEDs/each optic	1		
Light colour	White		47 °
Required compone	ents:		
			2430
			346
			5m 5m
	EDS		90 ⁴
			99 ⁴
LED	LUXEON Z ES		25° ¢ 25°
LED FWHM / FWTM	LUXEON Z ES 35.0° / 54.0°		20
LED FWHM / FWTM Efficiency	LUXEON Z ES 35.0° / 54.0° 86 %		94* 135" 94* 137 94* 137 94* 137 94* 137 94* 137 94* 137 137 137 137 137 137 137 137
LED FWHM / FWTM Efficiency Peak intensity	LUXEON Z ES 35.0° / 54.0° 86 % 2.4 cd/lm		60 91 ³ 91 ³ 00 00 00 00 00 00 00 00 00 0
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LUXEON Z ES 35.0° / 54.0° 86 % 2.4 cd/lm 1		G. 132, 00 00 00 00 00 00 00 00 00 0
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON Z ES 35.0° / 54.0° 86 % 2.4 cd/lm 1 White		90 - 169 - 197
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LUXEON Z ES 35.0° / 54.0° 86 % 2.4 cd/lm 1 White		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON Z ES 35.0° / 54.0° 86 % 2.4 cd/lm 1 White		94* 177 100 100 100 100 100 100 100
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON Z ES 35.0° / 54.0° 86 % 2.4 cd/lm 1 White		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LUXEON Z ES 35.0° / 54.0° 86 % 2.4 cd/lm 1 White		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LUXEON Z ES 35.0° / 54.0° 86 % 2.4 cd/lm 1 White ents:		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LUXEON Z ES 35.0° / 54.0° 86 % 2.4 cd/lm 1 White ents:		34 30 34 30 37 30 36 30
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LUXEON Z ES 35.0° / 54.0° 86 % 2.4 cd/lm 1 White ents: NCSxE17A 28.0° / 50.0°		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LUXEON Z ES 35.0° / 54.0° 86 % 2.4 cd/lm 1 White ents: NCSxE17A 28.0° / 50.0° 86 %		34 30 34 30 37 30 36 30
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone MICHIM LED FWHM / FWTM Efficiency Peak intensity	LUXEON Z ES 35.0° / 54.0° 86 % 2.4 cd/lm 1 White ents: NCSxE17A 28.0° / 50.0°		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone MICHI/ LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LUXEON Z ES 35.0° / 54.0° 86 % 2.4 cd/lm 1 White ents: NCSxE17A 28.0° / 50.0° 86 %		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone MICHIM LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON Z ES 35.0° / 54.0° 86 % 2.4 cd/lm 1 White onts: NCSxE17A 28.0° / 50.0° 86 % 3.1 cd/lm 1 White		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone MICHIM LED FWHM / FWTM Efficiency Peak intensity	LUXEON Z ES 35.0° / 54.0° 86 % 2.4 cd/lm 1 White onts: NCSxE17A 28.0° / 50.0° 86 % 3.1 cd/lm 1 White		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone MICHIM LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON Z ES 35.0° / 54.0° 86 % 2.4 cd/lm 1 White onts: NCSxE17A 28.0° / 50.0° 86 % 3.1 cd/lm 1 White		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone MICHIA LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON Z ES 35.0° / 54.0° 86 % 2.4 cd/lm 1 White onts: NCSxE17A 28.0° / 50.0° 86 % 3.1 cd/lm 1 White		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone MICHIA Efficiency Peak intensity LEDs/each optic Light colour	LUXEON Z ES 35.0° / 54.0° 86 % 2.4 cd/lm 1 White onts: NCSxE17A 28.0° / 50.0° 86 % 3.1 cd/lm 1 White		



				1~1	
ØNICHI			90*		90*
LED	NVSW219F				
FWHM / FWTM	42.0° / 62.0°		73*	400	
Efficiency	85 %				
Peak intensity	1.7 cd/lm				LA Ž
LEDs/each optic	1				$(\land) \times ($
Light colour	White		45*		45*
Required compone	nts:			1230	
				\times	$\lambda \times$
				1630	2
			30*		30*
			4	15% 0%	15°
ØNICHI			90*		90*
LED	NVSW319B				
FWHM / FWTM	43.0° / 63.0°		73-	400	
Efficiency	86 %		60.9		60°
Peak intensity	1.6 cd/lm				
LEDs/each optic	1			× / /	(\land)
Light colour	White		45*		45°
Required component	nts:			1200	
			30*	1600	36°
				10	
WNICHIA			90°		90*
			90*		90*
LED	NVSxE21A		90* 75*		90* 75*
LED FWHM / FWTM	NVSxE21A 29.0° / 51.0°		90* 75*		
LED FWHM / FWTM Efficiency	NVSxE21A 29.0° / 51.0° 86 %		904 757 694		
LED FWHM / FWTM Efficiency Peak intensity	NVSxE21A 29.0° / 51.0° 86 % 3 cd/lm		50° 79: 69*		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	NVSxE21A 29.0° / 51.0° 86 % 3 cd/lm 1		90* 29: 69*	60	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	NVSxE21A 29.0° / 51.0° 86 % 3 cd/lm 1 White		94 29. 95		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	NVSxE21A 29.0° / 51.0° 86 % 3 cd/lm 1 White		44 25 20		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	NVSxE21A 29.0° / 51.0° 86 % 3 cd/lm 1 White		6)4 23 24	160	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	NVSxE21A 29.0° / 51.0° 86 % 3 cd/lm 1 White		92 27 94 94	160	67
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	NVSxE21A 29.0° / 51.0° 86 % 3 cd/lm 1 White nts:		90* 29. 69* 69*	160	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	NVSxE21A 29.0° / 51.0° 86 % 3 cd/lm 1 White nts:		94 95 95 97 97 97 97 97 98	100	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	NVSxE21A 29.0° / 51.0° 86 % 3 cd/lm 1 White nts:		90 27 09 97 97 97 97 90	100	197
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	NVSxE21A 29.0° / 51.0° 86 % 3 cd/lm 1 White nts:		80 27 97 98 98 98 98 98 98 98 98 98 98 98 98 98	100	197
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	NVSxE21A 29.0° / 51.0° 86 % 3 cd/lm 1 White nts: NVSxx19B/NVSxx19C		25. 27. 28. 29. 29. 29. 29. 29. 29. 29. 29. 29. 29	100	197
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component MICHIA LED FWHM / FWTM	NVSxE21A 29.0° / 51.0° 86 % 3 cd/lm 1 White nts: NVSxx19B/NVSxx19C 39.0° / 60.0°		20 27 27 28 29 29 29 29 29 29 29 29 29 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	100	197
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component MICHIM LED FWHM / FWTM Efficiency	NVSxE21A 29.0° / 51.0° 86 % 3 cd/lm 1 White nts: NVSxx19B/NVSxx19C 39.0° / 60.0° 85 %		504 25 64 95 95 95 95 95 95 95 95	100 203 30 203	197
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Required component LED FWHM / FWTM Efficiency Peak intensity	NVSxE21A 29.0° / 51.0° 86 % 3 cd/lm 1 White nts: NVSxx19B/NVSxx19C 39.0° / 60.0° 85 % 1.9 cd/lm		92 95 95 95 95 95 95 95 95 95 95 95 95 95	100 203 30 203	15°.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Required component Equired component NICHIA LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	NVSxE21A 29.0° / 51.0° 86 % 3 cd/lm 1 White nts: NVSxx19B/NVSxx19C 39.0° / 60.0° 85 % 1.9 cd/lm 1 White		92 92 93 94 94 94 94 94 94 94 94 94 94 94 94 94	160 200 30 30 40 40 40 40 40	15°.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Required component EQ FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	NVSxE21A 29.0° / 51.0° 86 % 3 cd/lm 1 White nts: NVSxx19B/NVSxx19C 39.0° / 60.0° 85 % 1.9 cd/lm 1 White		91 92 92 92 92 92 92 92 92 92 92 92 92 92		15°.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Required component EQ FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	NVSxE21A 29.0° / 51.0° 86 % 3 cd/lm 1 White nts: NVSxx19B/NVSxx19C 39.0° / 60.0° 85 % 1.9 cd/lm 1 White		92 92 92 94 94 94 94 94 94 94 94 94 94 94 94 94	160 200 30 30 40 40 40 40 40	197
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component MICHIO Efficiency Peak intensity LEDs/each optic Light colour	NVSxE21A 29.0° / 51.0° 86 % 3 cd/lm 1 White nts: NVSxx19B/NVSxx19C 39.0° / 60.0° 85 % 1.9 cd/lm 1 White				15°.



OSRAM Opto Semiconductors		90*
LED	OSCONIQ P 3737 (2W version)	
FWHM / FWTM	35.0° / 56.0°	
Efficiency	86 %	
Peak intensity	2.3 cd/lm	
LEDs/each optic	1	
Light colour	White	9'
Required compone	nts:	
		30* 200 15 [°] d [*] 15 [°]
OSRAM		90°
Opto Semiconductors	OSCONIQ P 3737 (3W version)	
FWHM / FWTM	38.0° / 59.0°	7
Efficiency	86 %	
Peak intensity	2 cd/lm	90 ⁴
LEDs/each optic	1	
Light colour	White	at a large state of the state o
Required compone		
		100
		33 ⁵ 0 ⁴ 35 ⁵
OSRAM Opto Semiconductors		50°
OSRAM Opto Semiconductors LED	OSCONIQ P 7070	
Opto Semiconductors	OSCONIQ P 7070 39.0° / 62.0°	94 ⁴
Opto Semiconductors		90 ⁴ 75 00
opto Semiconductors LED FWHM / FWTM	39.0° / 62.0°	50°
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	39.0° / 62.0° 85 %	90- 92- 90-
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	39.0° / 62.0° 85 % 1.8 cd/lm 1 White	9x*
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	39.0° / 62.0° 85 % 1.8 cd/lm 1 White	94 75 60 60
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	39.0° / 62.0° 85 % 1.8 cd/lm 1 White	54 73 60 60 60 125 125
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	39.0° / 62.0° 85 % 1.8 cd/lm 1 White	5. 5. 7. 60 60 7. 123 109 109
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	39.0° / 62.0° 85 % 1.8 cd/lm 1 White	200
Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	39.0° / 62.0° 85 % 1.8 cd/lm 1 White	77 60 60 60 80 80 80 80 80 80 80 80 80 80 80 80 80
Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	39.0° / 62.0° 85 % 1.8 cd/lm 1 White nts:	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone OSRAM Opto Semiconductors LED	39.0° / 62.0° 85 % 1.8 cd/lm 1 White nts: OSLON Black Flat (LUW HWQP)	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone OSRAM Opto Semiconductors LED FWHM / FWTM	39.0° / 62.0° 85 % 1.8 cd/lm 1 White nts: OSLON Black Flat (LUW HWQP) 31.0° / 51.0°	
Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency	39.0° / 62.0° 85 % 1.8 cd/lm 1 White nts: OSLON Black Flat (LUW HWQP) 31.0° / 51.0° 85 %	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	39.0° / 62.0° 85 % 1.8 cd/lm 1 White nts: OSLON Black Flat (LUW HWQP) 31.0° / 51.0°	
Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	39.0° / 62.0° 85 % 1.8 cd/lm 1 White nts: OSLON Black Flat (LUW HWQP) 31.0° / 51.0° 85 % 2.8 cd/lm	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	39.0° / 62.0° 85 % 1.8 cd/lm 1 White nts: OSLON Black Flat (LUW HWQP) 31.0° / 51.0° 85 % 2.8 cd/lm 1 White	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	39.0° / 62.0° 85 % 1.8 cd/lm 1 White nts: OSLON Black Flat (LUW HWQP) 31.0° / 51.0° 85 % 2.8 cd/lm 1 White	
Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	39.0° / 62.0° 85 % 1.8 cd/lm 1 White nts: OSLON Black Flat (LUW HWQP) 31.0° / 51.0° 85 % 2.8 cd/lm 1 White	
Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	39.0° / 62.0° 85 % 1.8 cd/lm 1 White nts: OSLON Black Flat (LUW HWQP) 31.0° / 51.0° 85 % 2.8 cd/lm 1 White	



OSRAM Opto Semiconductors		90* 90*
LED	OSLON Square CSSRM2/CSSRM3	
FWHM / FWTM	39.0° / 59.0°	200 - 72 ⁴
Efficiency	85 %	
Peak intensity	2 cd/lm	800 BU
LEDs/each optic	1	
Light colour	White	47 <u>1200</u> 47
Required compone	nts:	
		1670
		30° 2000 30°
		15° 0° 35°
OSRAM Opto Semiconductors		90* 90*
LED	OSLON Square EC	
FWHM / FWTM	39.0° / 59.0°	400
Efficiency	84 %	60°
Peak intensity	1.9 cd/lm	
LEDs/each optic	1	
Light colour	White	a [*] 1200
Required compone	nts:	
		30* 30*
		15° 2000 0° 15°
OSRAM Opto Semiconductors		90* 90*
LED	OSLON Square PC	
FWHM / FWTM	39.0° / 60.0°	400
Efficiency	85 %	
Peak intensity	1.9 cd/lm	
LEDs/each optic	1	
Light colour	White	av 1230 av
Required compone	nts:	
		1000
		30* 2000 31.*
OSRAM		123 0 ⁶ 32°
Opto Semiconductors		90* 90*
LED	OSLON SSL 150	75.
FWHM / FWTM	34.0° / 54.0°	
Efficiency	85 %	60° 60°
Peak intensity	2.5 cd/lm	
LEDs/each optic	1	
Light colour	White	e* e*
Required compone	nts:	
		200
		36° 35° 36°
		10" 0" 15"



OSRAM		
Opto Semiconductors		90° 90°
	OSLON SSL 80	75
FWHM / FWTM	38.0° / 58.0°	[] [] [] [] [] [] [] [] [] []
	85 %	
	2 cd/lm	200
LEDs/each optic	1	
e e	White	g' a'
Required component	ts:	
		30° m at m
OSRAM Opto Semiconductors		
	OSTAR Stage (S2WN)	
FWHM / FWTM	38.0° / 59.0°	75
Efficiency	85 %	
	2.1 cd/lm	69** 60°
LEDs/each optic	1	
	RGBW	gr and
Required componen		
rtequired component		
		30 ⁶ 15 ⁵ 0 ⁶ 15 ⁵
SAMSU	ING	50" 50
	LH181A	
FWHM / FWTM		75
FWHM / FWTM Efficiency	28.0° / 51.0°	
Efficiency	28.0° / 51.0° 82 %	77
Efficiency Peak intensity	28.0° / 51.0° 82 % 2.8 cd/lm	
Efficiency Peak intensity LEDs/each optic	28.0° / 51.0° 82 % 2.8 cd/lm 1	
Efficiency Peak intensity LEDs/each optic Light colour	28.0° / 51.0° 82 % 2.8 cd/lm 1 White	
Efficiency Peak intensity LEDs/each optic	28.0° / 51.0° 82 % 2.8 cd/lm 1 White	
Efficiency Peak intensity LEDs/each optic Light colour	28.0° / 51.0° 82 % 2.8 cd/lm 1 White	
Efficiency Peak intensity LEDs/each optic Light colour	28.0° / 51.0° 82 % 2.8 cd/lm 1 White	
Efficiency Peak intensity LEDs/each optic Light colour	28.0° / 51.0° 82 % 2.8 cd/lm 1 White	
Efficiency Peak intensity LEDs/each optic Light colour Required componen	28.0° / 51.0° 82 % 2.8 cd/lm 1 White ts:	
Efficiency Peak intensity LEDs/each optic Light colour Required componen	28.0° / 51.0° 82 % 2.8 cd/lm 1 White ts:	
Efficiency Peak intensity LEDs/each optic Light colour Required componen	28.0° / 51.0° 82 % 2.8 cd/lm 1 White ts:	
Efficiency Peak intensity LEDs/each optic Light colour Required componen SAMSU LED FWHM / FWTM	28.0° / 51.0° 82 % 2.8 cd/lm 1 White ts: ING LH181B 30.0° / 51.0°	
Efficiency Peak intensity LEDs/each optic Light colour Required componen SANSU LED FWHM / FWTM Efficiency	28.0° / 51.0° 82 % 2.8 cd/lm 1 White ts:	
Efficiency Peak intensity LEDs/each optic Light colour Required componen SANSU LED FWHM / FWTM Efficiency Peak intensity	28.0° / 51.0° 82 % 2.8 cd/lm 1 White ts:	
Efficiency Peak intensity LEDs/each optic Light colour Required componen SANSU LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	28.0° / 51.0° 82 % 2.8 cd/lm 1 White ts:	
Efficiency Peak intensity LEDs/each optic Light colour Required componen SAMSU LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	28.0° / 51.0° 82 % 2.8 cd/lm 1 White ts:	
Efficiency Peak intensity LEDs/each optic Light colour Required componen SANSU LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	28.0° / 51.0° 82 % 2.8 cd/lm 1 White ts:	
Efficiency Peak intensity LEDs/each optic Light colour Required componen SAMSU LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	28.0° / 51.0° 82 % 2.8 cd/lm 1 White ts:	
Efficiency Peak intensity LEDs/each optic Light colour Required componen SAMSU LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	28.0° / 51.0° 82 % 2.8 cd/lm 1 White ts:	



SAMSU	ING		90° 90°
LED	LH231B		
FWHM / FWTM	31.0° / 53.0°		75
Efficiency	86 %		
Peak intensity	2.7 cd/lm		60°
LEDs/each optic	1		
Light colour	White		97* 67°
Required componer			
			200
			15° 0° 15°
SAMSU	ING		90° 90°
LED	LH351B		
FWHM / FWTM	41.0° / 61.0°		25* 23*
Efficiency	85 %		
Peak intensity	1.8 cd/lm		
LEDs/each optic	1		
Light colour	White		g: et
Required componer	nts:		
			100
			300 330
0.0.0.0			15° 0° 15°
SAMSU	ING		90* 90*
	LH351C		
			27. 27. 26.
LED	LH351C		61 22 25 26 29 29 29 29 29 29 29 29 29 29
LED FWHM / FWTM Efficiency Peak intensity	LH351C 43.0° / 62.0°		6), 60, 60, 25, 25, 25, 25, 25, 25, 25, 25, 25, 25
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LH351C 43.0° / 62.0° 86 % 1.7 cd/lm 1		60 60 60
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH351C 43.0° / 62.0° 86 % 1.7 cd/lm 1 White		6. 6. 6. 2. 2. 2. 2. 2. 2. 2.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LH351C 43.0° / 62.0° 86 % 1.7 cd/lm 1 White		60 60 60
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH351C 43.0° / 62.0° 86 % 1.7 cd/lm 1 White		60 60 60
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH351C 43.0° / 62.0° 86 % 1.7 cd/lm 1 White		60 60 60
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH351C 43.0° / 62.0° 86 % 1.7 cd/lm 1 White		60 60 60
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer	LH351C 43.0° / 62.0° 86 % 1.7 cd/lm 1 White nts:		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer	LH351C 43.0° / 62.0° 86 % 1.7 cd/lm 1 White hts:		60 60 60
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer	LH351C 43.0° / 62.0° 86 % 1.7 cd/lm 1 White hts:		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer SAMSU LED FWHM / FWTM	LH351C 43.0° / 62.0° 86 % 1.7 cd/lm 1 White hts: NGC LH351D 44.0° / 65.0°		94 94 95 95 96 96 96 96 96 96 96 96 96 96
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer SAMSU LED FWHM / FWTM Efficiency	LH351C 43.0° / 62.0° 86 % 1.7 cd/lm 1 White hts: LH351D 44.0° / 65.0° 85 %		94 94 95 95 96 96 96 96 96 96 96 96 96 96
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer SAMSU LED FWHM / FWTM Efficiency Peak intensity	LH351C 43.0° / 62.0° 86 % 1.7 cd/lm 1 White hts: LH351D 44.0° / 65.0° 85 % 1.6 cd/lm		94 94 95 95 96 96 96 96 96 96 96 96 96 96
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer SANNSU LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LH351C 43.0° / 62.0° 86 % 1.7 cd/lm 1 White hts: LH351D 44.0° / 65.0° 85 % 1.6 cd/lm 1		94 94 95 95 96 96 96 96 96 96 96 96 96 96
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer SAMSU LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH351C 43.0° / 62.0° 86 % 1.7 cd/lm 1 White hts:		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer SANNSU LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LH351C 43.0° / 62.0° 86 % 1.7 cd/lm 1 White hts:		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer SALMSU LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH351C 43.0° / 62.0° 86 % 1.7 cd/lm 1 White hts:		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer SALMSU LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH351C 43.0° / 62.0° 86 % 1.7 cd/lm 1 White hts:		94 94 95 95 96 96 96 96 96 96 96 96 96 96



CANACI			
SVWSI			90° 90°
LED	LH508A		75.
FWHM / FWTM	36.0° / 58.0°		
Efficiency	86 %		50 ⁴ 800 50°
Peak intensity	2.2 cd/lm		
LEDs/each optic	1		
Light colour	White		101 01 01 01 01 01 01 01 01 01 01 01 01
Required compone	nts:		1630
			30° 137 0° 155 36°
SΛΜSL	JNG		50*
LED	LM561B		
FWHM / FWTM	36.0° / 57.0°		
Efficiency	86 %		
Peak intensity	2.3 cd/lm		60 ¹ 800
LEDs/each optic	1		
Light colour	White		ar ar
Required compone			1600
			30* 34.
SEOUL			200 - 15°
SEOUL SEMICONDUCTOR			90°
SEOUL SEMICONDUCTOR	WICOP 5050	10000	
	WICOP 5050 42.0° / 67.0°		52
LED FWHM / FWTM Efficiency	42.0° / 67.0° 83 %		9)* 73* 60* 60*
LED FWHM / FWTM Efficiency Peak intensity	42.0° / 67.0° 83 % 1.6 cd/lm		91 ⁴ 99 ⁷ 70 [*] 60 [*] 60 [*]
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	42.0° / 67.0° 83 % 1.6 cd/lm 1		27°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	42.0° / 67.0° 83 % 1.6 cd/lm 1 White		gr
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	42.0° / 67.0° 83 % 1.6 cd/lm 1 White		27°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	42.0° / 67.0° 83 % 1.6 cd/lm 1 White		27°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	42.0° / 67.0° 83 % 1.6 cd/lm 1 White		27°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	42.0° / 67.0° 83 % 1.6 cd/lm 1 White		27°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	42.0° / 67.0° 83 % 1.6 cd/lm 1 White		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component stouu stemiconductor	42.0° / 67.0° 83 % 1.6 cd/lm 1 White nts:		27°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer	42.0° / 67.0° 83 % 1.6 cd/lm 1 White nts:		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component stout stemconductor LED FWHM / FWTM	42.0° / 67.0° 83 % 1.6 cd/lm 1 White nts: Z5M3 36.0° / 58.0°		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component seourssmiconbuctore LED FWHM / FWTM Efficiency	42.0° / 67.0° 83 % 1.6 cd/lm 1 White nts: Z5M3 36.0° / 58.0° 85 %		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component securic semiconductor LED FWHM / FWTM Efficiency Peak intensity	42.0° / 67.0° 83 % 1.6 cd/lm 1 White nts: Z5M3 36.0° / 58.0° 85 % 2.2 cd/lm		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component stous semiconoucron LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	42.0° / 67.0° 83 % 1.6 cd/lm 1 White nts: Z5M3 36.0° / 58.0° 85 % 2.2 cd/lm 1		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component stous semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	42.0° / 67.0° 83 % 1.6 cd/lm 1 White nts: Z5M3 36.0° / 58.0° 85 % 2.2 cd/lm 1 White		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component stous semiconoucron LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	42.0° / 67.0° 83 % 1.6 cd/lm 1 White nts: Z5M3 36.0° / 58.0° 85 % 2.2 cd/lm 1 White		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component stous semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	42.0° / 67.0° 83 % 1.6 cd/lm 1 White nts: Z5M3 36.0° / 58.0° 85 % 2.2 cd/lm 1 White		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componed scous semiconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	42.0° / 67.0° 83 % 1.6 cd/lm 1 White nts: Z5M3 36.0° / 58.0° 85 % 2.2 cd/lm 1 White		



CREE ≑		90° 90°
LEDS	J Series 5050 Round LES	
FWHM / FWTM	40.0° / 56.0°	25* 25*
Efficiency	94 %	
Peak intensity	2.3 cd/lm	60* 60*
LEDs/each optic	1	
Light colour	White	g
Required components:		1600
		30° 2400 30° 15° 0° 15°
		90* 90*
LED	XHP50.3 HD	
FWHM / FWTM	44.0° / 62.0°	75'
Efficiency	84 %	- 400
Peak intensity	1.6 cd/lm	60°
LEDs/each optic	1	200
Light colour	White	47*
Required components:		
		30° 30°
		15° 0° 15°
		90° 50°
	XHP50.3 HI	<u>97</u>
LED	XHP50.3 HI 40.0° / 58.0°	39° - 39°
LED FWHM / FWTM		27 27 29 29 29 29 29
LED FWHM / FWTM Efficiency	40.0° / 58.0°	60 60°
LED FWHM / FWTM	40.0° / 58.0° 95 %	97 97 97 96 00 00
LED FWHM / FWTM Efficiency Peak intensity	40.0° / 58.0° 95 % 2.1 cd/lm	91 ⁴ 91 ⁴ 75 ⁵ 61 ⁴ 000 61 ⁴ 97
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	40.0° / 58.0° 95 % 2.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	40.0° / 58.0° 95 % 2.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	40.0° / 58.0° 95 % 2.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	40.0° / 58.0° 95 % 2.1 cd/lm 1	97
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	40.0° / 58.0° 95 % 2.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	40.0° / 58.0° 95 % 2.1 cd/lm 1 White	97
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	40.0° / 58.0° 95 % 2.1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREE LED ED FWHM / FWTM	40.0° / 58.0° 95 % 2.1 cd/lm 1 White XHP70.3 HD 46.0° / 66.0°	25- 26- 26- 26- 26- 26- 26- 26- 26- 26- 26
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREE LED FWHM / FWTM Efficiency	40.0° / 58.0° 95 % 2.1 cd/lm 1 White XHP70.3 HD 46.0° / 66.0° 83 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Required components: LED FWHM / FWTM Efficiency Peak intensity	40.0° / 58.0° 95 % 2.1 cd/lm 1 White XHP70.3 HD 46.0° / 66.0° 83 % 1.5 cd/lm	25- 26- 26- 26- 26- 26- 26- 26- 26- 26- 26
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Required components: LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	40.0° / 58.0° 95 % 2.1 cd/lm 1 White XHP70.3 HD 46.0° / 66.0° 83 % 1.5 cd/lm 1	25- 26- 26- 26- 26- 26- 26- 26- 26- 26- 26
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREE ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	40.0° / 58.0° 95 % 2.1 cd/lm 1 White XHP70.3 HD 46.0° / 66.0° 83 % 1.5 cd/lm	25- 26- 26- 26- 26- 26- 26- 26- 26- 26- 26
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Required components: LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	40.0° / 58.0° 95 % 2.1 cd/lm 1 White XHP70.3 HD 46.0° / 66.0° 83 % 1.5 cd/lm 1	25- 26- 26- 26- 26- 26- 26- 26- 26- 26- 26
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREE ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	40.0° / 58.0° 95 % 2.1 cd/lm 1 White XHP70.3 HD 46.0° / 66.0° 83 % 1.5 cd/lm 1	25- 26- 26- 26- 26- 26- 26- 26- 26- 26- 26
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREE ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	40.0° / 58.0° 95 % 2.1 cd/lm 1 White XHP70.3 HD 46.0° / 66.0° 83 % 1.5 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	40.0° / 58.0° 95 % 2.1 cd/lm 1 White XHP70.3 HD 46.0° / 66.0° 83 % 1.5 cd/lm 1	



CREE ≑		90, 90,
LED	XM-L	
FWHM / FWTM	45.0° / 60.0°	75°
Efficiency	93 %	
Peak intensity	1.9 cd/lm	60
LEDs/each optic	1	
Light colour	White	45*
Required components:	Wille	1230
Required components.		
		1630
		36° 30° 30°
		90° 90°
LEDS	XM-L2	
ED FWHM / FWTM	43.0° / 58.0°	75°
Efficiency	43.0 ⁻⁷ 58.0 ⁻⁷ 93 %	
Peak intensity	93 % 2 cd/lm	60 ⁴ 60 ⁴
LEDs/each optic	1	
Light colour	White	
Required components:	White	
Required components.		
		36° 35° 36°
)S	90° 9 0°
		90 ⁴
LED	LUXEON 7070	35. 26. 26.
LED FWHM / FWTM	LUXEON 7070 38.0° / 60.0°	39°
LED FWHM / FWTM Efficiency	LUXEON 7070 38.0° / 60.0° 94 %	60° 001 00° 30° 30°
LED FWHM / FWTM Efficiency Peak intensity	LUXEON 7070 38.0° / 60.0°	60 ⁴ 60 ⁴ 60 ⁴
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LUXEON 7070 38.0° / 60.0° 94 % 2.1 cd/lm	6, 6, 6, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7, 7,
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON 7070 38.0° / 60.0° 94 % 2.1 cd/lm 1	51
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LUXEON 7070 38.0° / 60.0° 94 % 2.1 cd/lm 1	59 ⁴ 59 ⁴ 59 ⁴ 59 ⁴ 50 ⁵ 50 ⁷ 50 ⁷
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON 7070 38.0° / 60.0° 94 % 2.1 cd/lm 1	20 20 21 20 25 25 25 25
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON 7070 38.0° / 60.0° 94 % 2.1 cd/lm 1	30° 30° 30° 30°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 7070 38.0° / 60.0° 94 % 2.1 cd/lm 1 White	20 20 20 20 20 20 20 20 20 20
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 7070 38.0° / 60.0° 94 % 2.1 cd/lm 1 White	300
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 7070 38.0° / 60.0° 94 % 2.1 cd/lm 1 White SST-20	300
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 7070 38.0° / 60.0° 94 % 2.1 cd/lm 1 White JS SST-20 36.0° / 54.0°	30°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 7070 38.0° / 60.0° 94 % 2.1 cd/lm 1 White SST-20 36.0° / 54.0° 93 %	300
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 7070 38.0° / 60.0° 94 % 2.1 cd/lm 1 White SST-20 36.0° / 54.0° 93 % 2.7 cd/lm	30°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 7070 38.0° / 60.0° 94 % 2.1 cd/lm 1 White SST-20 36.0° / 54.0° 93 % 2.7 cd/lm 1	500 500 500 500 500 500 500 500 500 500
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 7070 38.0° / 60.0° 94 % 2.1 cd/lm 1 White SST-20 36.0° / 54.0° 93 % 2.7 cd/lm	30°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 7070 38.0° / 60.0° 94 % 2.1 cd/lm 1 White SST-20 36.0° / 54.0° 93 % 2.7 cd/lm 1	500 500 500 500 500 500 500 500 500 500
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 7070 38.0° / 60.0° 94 % 2.1 cd/lm 1 White SST-20 36.0° / 54.0° 93 % 2.7 cd/lm 1	500 500 500 500 500 500 500 500 500 500
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 7070 38.0° / 60.0° 94 % 2.1 cd/lm 1 White SST-20 36.0° / 54.0° 93 % 2.7 cd/lm 1	er er 100 100 100 100 100 100 100 10
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 7070 38.0° / 60.0° 94 % 2.1 cd/lm 1 White SST-20 36.0° / 54.0° 93 % 2.7 cd/lm 1	



	JS	90* 90*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	SST-70X-WCS 40.0° / 58.0° 88 % 2.1 cd/lm 1 White	20 20 20 20 20 20 20 20 20 20
ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	COB S-Type (LES 7) 42.0° / 64.0° 93 % 2 cd/lm 1 White	20° 20° 20° 20°
ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	COB T-Type 40.0° / 62.0° 93 % 2.1 cd/lm 1 White	91 ⁴ 92 ⁴ 9
ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	NCSxE17A 34.0° / 54.0° 90 % 2.6 cd/lm 4 White	200 200 200 200 200 200 200 200



MICHIΛ		90° 90°
LED	NFMW48xA	
FWHM / FWTM	36.0° / 55.0°	75*
Efficiency	93 %	
Peak intensity	2.6 cd/lm	60* 60*
LEDs/each optic	1	
Light colour	White	g* m km
Required components:		
		30°
MICHIΛ		90* 90*
LED	NV4WB35AM	
FWHM / FWTM	36.0° / 54.0°	
Efficiency	94 %	60 ⁴ 60 ⁴
Peak intensity	2.7 cd/lm	$\Gamma \times / I = \Lambda \setminus \times \Gamma$
LEDs/each optic	1	
Light colour	White	95°
Required components:		
		2430
		ו × ×•
Maure		
MICHIΛ		
		90° 90°
LED	NV4x144A	75° 90°
LED FWHM / FWTM	48.0° / 66.0°	77
LED FWHM / FWTM Efficiency	48.0° / 66.0° 90 %	
LED FWHM / FWTM Efficiency Peak intensity	48.0° / 66.0° 90 % 1.5 cd/lm	77
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	48.0° / 66.0° 90 % 1.5 cd/lm 1	77
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	48.0° / 66.0° 90 % 1.5 cd/lm	77
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	48.0° / 66.0° 90 % 1.5 cd/lm 1	77
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	48.0° / 66.0° 90 % 1.5 cd/lm 1	77
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	48.0° / 66.0° 90 % 1.5 cd/lm 1	77
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	48.0° / 66.0° 90 % 1.5 cd/lm 1	77
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	48.0° / 66.0° 90 % 1.5 cd/lm 1	75 64 67 67 1278 80 1278
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	48.0° / 66.0° 90 % 1.5 cd/lm 1 White	75 64 64 150 150 150 150 150 150 150 150
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	48.0° / 66.0° 90 % 1.5 cd/lm 1 White	75 64 64 150 150 150 150 150 150 150 150
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: COSRAM Opto Semiconductors LED FWHM / FWTM	48.0° / 66.0° 90 % 1.5 cd/lm 1 White Duris S8 39.0° / 58.0°	30 100 00 60 00 00 60 00 00 100 00 00
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: SOSRAM Opto Semiconductors LED FWHM / FWTM Efficiency	48.0° / 66.0° 90 % 1.5 cd/lm 1 White Duris S8 39.0° / 58.0° 94 %	30 100 00 60 00 00 60 00 00 100 00 00
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: COSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	48.0° / 66.0° 90 % 1.5 cd/lm 1 White Duris S8 39.0° / 58.0° 94 % 2.3 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	48.0° / 66.0° 90 % 1.5 cd/lm 1 White Duris S8 39.0° / 58.0° 94 % 2.3 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	48.0° / 66.0° 90 % 1.5 cd/lm 1 White Duris S8 39.0° / 58.0° 94 % 2.3 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: COSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	48.0° / 66.0° 90 % 1.5 cd/lm 1 White Duris S8 39.0° / 58.0° 94 % 2.3 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	48.0° / 66.0° 90 % 1.5 cd/lm 1 White Duris S8 39.0° / 58.0° 94 % 2.3 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	48.0° / 66.0° 90 % 1.5 cd/lm 1 White Duris S8 39.0° / 58.0° 94 % 2.3 cd/lm 1	



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.

Due to use of high power COB's with this product, special attention to proper thermal design is highly recommended. LEDiL has no liability for direct, indirect or consecutive damages arising from the LEDiL products being used outside of the recommended temperature range.

MATERIALS:

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