

LEIA-S

~3° spot beam

TECHNICAL SPECIFICATIONS:

Dimensions	Ø 50.0 mm
Height	53 mm
Fastening	pin, screw
ROHS compliant	yes 🛈



PRODUCT DATASHEET

LEIA-S

MATERIAL SPECIFICATIONS:

Component F16199_LEIA-S F16213_LEIA-HLD **Type** Single lens Holder

Material	Colour	Finish
PMMA		
HRPC	white	

ORDERING INFORMATION:

Quantities for one set:

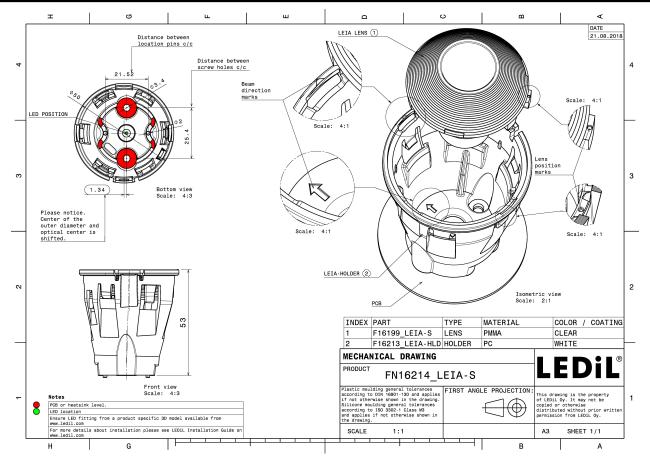
Single lens 1 Holder 1



Component		Qty in box	MOQ	MPQ	Box weight (kg)
F16199_LEIA-S » Box size: 480 x 280 x 300 mm	Single lens	240	40	40	8.2
F16213_LEIA-HLD » Box size: 398 x 298 x 265 mm	Holder	400	40	20	5.8



PRODUCT DATASHEET LEIA-S



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



	0	X000 T
LED	XHP35 HD	2009
FWHM / FWTM	6.0° / 9.0°	1997 -
Efficiency	50 %	100 -
Peak intensity	22.6 cd/lm	1000
LEDs/each optic	1	1390 -
Light colour	White	1000 -
Required compone		100
		600
		609 -
		200
	D	-1964° -1924° -1964° -1964° -1964° -1964° -1964° -1964° -1964° -1964° -1964° -1964° -1964° -1964° -1964° -1964 2899
LED	XHP35 HD	369
EED FWHM / FWTM	52.0 + 6.0° / 77.0 + 15.0°	239
		100
Efficiency	45 % 2.6 cd/lm	100-
Peak intensity		
LEDs/each optic	1	
Light colour	White	100
Required compone		10
F16629_LEIA-S	0B-0	
		30
	D	90 ⁴
LED	XHP35 HD	
		78
FWHM / FWTM	XHP35 HD 6.0° / 9.0° 49 %	3
FWHM / FWTM Efficiency	6.0° / 9.0°	97 97 97
FWHM / FWTM Efficiency Peak intensity	6.0° / 9.0° 49 %	77
FWHM / FWTM Efficiency Peak intensity LEDs/each optic	6.0° / 9.0° 49 % 22.8 cd/lm	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	6.0° / 9.0° 49 % 22.8 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	6.0° / 9.0° 49 % 22.8 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	6.0° / 9.0° 49 % 22.8 cd/lm 1 White	77. 64. 65. 66. 60. 60. 60. 60. 60. 60. 60. 60. 60
FWHM / FWTM Efficiency Peak intensity	6.0° / 9.0° 49 % 22.8 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	6.0° / 9.0° 49 % 22.8 cd/lm 1 White ents:	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	6.0° / 9.0° 49 % 22.8 cd/lm 1 White ents:	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	6.0° / 9.0° 49 % 22.8 cd/lm 1 White ents:	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	6.0° / 9.0° 49 % 22.8 cd/lm 1 White ents: XHP35 HI 4.0° / 7.0°	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	6.0° / 9.0° 49 % 22.8 cd/lm 1 White ents: XHP35 HI 4.0° / 7.0° 52 %	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone CREE (LED FWHM / FWTM Efficiency Peak intensity	6.0° / 9.0° 49 % 22.8 cd/lm 1 White ents: XHP35 HI 4.0° / 7.0° 52 % 43.2 cd/lm	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone CREE (LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	6.0° / 9.0° 49 % 22.8 cd/lm 1 White ents: XHP35 HI 4.0° / 7.0° 52 % 43.2 cd/lm 1	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	6.0° / 9.0° 49 % 22.8 cd/lm 1 White ents: XHP35 HI 4.0° / 7.0° 52 % 43.2 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	6.0° / 9.0° 49 % 22.8 cd/lm 1 White ents: XHP35 HI 4.0° / 7.0° 52 % 43.2 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone CREE (LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	6.0° / 9.0° 49 % 22.8 cd/lm 1 White ents: XHP35 HI 4.0° / 7.0° 52 % 43.2 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone CREE (LED EWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	6.0° / 9.0° 49 % 22.8 cd/lm 1 White ents: XHP35 HI 4.0° / 7.0° 52 % 43.2 cd/lm 1 White	



	D	90 ⁴ 90 ⁴
LED	XHP35 HI	77
FWHM / FWTM	50.0 + 5.0° / 76.0 + 11.0°	
Efficiency	47 %	
Peak intensity	3.6 cd/lm	
LEDs/each optic	1	
Light colour	White	e, e,
Required compone		
F16629_LEIA-S	UB-O	
		- Colored - Colo
		30 ⁴ 25 ⁵ 0 ⁴ 25 ⁵
	D	90*
LED	XHP50.2	
FWHM / FWTM	52.0 + 8.0° / 78.0 + 20.0°	
Efficiency	42 %	
Peak intensity	1.8 cd/lm	
LEDs/each optic	1	
Light colour	White	g. at
Required compone	ents:	
F16629_LEIA-S	UB-O	
		400
		30' 30'
	•	
UREE T LE		90° 90'
		50'
LED	XHP50.2	90 ⁴ 73 ⁴ 25 ⁴
LED FWHM / FWTM		90 ⁴ 775 729 729
LED FWHM / FWTM Efficiency	XHP50.2 8.0° / 14.0° 48 %	50 ⁴ 50 ⁴ 50 ⁴ 50 ⁴
LED FWHM / FWTM Efficiency Peak intensity	XHP50.2 8.0° / 14.0°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	XHP50.2 8.0° / 14.0° 48 % 13 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity	XHP50.2 8.0° / 14.0° 48 % 13 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XHP50.2 8.0° / 14.0° 48 % 13 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XHP50.2 8.0° / 14.0° 48 % 13 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XHP50.2 8.0° / 14.0° 48 % 13 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XHP50.2 8.0° / 14.0° 48 % 13 cd/lm 1 White ents:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XHP50.2 8.0° / 14.0° 48 % 13 cd/lm 1 White ents:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XHP50.2 8.0° / 14.0° 48 % 13 cd/lm 1 White ents:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XHP50.2 8.0° / 14.0° 48 % 13 cd/lm 1 White ents: XP-E2 2.6° / 5.7°	20- 15 ⁻ 15 ⁻ 15 ⁻ 15 ⁻ 15 ⁻ 15 ⁻ 15 ⁻ 15 ⁻ 15 ⁻
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XHP50.2 8.0° / 14.0° 48 % 13 cd/lm 1 White ents: XP-E2 2.6° / 5.7° 59 %	20- 15 ⁻ 15 ⁻ 15 ⁻ 15 ⁻ 15 ⁻ 15 ⁻ 15 ⁻ 15 ⁻ 15 ⁻
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XHP50.2 8.0° / 14.0° 48 % 13 cd/lm 1 White ents: XP-E2 2.6° / 5.7° 59 % 128.3 cd/lm	20- 15 ⁻ 15 ⁻ 15 ⁻ 15 ⁻ 15 ⁻ 15 ⁻ 15 ⁻ 15 ⁻ 15 ⁻
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XHP50.2 8.0° / 14.0° 48 % 13 cd/lm 1 White ents: XP-E2 2.6° / 5.7° 59 % 128.3 cd/lm 1	
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	XHP50.2 8.0° / 14.0° 48 % 13 cd/lm 1 White ents: XP-E2 2.6° / 5.7° 59 % 128.3 cd/lm 1 White	20- 15 ⁻ 15 ⁻ 15 ⁻ 15 ⁻ 15 ⁻ 15 ⁻ 15 ⁻ 15 ⁻ 15 ⁻
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XHP50.2 8.0° / 14.0° 48 % 13 cd/lm 1 White ents: XP-E2 2.6° / 5.7° 59 % 128.3 cd/lm 1 White	
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	XHP50.2 8.0° / 14.0° 48 % 13 cd/lm 1 White ents: XP-E2 2.6° / 5.7° 59 % 128.3 cd/lm 1 White	
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	XHP50.2 8.0° / 14.0° 48 % 13 cd/lm 1 White ents: XP-E2 2.6° / 5.7° 59 % 128.3 cd/lm 1 White	



	D	50°	90*
LED	XP-G2		
FWHM / FWTM	57.0 + 4.0° / 82.0 + 9.0°	22	1
Efficiency	40 %		$\langle \ $
Peak intensity	4.6 cd/lm		ы
LEDs/each optic	1		
Light colour	White	er la	
Required compone	ents:		
		300	30
	2	20°	42 90
LED	XP-G2		
FWHM / FWTM	4.0° / 6.0°	7'	75
Efficiency	50 %		
Peak intensity	63.4 cd/lm	90°	~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~
LEDs/each optic	1		
Light colour	White	pri pri	
Required compone			
		eno	
		20 ⁰	30. 15°
	D	20*	90*
LED	XP-G3		
FWHM / FWTM	50.0 + 4.0° / 76.0 + 9.0°	27	72
Efficiency	47 %		
Peak intensity	3.7 cd/lm		
LEDs/each optic	1		
Light colour	White	97	e e
Required compone	ents:		$ \setminus \rangle$
F16629_LEIA-S	UB-O		X
—			
_		2015	153 30
		30° 30° 0°.	357 36
	D	90 ⁵ 20	15° 31
	D XP-G3	20- 10- 10- 10- 10- 10- 10- 10- 10- 10- 1	35 36
CREE 2 LEO LED FWHM / FWTM	XP-G3 4.0° / 7.0°		8
CREE 2 LEO LED FWHM / FWTM Efficiency	XP-G3 4.0° / 7.0° 51 %		
CREE LEO LED FWHM / FWTM Efficiency Peak intensity	XP-G3 4.0° / 7.0° 51 % 48.5 cd/lm		8
CREE LEC LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	XP-G3 4.0° / 7.0° 51 % 48.5 cd/lm 1		
CREE CLED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XP-G3 4.0° / 7.0° 51 % 48.5 cd/lm 1 White		
CREE LEC LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	XP-G3 4.0° / 7.0° 51 % 48.5 cd/lm 1 White		
CREE LEC LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XP-G3 4.0° / 7.0° 51 % 48.5 cd/lm 1 White		
CREE LEC LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XP-G3 4.0° / 7.0° 51 % 48.5 cd/lm 1 White		



				90*	90*
LED	XP-L2				
FWHM / FWTM	51.0 + 6.0° / 77.0 + 16.0°			735	
Efficiency	49 %				
Peak intensity	2.8 cd/lm			60.º	
LEDs/each optic	1				
Light colour	White			950	3500
Required compone					
F16629_LEIA-SU					$ \land \times$
					2130
				309	36
				15%	0° 15°
				90*	90°
LED	XQ-E HD			75°	25'
FWHM / FWTM	50.0 + 3.0° / 76.0 + 9.0°				
Efficiency	42 %		_	60°	1600 60°
Peak intensity	4.6 cd/lm				
LEDs/each optic	1				
Light colour	White			$r \times h$	
Required componen		-			320
F16629_LEIA-SI	JB-O				
				30°	0% 15% 30%
				90*	90°
				90°	90*
LED	XQ-E HD		-	25°	99
LED FWHM / FWTM				39* 29	50
LED FWHM / FWTM Efficiency	XQ-E HD 3.0° / 6.0° 47 %			99* 73*	2540 66
LED FWHM / FWTM	XQ-E HD 3.0° / 6.0°			39* 75 69*	200
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	XQ-E HD 3.0° / 6.0° 47 % 91 cd/lm		۰	99°	230 (c)
LED FWHM / FWTM Efficiency Peak intensity	XQ-E HD 3.0° / 6.0° 47 % 91 cd/lm 1 White			g.	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XQ-E HD 3.0° / 6.0° 47 % 91 cd/lm 1 White			60 60 30.	550
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XQ-E HD 3.0° / 6.0° 47 % 91 cd/lm 1 White			59°	55.00 55.000
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XQ-E HD 3.0° / 6.0° 47 % 91 cd/lm 1 White			9°*	2549 7369 7369 7369 7369 7369
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	XQ-E HD 3.0° / 6.0° 47 % 91 cd/lm 1 White nts:			99° 75° 69° 30° 30° 30° 30°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	XQ-E HD 3.0° / 6.0° 47 % 91 cd/lm 1 White nts:			99° 99° 99° 157 157	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	XQ-E HD 3.0° / 6.0° 47 % 91 cd/lm 1 White nts:			99°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer	XQ-E HD 3.0° / 6.0° 47 % 91 cd/lm 1 White nts: XQ-E HI 52.0 + 3.0° / 79.0 + 9.0°			99°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer	XQ-E HD 3.0° / 6.0° 47 % 91 cd/lm 1 White nts: XQ-E HI 52.0 + 3.0° / 79.0 + 9.0° 44 %			99°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Required component LED FWHM / FWTM Efficiency Peak intensity	XQ-E HD 3.0° / 6.0° 47 % 91 cd/lm 1 White nts: XQ-E HI 52.0 + 3.0° / 79.0 + 9.0° 44 % 6 cd/lm			99°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Required component Efficiency Peak intensity LEDs/each optic	XQ-E HD 3.0° / 6.0° 47 % 91 cd/lm 1 White nts: XQ-E HI 52.0 + 3.0° / 79.0 + 9.0° 44 % 6 cd/lm 1			59°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Required component Efficiency Peak intensity LEDs/each optic Light colour	XQ-E HD 3.0° / 6.0° 47 % 91 cd/lm 1 White nts: XQ-E HI 52.0 + 3.0° / 79.0 + 9.0° 44 % 6 cd/lm 1 White			59° 39° 39° 39° 39° 39° 39° 39° 3	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component CREE (LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	XQ-E HD 3.0° / 6.0° 47 % 91 cd/lm 1 White nts: XQ-E HI 52.0 + 3.0° / 79.0 + 9.0° 44 % 6 cd/lm 1 White nts:			99°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Required component Efficiency Peak intensity LEDs/each optic	XQ-E HD 3.0° / 6.0° 47 % 91 cd/lm 1 White nts: XQ-E HI 52.0 + 3.0° / 79.0 + 9.0° 44 % 6 cd/lm 1 White nts:			59°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component CREE (LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	XQ-E HD 3.0° / 6.0° 47 % 91 cd/lm 1 White nts: XQ-E HI 52.0 + 3.0° / 79.0 + 9.0° 44 % 6 cd/lm 1 White nts:			99° 39° 39° 39° 39° 39° 39° 39°	



	D	30* 30
LED	XQ-E HI	
FWHM / FWTM	2.0° / 4.0°	7
Efficiency	48 %	
Peak intensity	112.6 cd/lm	
LEDs/each optic	1	200
Light colour	White	
Required compone		70
		1000
		at 100 - 100
	D	90 ⁴
LED	XT-E	72
FWHM / FWTM	50.0 + 4.0° / 76.0 + 11.0°	
Efficiency	46 %	
Peak intensity	6.2 cd/lm	
LEDs/each optic	1	
Light colour	White	9 ⁴
Required compone	ents:	
F16629_LEIA-S	SUB-O	
		\times
		24 22 x
	D	90° 9
LED	XT-E	
		29
FWHM / FWTM	4.0° / 7.0°	
	4.0° / 7.0° 49 %	
Efficiency	49 %	64 1200
Efficiency Peak intensity		
Efficiency Peak intensity LEDs/each optic	49 % 42.9 cd/lm	
Light colour	49 % 42.9 cd/lm 1 White	50 1 30 5
Efficiency Peak intensity LEDs/each optic	49 % 42.9 cd/lm 1 White	
Efficiency Peak intensity LEDs/each optic Light colour	49 % 42.9 cd/lm 1 White	
Efficiency Peak intensity LEDs/each optic Light colour	49 % 42.9 cd/lm 1 White	
Efficiency Peak intensity LEDs/each optic Light colour Required compone	49 % 42.9 cd/lm 1 White ents:	
Efficiency Peak intensity LEDs/each optic Light colour Required compone	49 % 42.9 cd/lm 1 White ents:	54- 54- 54- 54- 54- 54- 54- 54-
Efficiency Peak intensity LEDs/each optic Light colour Required compone	49 % 42.9 cd/lm 1 White ents: EDS LUXEON 5050 Round LES	
Efficiency Peak intensity LEDs/each optic Light colour Required compone	49 % 42.9 cd/lm 1 White ents: .EDS LUXEON 5050 Round LES 51.0 + 7.0° / 78.0 + 18.0°	
Efficiency Peak intensity LEDs/each optic Light colour Required compone	49 % 42.9 cd/lm 1 White ents: LUXEON 5050 Round LES 51.0 + 7.0° / 78.0 + 18.0° 46 %	
Efficiency Peak intensity LEDs/each optic Light colour Required compone Composition LUMIL ED FWHM / FWTM Efficiency Peak intensity	49 % 42.9 cd/lm 1 White ents: EDS LUXEON 5050 Round LES 51.0 + 7.0° / 78.0 + 18.0° 46 % 2.2 cd/lm	
Efficiency Peak intensity LEDs/each optic Light colour Required compone Composition LUMIL FWHM / FWTM Efficiency Peak intensity LEDs/each optic	49 % 42.9 cd/lm 1 White ents: LUXEON 5050 Round LES 51.0 + 7.0° / 78.0 + 18.0° 46 % 2.2 cd/lm 1	501 B0
Efficiency Peak intensity LEDs/each optic Light colour Required compone UNIC LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	49 % 42.9 cd/lm 1 White ents: LUXEON 5050 Round LES 51.0 + 7.0° / 78.0 + 18.0° 46 % 2.2 cd/lm 1 White	73° 641
Efficiency Peak intensity LEDs/each optic Light colour Required compone Composition LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	49 % 42.9 cd/lm 1 White ents: LUXEON 5050 Round LES 51.0 + 7.0° / 78.0 + 18.0° 46 % 2.2 cd/lm 1 White ents:	73° 641
Efficiency Peak intensity LEDs/each optic Light colour Required compone Composition LUMIL FWHM / FWTM Efficiency Peak intensity LEDs/each optic	49 % 42.9 cd/lm 1 White ents: LUXEON 5050 Round LES 51.0 + 7.0° / 78.0 + 18.0° 46 % 2.2 cd/lm 1 White ents:	
Efficiency Peak intensity LEDs/each optic Light colour Required compone Composition LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	49 % 42.9 cd/lm 1 White ents: LUXEON 5050 Round LES 51.0 + 7.0° / 78.0 + 18.0° 46 % 2.2 cd/lm 1 White ents:	50
Efficiency Peak intensity LEDs/each optic Light colour Required compone Description LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	49 % 42.9 cd/lm 1 White ents: LUXEON 5050 Round LES 51.0 + 7.0° / 78.0 + 18.0° 46 % 2.2 cd/lm 1 White ents:	



UMIL	.EDS	30*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LUXEON 5050 Round LES 7.0° / 11.0° 51 % 16.7 cd/lm 1 White	
	EDS	50*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F16629_LEIA-S	LUXEON CZ 51.0 + 3.0° / 76.0 + 7.0° 48 % 6.9 cd/lm 1 White ents:	
	FDS	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LUXEON CZ 2.0° / 5.0° 55 % 157 cd/lm 1 White ents:	
ED FWHM / FWTM Efficiency	LUXEON MZ 50.0 + 6.0° / 77.0 + 15.0° 45 % 2.8 cd/lm	



UMIL	.EDS	50° 50
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LUXEON MZ 6.0° / 9.0° 49 % 27.5 cd/lm 1 White	73 64 57 10 10 10 10 10 10 10 10 10 10 10 10 10
		20° 25° 0° 25° 30
🥙 LUMIL	.EDS	90* 90
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LUXEON TX 4.0° / 7.0° 51 % 58.4 cd/lm 1 White ents:	
	EDC	137 ¹ 64860 135
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F16629_LEIA-S	LUXEON TX 50.0 + 4.0° / 76.0 + 9.0° 48 % 4 cd/lm 1 White ents:	
🤭 LUMIL	.EDS	55*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F16629_LEIA-S	LUXEON V 51.0 + 6.0° / 77.0 + 15.0° 49 % 2.9 cd/lm 1 White ents:	





	EDS	90 ⁺ 90
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LUXEON V 6.0° / 9.0° 53 % 27.7 cd/lm 1	
Light colour Required compone	White nts:	
🖉 LUMIL	EDS	90 ⁴
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LUXEON Z 2.0° / 5.0° 50 % 131 cd/lm 1 White nts:	
	EDC	200 ⁻ 200 ⁻ 200 ⁻
CONTROLOGY	LUXEON Z ES 49.0 + 3.0° / 76.0 + 7.0° 49 % 5.7 cd/lm 1 White nts:	
ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LUXEON Z ES 3.0° / 6.0° 55 % 98.2 cd/lm 1 White	



ØNICHI		1000 -
LED	NCSxE17A	
FWHM / FWTM	50.0 + 3.0° / 77.0 + 7.0°	200
Efficiency	36 %	
Peak intensity	4.1 cd/lm	
LEDs/each optic	1	260 - and and a second s
Light colour	White	2000
Required compone		100 m - Andrew State Sta
F16629_LEIA-S		100
		-126.4° - 122.4° - 46.4° - 47.4° - 46.4° - 52.4° - 47.4° - 46.4° - 52.4° - 46.4° - 52.4° - 46.4° - 52.
		1000
LED	NCSxE17A	
FWHM / FWTM	3.0° / 6.0°	
Efficiency	40 %	200
Peak intensity	73.7 cd/lm	
LEDs/each optic	1	· · · · · · · · · · · · · · · · · · ·
Light colour	White	
Required compone	nts:	300 -
		1000
		199
		50*
LED	NVSW219F	77
FWHM / FWTM	4.0° / 7.0°	
Efficiency	50 %	69
D		
Peak intensity	47.5 cd/lm	
LEDs/each optic	1	
LEDs/each optic Light colour	1 White	c
LEDs/each optic	1 White	
LEDs/each optic Light colour	1 White	97
LEDs/each optic Light colour	1 White	e source state sta
LEDs/each optic Light colour	1 White	
LEDs/each optic Light colour Required compone	1 White nts:	
LEDs/each optic Light colour Required compone	1 White nts:	15 ⁻ 3000 5-
LEDs/each optic Light colour Required compone	1 White nts: NVSW219F	15 ⁻ 3000 5-
LEDs/each optic Light colour Required compone	1 White nts: NVSW219F 51.0 + 5.0° / 76.0 + 10.0°	15 ⁻ 3000 5-
LEDs/each optic Light colour Required compone	1 White nts: NVSW219F 51.0 + 5.0° / 76.0 + 10.0° 48 %	15 ⁻ 3000 5-
LEDs/each optic Light colour Required compone NICHIA LED FWHM / FWTM Efficiency Peak intensity	1 White nts: NVSW219F 51.0 + 5.0° / 76.0 + 10.0° 48 % 3.8 cd/lm	15 ⁻ 3000 5-
LEDs/each optic Light colour Required compone MICHIA LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	1 White nts: NVSW219F 51.0 + 5.0° / 76.0 + 10.0° 48 % 3.8 cd/lm 1	15 ⁻ 3000 5-
LEDs/each optic Light colour Required compone MICHIM LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	1 White nts: NVSW219F 51.0 + 5.0° / 76.0 + 10.0° 48 % 3.8 cd/lm 1 White	15 ⁻ 3000 5-
LEDs/each optic Light colour Required compone MICHIA LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	1 White nts: NVSW219F 51.0 + 5.0° / 76.0 + 10.0° 48 % 3.8 cd/lm 1 White nts:	15 ⁻ 3000 5-
LEDs/each optic Light colour Required compone MICHIM LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	1 White nts: NVSW219F 51.0 + 5.0° / 76.0 + 10.0° 48 % 3.8 cd/lm 1 White nts:	15 ⁻ 3000 5-
LEDs/each optic Light colour Required compone WICHIA LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	1 White nts: NVSW219F 51.0 + 5.0° / 76.0 + 10.0° 48 % 3.8 cd/lm 1 White nts:	15 ⁻ 3000 5-



		99 ⁴ 99 ⁴
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F16629_LEIA-S	NVSW319B 50.0 + 5.0° / 76.0 + 13.0° 46 % 3.4 cd/lm 1 White nts:	73 73 61 100 73 100 74 100 75 100 75 100 75 100
ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	NVSW319B 5.0° / 8.0° 52 % 36.8 cd/lm 1 White	
		10° V 10' 10' 10' 10' 10' 10' 10' 10' 10' 10'
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F16629_LEIA-S	NVSxE21A 49.0 + 4.0° / 77.0 + 13.0° 41 % 3.5 cd/lm 1 White nts:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	NVSxE21A 3.0° / 7.0° 46 % 51 cd/lm 1 White	



ØNICHI		90*
LED	- NVSxx19B/NVSxx19C	
FWHM / FWTM	4.0° / 7.0°	18
Efficiency	49 %	
Peak intensity	48.7 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone		
- 1 1		344
		30 ⁵ 3100 5 ⁷ 3
		95° 55° 75°
LED	NVSxx19B/NVSxx19C	
FWHM / FWTM	50.0 + 4.0° / 76.0 + 9.0°	
Efficiency	44 %	
Peak intensity	3.9 cd/lm	
LEDs/each optic	1	
Light colour	White	er e
Required compone		
F16629_LEIA-S		
		31/2 4000 30
OSRAM		200 [°] d ^a 100°
Opto Semiconductors		
LED	KW CULPM1.TG	75
LED FWHM / FWTM	3.0° / 5.0°	
LED FWHM / FWTM Efficiency	3.0° / 5.0° 54 %	
LED FWHM / FWTM Efficiency Peak intensity	3.0° / 5.0° 54 % 96.6 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	3.0° / 5.0° 54 % 96.6 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	3.0° / 5.0° 54 % 96.6 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	3.0° / 5.0° 54 % 96.6 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	3.0° / 5.0° 54 % 96.6 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	3.0° / 5.0° 54 % 96.6 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	3.0° / 5.0° 54 % 96.6 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	3.0° / 5.0° 54 % 96.6 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	3.0° / 5.0° 54 % 96.6 cd/lm 1 White ents:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	3.0° / 5.0° 54 % 96.6 cd/lm 1 White ents: OSCONIQ P 3737 (2W version)	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	3.0° / 5.0° 54 % 96.6 cd/lm 1 White ents: OSCONIQ P 3737 (2W version) 50.0 + 4.0° / 76.0 + 9.0°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency	3.0° / 5.0° 54 % 96.6 cd/lm 1 White ents: OSCONIQ P 3737 (2W version) 50.0 + 4.0° / 76.0 + 9.0° 49 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	3.0° / 5.0° 54 % 96.6 cd/lm 1 White ents: OSCONIQ P 3737 (2W version) 50.0 + 4.0° / 76.0 + 9.0° 49 % 4.5 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	3.0° / 5.0° 54 % 96.6 cd/lm 1 White ents: OSCONIQ P 3737 (2W version) 50.0 + 4.0° / 76.0 + 9.0° 49 % 4.5 cd/lm 1	
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	3.0° / 5.0° 54 % 96.6 cd/lm 1 White ents: OSCONIQ P 3737 (2W version) 50.0 + 4.0° / 76.0 + 9.0° 49 % 4.5 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	3.0° / 5.0° 54 % 96.6 cd/lm 1 White ents: OSCONIQ P 3737 (2W version) 50.0 + 4.0° / 76.0 + 9.0° 49 % 4.5 cd/lm 1 White	
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	3.0° / 5.0° 54 % 96.6 cd/lm 1 White ents: OSCONIQ P 3737 (2W version) 50.0 + 4.0° / 76.0 + 9.0° 49 % 4.5 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone Optic Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	3.0° / 5.0° 54 % 96.6 cd/lm 1 White ents: OSCONIQ P 3737 (2W version) 50.0 + 4.0° / 76.0 + 9.0° 49 % 4.5 cd/lm 1 White	



OSRAM Opto Semiconductors		50*	90*
LED	OSCONIQ P 3737 (2W version)		
FWHM / FWTM	3.0° / 7.0°	27	75
Efficiency	54 %		\sum
Peak intensity	62.4 cd/lm	97 ⁻	
LEDs/each optic	1		
Light colour	White	er la	45*
Required componer	nts:		
		30.	34.
OSRAM		157 6400 157 00	12,
Opto Semiconductors		2000	
LED	OSCONIQ P 3737 (3W version)	300	
FWHM / FWTM	51.0 + 5.0° / 76.0 + 14.0°	2609	
Efficiency	48 %	220	
Peak intensity	3.4 cd/lm		
LEDs/each optic	1		
Light colour	White		
Required componer		100	
F16629_LEIA-SU	JB-O	800	
		······································	
		200 	e" 67.8" 96.6" 112.6" 118.4
OSRAM Opto Semiconductors		90°	90*
	OSCONIO P 3737 (3W version)		
LED	OSCONIQ P 3737 (3W version) 5.0° / 8.0°	71	
LED FWHM / FWTM	5.0° / 8.0°	75	- Bi
LED FWHM / FWTM Efficiency	5.0° / 8.0° 53 %	6° - 100	90°
LED FWHM / FWTM Efficiency Peak intensity	5.0° / 8.0° 53 % 36 cd/lm	77 61	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	5.0° / 8.0° 53 %	75 Gr	6 80
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	5.0° / 8.0° 53 % 36 cd/lm 1 White	71 10 10 10 10 10 10 10 10 10 10 10 10 10	e.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	5.0° / 8.0° 53 % 36 cd/lm 1 White	71 91 92 92 92 92 92 92 92 92 92 92 92 92 92	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	5.0° / 8.0° 53 % 36 cd/lm 1 White	2. 6. 0. 2000	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	5.0° / 8.0° 53 % 36 cd/lm 1 White	74 Gr 1 70 70 70 70 70 70 70 70 70 70 70 70 70	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	5.0° / 8.0° 53 % 36 cd/lm 1 White		<u>722</u> 34
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer	5.0° / 8.0° 53 % 36 cd/lm 1 White nts:		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer	5.0° / 8.0° 53 % 36 cd/lm 1 White nts: OSLON Square CSSRM2/CSSRM3		<u>722</u> 34
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer Opto Semiconductors LED FWHM / FWTM	5.0° / 8.0° 53 % 36 cd/lm 1 White nts: OSLON Square CSSRM2/CSSRM3 50.0 + 4.0° / 75.0 + 8.0°		<u>722</u> 34
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer Opto Semiconductors LED FWHM / FWTM Efficiency	5.0° / 8.0° 53 % 36 cd/lm 1 White nts: OSLON Square CSSRM2/CSSRM3 50.0 + 4.0° / 75.0 + 8.0° 46 %		<u>132</u> 222
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	5.0° / 8.0° 53 % 36 cd/lm 1 White nts: OSLON Square CSSRM2/CSSRM3 50.0 + 4.0° / 75.0 + 8.0° 46 % 4.4 cd/lm		<u>132</u> 222
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer Required componer LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	5.0° / 8.0° 53 % 36 cd/lm 1 White nts: OSLON Square CSSRM2/CSSRM3 50.0 + 4.0° / 75.0 + 8.0° 46 % 4.4 cd/lm 1		<u>132</u> 222
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer COSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	5.0° / 8.0° 53 % 36 cd/lm 1 White nts: OSLON Square CSSRM2/CSSRM3 50.0 + 4.0° / 75.0 + 8.0° 46 % 4.4 cd/lm 1 White		13°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer	5.0° / 8.0° 53 % 36 cd/lm 1 White nts: OSLON Square CSSRM2/CSSRM3 50.0 + 4.0° / 75.0 + 8.0° 46 % 4.4 cd/lm 1 White nts:		13°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer COSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	5.0° / 8.0° 53 % 36 cd/lm 1 White nts: OSLON Square CSSRM2/CSSRM3 50.0 + 4.0° / 75.0 + 8.0° 46 % 4.4 cd/lm 1 White nts:		132
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer	5.0° / 8.0° 53 % 36 cd/lm 1 White nts: OSLON Square CSSRM2/CSSRM3 50.0 + 4.0° / 75.0 + 8.0° 46 % 4.4 cd/lm 1 White nts:		132



OSRAM		
Opto Semiconductors	OSLON Square CSSRM2/CSSRM3	90*
FWHM / FWTM	4.0° / 7.0°	3.
Efficiency	49 %	
Peak intensity	64.8 cd/lm	64. 30.
LEDs/each optic	1	
Light colour	White	gr /
Required componer		
		5220
		30*
OSRAM		<u>- at to ta</u>
Opto Semiconductors		50°
LED	OSLON Square PC	75
FWHM / FWTM	52.0 + 4.0° / 77.0 + 9.0°	
Efficiency	42 %	Bre Arrent Ar
Peak intensity	3.9 cd/lm	
LEDs/each optic	1	
Light colour	White	, , ,
Required componer		
F16629_LEIA-SU	JB-O	
		30 ⁴ 13 ⁵ 0 ⁶ 13 ⁴
OSRAM Opto Semiconductors		30*
LED	OSLON SSL 150	
LED	OSLON SSL 150 47.0 + 3.0° / 73.0 + 7.0°	78
LED FWHM / FWTM		
	47.0 + 3.0° / 73.0 + 7.0°	75- 10- 10-
LED FWHM / FWTM Efficiency	47.0 + 3.0° / 73.0 + 7.0° 40 %	Q1
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	47.0 + 3.0° / 73.0 + 7.0° 40 % 4.9 cd/lm	57- 57-
LED FWHM / FWTM Efficiency Peak intensity	47.0 + 3.0° / 73.0 + 7.0° 40 % 4.9 cd/lm 1 White	37 50 50 50 50 50 50 50 50 50 50 50 50 50
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	47.0 + 3.0° / 73.0 + 7.0° 40 % 4.9 cd/lm 1 White hts:	37 50 60 70 70 70 70 70 70 70 70 70 70 70 70 70
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	47.0 + 3.0° / 73.0 + 7.0° 40 % 4.9 cd/lm 1 White hts:	75- (41- (2)- (2)- (2)- (2)- (2)- (2)- (2)- (2)
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	47.0 + 3.0° / 73.0 + 7.0° 40 % 4.9 cd/lm 1 White hts:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	47.0 + 3.0° / 73.0 + 7.0° 40 % 4.9 cd/lm 1 White hts:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer F16629_LEIA-SU	47.0 + 3.0° / 73.0 + 7.0° 40 % 4.9 cd/lm 1 White hts: JB-O	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer F16629_LEIA-SU	47.0 + 3.0° / 73.0 + 7.0° 40 % 4.9 cd/lm 1 White hts: JB-O OSLON SSL 150	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer F16629_LEIA-SL	47.0 + 3.0° / 73.0 + 7.0° 40 % 4.9 cd/lm 1 White hts: JB-O OSLON SSL 150 2.0° / 5.0°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer F16629_LEIA-SU	47.0 + 3.0° / 73.0 + 7.0° 40 % 4.9 cd/lm 1 White hts: JB-O OSLON SSL 150 2.0° / 5.0° 46 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer F16629_LEIA-SU	47.0 + 3.0° / 73.0 + 7.0° 40 % 4.9 cd/lm 1 White hts: JB-O OSLON SSL 150 2.0° / 5.0° 46 % 122 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer F16629_LEIA-SU	47.0 + 3.0° / 73.0 + 7.0° 40 % 4.9 cd/lm 1 White hts: JB-O OSLON SSL 150 2.0° / 5.0° 46 % 122 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer F16629_LEIA-SL Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	47.0 + 3.0° / 73.0 + 7.0° 40 % 4.9 cd/lm 1 White hts: JB-O OSLON SSL 150 2.0° / 5.0° 46 % 122 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer F16629_LEIA-SL Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	47.0 + 3.0° / 73.0 + 7.0° 40 % 4.9 cd/lm 1 White hts: JB-O OSLON SSL 150 2.0° / 5.0° 46 % 122 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer F16629_LEIA-SL Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	47.0 + 3.0° / 73.0 + 7.0° 40 % 4.9 cd/lm 1 White hts: JB-O OSLON SSL 150 2.0° / 5.0° 46 % 122 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer F16629_LEIA-SL Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	47.0 + 3.0° / 73.0 + 7.0° 40 % 4.9 cd/lm 1 White hts: JB-O OSLON SSL 150 2.0° / 5.0° 46 % 122 cd/lm 1 White	



OSRAM Opto Semiconductors		90*	90*
LED	OSLON SSL 80		
FWHM / FWTM	3.0° / 6.0°		75
Efficiency	62 %		60*
Peak intensity	106.7 cd/lm		
LEDs/each optic	1		
Light colour	White	97	45*
Required compone	ents:		
		30*	300
OSRAM Opto Semiconductors			15°
		50°	90*
LED	OSLON SSL 80	37	75"
FWHM / FWTM	51.0 + 3.0° / 77.0 + 7.0°		
Efficiency	56 %	be a second s	60,
Peak intensity	6.5 cd/lm		
LEDs/each optic	1		
Light colour	White		
Required compone			
F16629_LEIA-S	50B-0		
		30 ⁶ 600	12°, 39¢
OSRAM Opto Semiconductors		90*	90*
LED	OSTAR Projection Compact (Kx.CSLNM1.xx)		
FWHM / FWTM	3.0° / 5.0°	75	25*
Efficiency	49 %		VN.
Peak intensity	120.8 cd/lm		BC.
LEDs/each optic	1		
Light colour	White	9.	45°
Required compone	ents:	7560	
		102-00	
		30	36.0
			15'
SAMSI		90°	90*
LED	LH231B	75	
FWHM / FWTM	50.0 + 4.0° / 76.0 + 13.0°		\mathcal{A}
Efficiency	46 %		× 60,
Peak intensity	3.5 cd/lm		
LEDs/each optic	1		
	\A/bito	57°	45*
Light colour	White		
Required compone	ents:		
	ents:		
Required compone	ents:		
Required compone	ents:		30°



SAMS	UNG	.000
LED	LH231B	4000
FWHM / FWTM	4.0° / 7.0°	1999
Efficiency	50 %	300 -
Peak intensity	43.6 cd/lm	300
LEDs/each optic	1	2007
Light colour	White	2000
Required compone	ents:	1999
		1000
		600
SAMS	UNG	94° 999
LED	LH351B	
FWHM / FWTM	52.0 + 4.0° / 77.0 + 10.0°	
Efficiency	50 %	
Peak intensity	4.3 cd/lm	
LEDs/each optic	1	
Light colour	White	ar (100
Required compone	ents:	
F16629_LEIA-S		80
		30"
SAMS	UNG	90°
LED	LH351B	
FWHM / FWTM	4.0° / 7.0°	75
Efficiency	55 %	
Peak intensity	54.4 cd/lm	
LEDs/each optic	1	
Light colour	White	gr at
Required compone	ents:	
		20* 202 25* 0* 25*
SAMS	ING	st. Sat
LED	LH351C	
FWHM / FWTM	4.0° / 7.0°	77
Efficiency	57 %	
Peak intensity	46.1 cd/lm	
LEDs/each optic	1	
Light colour	White	er zen er
Required compone		
		34



LED LH3S1C FWH / FWTM 500 + 5.0° / 7.0. + 12.0° Filiciency 52 % Pack intensity 3 9 cd/m Lebyleach optic 1 Light colour White Required components: SAMS UNC LED LH3S1D WMM / FWTM 50.° / 9.0° Efficiency 54 % Pack intensity 29 cd/m LEDs/each optic 1 Light colour White Required components: SAMS UNC LED LH3S1D WMM / FWTM 50.° / 7.0° Efficiency 54 % Pack intensity 3.1 cd/m LEDs/each optic 1 Light colour White Required components: SAMS UNC LED LH3S1D WMM / FWTM 50.° / 7.0° Efficiency 50 % Pack intensity 3.1 cd/m LEDs/each optic 1 LEDs/each optic 1	SAMSI	JNG	90 ⁴ 90 ⁵
Efficiency § 2 % Peak itensity 3.9 cd/m Light colour While Required components: Image: Components iteration itera	LED		
Peak Intensity 3.9 od/im LEDviaced optic 1 LEDviaced optic 2 SAMSUNG LED LH351D WMM / FWTM 50 / 9.0° Efficiency 54 % Peak Intensity 29 od/im LEDviaced optic 1 Light colour White Required components: F16829_LEIA-SUB-O SAMSUNG LED LH351D WMM / FWTM 53.0 + 5.0° / 77.0 + 14.0° Efficiency 50 % Peak Intensity 3.1 od/im LEDviaced optic 1 Light colour White SAMSUNG LED LH351D WMM / FWTM 53.0 + 5.0° / 77.0 + 14.0° Efficiency 50 % Peak Intensity 7.1 od/im LEDviaced optic 1 LED LH35B-O SAMSUNG LED LH35B-O SAMSUNG LED LH35B-O SAMSUNG LED LH35B-O LED LH35B-O SAMSUNG LED LH35B-O LH35B-O LH35B-O LED LH35B-O LED	FWHM / FWTM	50.0 + 5.0° / 76.0 + 12.0°	
LEDsteach optic 1 Light colour White Required components: ED LH351D WMM / FWTM 50 / 90 ° Efficiency 54 % Peak intensity 29 colim LEDsteach optic 1 Light colour White Required components: ED LH351D WMM / FWTM 53.0 + 5.0' /77.0 + 14.0° Efficiency 50 % Peak intensity 3.1 colim LEDsteach optic 1 LEDsteach	Efficiency	52 %	
Jight colour White Required components: LED LH351D WMM /FWTM 50' / 90'* Hifteincry 54 % Peak intensity 7.3 colim LEDs/each optic 1 Jight colour White Required components: F16829_LEIA-SUB-O ED LH351D WMM /FWTM 70' / 11.0* Hifteincry 50 % Peak intensity 7.3 colim LEDs/each optic 1 Jight colour White Required components: F16829_LEIA-SUB-O	Peak intensity	3.9 cd/lm	
Required components: EXAM SUNC LED LH351D WMM /FVTM 5.0° /9.0° Hiddeny 29 collm LEDs/each optic 1 LEDs/each optic 1 LEDs	LEDs/each optic	1	
SAMSUNG LED LH351D WMM /FVT 50.9 00° Efficiency 54 % Peak intensity 29 cd/m LeDs/each optic 1 	Light colour		
LED LH351D WHM / FWTM 5.0° / 9.0° Filciancy 54% Peak intensity 29 cd/m LEDs/each optic 1 .ight colour White Required components: F16629_LEIA-SUB-O SAMS UNG LED LH508A WHM / FWTM 50 % Peak intensity 3.1 cd/m LEDs/each optic 1 .ight colour White Required components: F16629_LEIA-SUB-O The Subsection 1 .ight colour White Required components: F16629_LEIA-SUB-O	Required compone	ents:	
LED LH351D WHM / FWTM 5.0° / 9.0° Filciancy 54% Peak intensity 29 cd/m LEDs/each optic 1 .ight colour White Required components: F16629_LEIA-SUB-O SAMS UNG LED LH508A WHM / FWTM 50 % Peak intensity 3.1 cd/m LEDs/each optic 1 .ight colour White Required components: F16629_LEIA-SUB-O The Subsection 1 .ight colour White Required components: F16629_LEIA-SUB-O			
LED LH351D WHM / FWTM 5.0° / 9.0° Filciancy 54% Peak intensity 29 cd/m LEDs/each optic 1 .ight colour White Required components: F16629_LEIA-SUB-O SAMS UNG LED LH508A WHM / FWTM 50 % Peak intensity 3.1 cd/m LEDs/each optic 1 .ight colour White Required components: F16629_LEIA-SUB-O The Subsection 1 .ight colour White Required components: F16629_LEIA-SUB-O			\times / \times / \times
LED LH351D WHM / FWTM 5.0° / 9.0° Filciancy 54% Peak intensity 29 cd/m LEDs/each optic 1 .ight colour White Required components: F16629_LEIA-SUB-O SAMS UNG LED LH508A WHM / FWTM 50 % Peak intensity 3.1 cd/m LEDs/each optic 1 .ight colour White Required components: F16629_LEIA-SUB-O The Subsection 1 .ight colour White Required components: F16629_LEIA-SUB-O			20 ¹⁰ 000 300 200 00 ¹ 10°
LED LH351D WHM / FWTM 5.0° / 9.0° Filciancy 54% Peak intensity 29 cd/m LEDs/each optic 1 .ight colour White Required components: F16629_LEIA-SUB-O SAMS UNG LED LH508A WHM / FWTM 50 % Peak intensity 3.1 cd/m LEDs/each optic 1 .ight colour White Required components: F16629_LEIA-SUB-O The Subsection 1 .ight colour White Required components: F16629_LEIA-SUB-O	SAMSI	JNG	30*
WHM / FWTM 5.0° / 9.0° Efficiency 54 % Peak intensity 29 od/m LEDSreach optic 1 	LED		
Efficiency 64 % Peak intensity 29 cd/lm LEDs/each optic 1 Light colour White Required components: ED LH351D WH/M / FVT 53.0 + 5.0° / 77.0 + 14.0° Efficiency 50 % Peak intensity 3.1 cd/lm LEDs/each optic 1 Light colour White Required components: F16629_LEIA-SUB-O ED LH508A WH/M / FVT 1.1.0° Efficiency 50 % Peak intensity 7.3 cd/lm LEDs/each optic 1 Light colour White Required components: F16629_LEIA-SUB-O	FWHM / FWTM		39
Peak intensity 29 cd/lm LEDs/each optic 1 Light colour White Required components: SAMSUNC LED LH351D WHM / FWTM 53.0 + 5.0° / 77.0 + 14.0° Efficiency 50 % Peak intensity 3.1 cd/m LEDs/each optic 1 Light colour White Required components: F16629_LEIA-SUB-O SAMSUNC LED LH508A WHM / FWTM 7.0° / 11.0° Efficiency 50 % Peak intensity 7.3 cd/m LEDs/each optic 1 LEDs/each optic 1 LEDs/each optic 1 Light colour White	Efficiency		
LEDs/each optic 1 Light colour White Required components: SAMSUNG LED LH351D WHM / FWTM 53.0 + 5.0° / 77.0 + 14.0° Efficiency 50% Peak intensity 3.1 cd/lm LEDs/each optic 1 Light colour White Required components: F16629_LEIA-SUB-O SAMSUNG LED LH508A WHM / FWTM 7.0° / 11.0° Efficiency 50% Peak intensity 7.3 cd/lm LEDs/each optic 1 LEDs/each optic 1	Peak intensity		
ight colour White Required components: SAMSUNG LED LH351D FWHM / FVTM 53.0 + 5.0° / 77.0 + 14.0° fficiency 50 % Peak intensity 3.1 cd/lm LEDs/each optic 1 ight colour White Required components: F16629_LEIA-SUB-O SAMSUNG LED LH508A FWHM / FVTM 7.0° / 11.0° fficiency 50 % Peak intensity 17.3 cd/lm LEDs/each optic 1 ight colour T, 30 / 11.0° fficiency 50 % Peak intensity 17.3 cd/lm LEDs/each optic 1 ight colour White	LEDs/each optic	1	
Required components: ED LH351D WHM / FVTM 53.0 + 5.0° / 77.0 + 14.0° Efficiency 50 % Peak intensity 3.1 cd/lm LEDs/each optic 1 Light colour White Required components: F16629_LEIA-SUB-O SAMSSUNG ED LH508A WHM / FVTM 7.0° / 11.0° Efficiency 50 % Peak intensity 17.3 cd/lm LEDs/each optic 1 Light colour White	Light colour	White	a de la construcción de la const
SAMSUNG ED H351D WHM / FWTM 53.0 + 5.0° / 77.0 + 14.0° Efficiency 50 % Peak intensity 3.1 cd/lm EDs/each optic 1 Ept colour White Required components: F16629_LEIA-SUB-O SAMSUNG ED H508A WHM / FWTM 7.0° / 11.0° Efficiency 50 % Peak intensity 7.3 cd/lm EDS/each optic 1 ight colour White		ents:	
LED LH351D FWHM / FWTM 53.0 + 5.0° / 77.0 + 14.0° Efficiency 50 % Peak intensity 3.1 cd/lm LEDs/each optic 1 Light colour White Required components: F16629_LEIA-SUB-O SAMSUNG LED LH508A FWHM / FWTM 7.0° / 11.0° Efficiency 50 % Peak intensity 17.3 cd/lm LEDs/each optic 1 Light colour White			
LED LH351D FWHM / FWTM 53.0 + 5.0° / 77.0 + 14.0° Efficiency 50 % Peak intensity 3.1 cd/lm LEDs/each optic 1 Light colour White Required components: F16629_LEIA-SUB-O SAMSUNG LED LH508A FWHM / FWTM 7.0° / 11.0° Efficiency 50 % Peak intensity 17.3 cd/lm LEDs/each optic 1 Light colour White			2444
LED LH351D FWHM / FWTM 53.0 + 5.0° / 77.0 + 14.0° Efficiency 50 % Peak intensity 3.1 cd/lm LEDs/each optic 1 Light colour White Required components: F16629_LEIA-SUB-O SAMSUNG LED LH508A FWHM / FWTM 7.0° / 11.0° Efficiency 50 % Peak intensity 17.3 cd/lm LEDs/each optic 1 Light colour White			30°
LED LH351D FWHM / FWTM 53.0 + 5.0° / 77.0 + 14.0° Efficiency 50 % Peak intensity 3.1 cd/lm LEDs/each optic 1 Light colour White Required components: F16629_LEIA-SUB-O SAMSUNG LED LH508A FWHM / FWTM 7.0° / 11.0° Efficiency 50 % Peak intensity 17.3 cd/lm LEDs/each optic 1 Light colour White	<u>evwe</u>		
EWHM / FWTM 53.0 + 5.0° / 77.0 + 14.0° Efficiency 50 % Peak intensity 3.1 cd/lm LEDs/each optic 1 Light colour White Required components: F16629_LEIA-SUB-O SAMSUNG LED LH508A EVHM / FWTM 7.0° / 11.0° Efficiency 50 % Peak intensity 17.3 cd/lm LEDs/each optic 1 Light colour White			
Efficiency 50 % Peak intensity 3.1 cd/lm LEDs/each optic 1 Light colour White Required components: F16629_LEIA-SUB-O SAMSUNG LED LH508A WHM / FWTM 7.0° / 11.0° Efficiency 50 % Peak intensity 17.3 cd/lm LEDs/each optic 1 Light colour White			75
Peak intensity 3.1 cd/lm LEDs/each optic 1 Light colour White Required components: F16629_LEIA-SUB-O SAMSUNG LED LH508A FWHM / FWTM 7.0° / 11.0° Efficiency 50 % Peak intensity 17.3 cd/lm LEDs/each optic 1 Light colour White			
LEDs/each optix 1 Light colour White Required components: F16629_LEIA-SUB-O SAMSUNG LED LH508A FWHM / FWTM 7.0° / 11.0° Efficiency 50 % Peak intensity 17.3 cd/m LEDs/each optix 1 Light colour White			
Light colour White Required components: F16629_LEIA-SUB-O SAMSUNG LED LH508A FWHM / FWTM 7.0° / 11.0° Efficiency 50 % Peak intensity 17.3 cd/lm LEDs/each optic 1 Light colour White			
Required components: F16629_LEIA-SUB-O SAMSUNG LED LH508A FWHM / FWTM 7.0° / 11.0° Efficiency 50 % Peak intensity 17.3 cd/m LEDs/each optic 1 Light colour White			
F16629_LEIA-SUB-O			
SAMSUNG LED LH508A WHM / FWTM 7.0° / 11.0° Efficiency 50 % Peak intensity 17.3 cd/m LEDs/each optic 1 Light colour White			ote
SAMSUNG LED LH508A FWHM / FWTM 7.0° / 11.0° Efficiency 50 % Peak intensity 17.3 cd/lm LEDs/each optic 1 Light colour White	110020_222.00		
SAMSUNG LED LH508A FWHM / FWTM 7.0° / 11.0° Efficiency 50 % Peak intensity 17.3 cd/lm LEDs/each optic 1 Light colour White			
LH508A WHM / FWTM 7.0° / 11.0° Efficiency 50 % Peak intensity 17.3 cd/lm LEDs/each optic 1 Light colour White			2 ⁹⁹ / <u>2009</u> ev 25 ⁹ o [†] 25 ⁹
LH508A WHM / FWTM 7.0° / 11.0° Efficiency 50 % Peak intensity 17.3 cd/lm LEDs/each optic 1 Light colour White	SAMSI	JNG	30* 30
Efficiency 50 % Peak intensity 17.3 cd/lm LEDs/each optic 1 Light colour White	LED	LH508A	24
Peak intensity 17.3 cd/lm LEDs/each optic 1 Light colour White	FWHM / FWTM	7.0° / 11.0°	
LEDs/each optic 1 Light colour White	Efficiency	50 %	61
Light colour White	Peak intensity	17.3 cd/lm	
	LEDs/each optic	1	
Required components:	Light colour		as a
	Required compone	ents:	
			30



SAMS		2600 T
<u> 371 M 3 (</u>		2400
LED	LH508A	2000-
FWHM / FWTM	52.0 + 7.0° / 78.0 + 17.0°	2009
Efficiency	45 %	1899
Peak intensity	2.4 cd/lm	1600 -
LEDs/each optic	1	1600
Light colour	White	100
Required compone	ents:	
F16629_LEIA-S	SUB-O	600 -
		······································

		-128.0" -112.6" -60.0" -67.6" -46.1" -22.6" 0.0" 22.6" 48.4" 67.6" 90.0" 112.6" 118.



CREESILED LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	XHP70.2 12.0° / 18.0° 48 % 7.4 cd/lm 1 White	91 ⁴ 92 ⁴ 93 ⁴ 94 94 95 95 95 95 95 95 95 95 95 95 95 95 95
		p.*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: F16629_LEIA-SUB-O	XP-G2 HE 36.0 + 5.0° / 58.0 + 12.0° 44 % 4.3 cd/lm 1 White	20 20 20 20 10 10 10 10 10 10 10 10 10 1
CREES LED LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	XP-G2 HE 5.0° / 11.0° 48 % 29.9 cd/lm 1 White	50° 50° 50° 50° 50° 50° 50° 50° 50° 50°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	XP-L HD 6.3° / 12.9° 51 % 23.5 cd/lm 1 White	25° 28° 15° 25° 28° 15°



		50 ⁴
LED	XP-L HI	75
FWHM / FWTM	4.5° / 9.5°	
Efficiency Peak intensity	53 % 42.6 cd/lm	60* 60°
-		
LEDs/each optic	1 White	
Light colour Required components:	White	
Required components.		
		33400
		30° 30° 30° 15°
	05	90* 90*
LED	LUXEON C	75*
FWHM / FWTM	3.6° / 7.0°	
Efficiency	36 %	60°
Peak intensity	53.7 cd/lm	$\langle \langle \rangle \rangle$
LEDs/each optic	1	
Light colour	White	ar ar
Required components:		300
		30* 36*
		12999 T
)S	
	LUXEON CZ	
LED FWHM / FWTM	LUXEON CZ 10.0° / 16.0°	1399
LED FWHM / FWTM Efficiency	LUXEON CZ 10.0° / 16.0° 42 %	1399
LED FWHM / FWTM Efficiency Peak intensity	LUXEON CZ 10.0° / 16.0° 42 % 11 cd/lm	1399
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LUXEON CZ 10.0° / 16.0° 42 % 11 cd/lm 4	1000
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON CZ 10.0° / 16.0° 42 % 11 cd/lm	1000
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LUXEON CZ 10.0° / 16.0° 42 % 11 cd/lm 4	1333 - 1334 - 1335 - 1339 - 1339 - 1339 - 1339 - 1339 - 1339 - 1339 - 1339 - 1339 - 1339 - 1339 - 1339 - 1339 -
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON CZ 10.0° / 16.0° 42 % 11 cd/lm 4	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON CZ 10.0° / 16.0° 42 % 11 cd/lm 4	1333 - 1334 - 1335 - 1339 - 1339 - 1339 - 1339 - 1339 - 1339 - 1339 - 1339 - 1339 - 1339 - 1339 - 1339 - 1339 -
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON CZ 10.0° / 16.0° 42 % 11 cd/lm 4	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON CZ 10.0° / 16.0° 42 % 11 cd/lm 4 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON CZ 10.0° / 16.0° 42 % 11 cd/lm 4 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON CZ 10.0° / 16.0° 42 % 11 cd/lm 4 White S LUXEON Rubix	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON CZ 10.0° / 16.0° 42 % 11 cd/lm 4 White S LUXEON Rubix 4.0° / 7.0°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON CZ 10.0° / 16.0° 42 % 11 cd/lm 4 White S LUXEON Rubix	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON CZ 10.0° / 16.0° 42 % 11 cd/lm 4 White S LUXEON Rubix 4.0° / 7.0° 45 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: WIM / COMPARENT LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LUXEON CZ 10.0° / 16.0° 42 % 11 cd/lm 4 White Vhite LUXEON Rubix 4.0° / 7.0° 45 % 74.7 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON CZ 10.0° / 16.0° 42 % 11 cd/lm 4 White V S LUXEON Rubix 4.0° / 7.0° 45 % 74.7 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON CZ 10.0° / 16.0° 42 % 11 cd/lm 4 White Vhite LUXEON Rubix 4.0° / 7.0° 45 % 74.7 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON CZ 10.0° / 16.0° 42 % 11 cd/lm 4 White Vhite LUXEON Rubix 4.0° / 7.0° 45 % 74.7 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON CZ 10.0° / 16.0° 42 % 11 cd/lm 4 White Vhite LUXEON Rubix 4.0° / 7.0° 45 % 74.7 cd/lm 1	



)S	90*
LED	LUXEON Rubix	78-
FWHM / FWTM	5.0° / 9.0°	
Efficiency	51 %	60 ²
Peak intensity	47.4 cd/lm	
LEDs/each optic	1	
Light colour	Red	42. 43.
Required components:		
		33820
		\times / \vee \times
		36° 35° 35° 30°
)S	90 ⁺ 90 ⁺
LED	LUXEON Rubix	
FWHM / FWTM	5.0° / 9.0°	75*
Efficiency	49 %	60 ¹ 13 ²⁰ 60 [*]
Peak intensity	44.5 cd/lm	
LEDs/each optic	1	
Light colour	Green	
Required components:		
		39 00
		30° 15° 0° 15° 36°
)S	90 [*] 90 [*]
LED	LUXEON Rubix	
FWHM / FWTM	5.0° / 9.0°	75*
Efficiency	49 %	50 ⁵
Peak intensity	44.5 cd/lm	
LEDs/each optic	1	
Light colour	Blue	
Description of a second second		
Required components:		° °
kequirea components:		¢*
kequirea components:		
kequirea components:		3 ¹⁰
)S	20 ⁴ 25 ⁵ 0 ⁴ 35 ⁵ 26 ⁴
		91 ² 91 ² 9
	LUXEON V2	35 36 37 30 30 30 30 30 30 30 30 30 30
LUMILED FWHM / FWTM	LUXEON V2 4.8° / 9.5°	
ED FWHM / FWTM Efficiency	LUXEON V2 4.8° / 9.5° 46 %	
ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON V2 4.8° / 9.5° 46 % 39.5 cd/lm	
ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LUXEON V2 4.8° / 9.5° 46 % 39.5 cd/lm 1	d. 2000 er. en 100 100 bi 20. 50. 30. 20. 50.
ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON V2 4.8° / 9.5° 46 % 39.5 cd/lm 1	
ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON V2 4.8° / 9.5° 46 % 39.5 cd/lm 1	



	JS	90° 90°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	SBT-90 6.0° / 11.0° 44 % 26 cd/lm 1 White	27° 0° 25°
LED FWHM / FWTM Efficiency LEDs/each optic Light colour Required components:	SST-10-B130 4.0° / 9.0° 45 % 1 IR	50° 10° 10°
ED FWHM / FWTM Efficiency Peak intensity	NF2x757G 4.6° / 9.2° 50 % 52.2 cd/lm	30* 30* 30* 30*
LEDs/each optic Light colour Required components:	1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	NV4WB35AM 7.0° / 13.0° 46 % 21.9 cd/lm 1 White	12. 13. 14. 15. 15. 15. 15. 15. 15. 15. 15



ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	NV4x144A 9.0° / 15.0° 44 % 12.6 cd/lm 1 White	22° 0° 12° %
ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	NVSW3x9A 2.4° / 4.8° 44 % 34.5 cd/lm 1 White	31 32 32 32 33 32
ED FWHM / FWTM Efficiency	NVSW519A 5.0° / 10.0° 45 %	20- 20- 20- 20- 20- 20- 20- 20- 20- 20-
Peak intensity LEDs/each optic Light colour Required components:	28.4 cd/lm 1 White	200 200 200 200 200 200 200 200 200 200
OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	OSLON Black Flat 4.5° / 11.0° 50 % 40.4 cd/lm 1 White	257 0° 157 90° 90° 90° 90° 10° 90° 90° 90° 90° 90° 90° 90° 9



OSRAM		90° 90°
Opto Semiconductors	OSLON Square EC	
FWHM / FWTM	4.0° / 8.0°	75*
Efficiency	4.0 7 8.0 57 %	
Peak intensity	68 cd/lm	60°
LEDs/each optic	1	
Light colour	White	45° 45°
Required components:	Wille	
Required components.		51200
		\times / / \times
		30° 30° 30°
OSRAM Opto Semiconductors		80 ⁴ 90 ⁴
LED	OSLON SSL 150	
FWHM / FWTM	5.0° / 10.0°	
Efficiency	41 %	
Peak intensity	31.6 cd/lm	Egen been been been been been been been b
LEDs/each optic	1	
Light colour	Red	e7 1800 e7*
Required components:		
		\times / $ $ \setminus \times
		300 3000 300
		150 00 150
OSRAM Oth Semiconductors		90*
Opto Semiconductors	OSTAR Stage (S2WM)	50 ¹
Opto Semiconductors	OSTAR Stage (S2WM) 6.0° / 11.0°	50°
Depto Semiconductors LED FWHM / FWTM	6.0° / 11.0°	20 20 20 20 20 20 20 20 20 20 20 20 20 2
Opto Semiconductors LED FWHM / FWTM Efficiency	6.0° / 11.0° 49 %	57 57 61 ⁴ 100 100 100
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	6.0° / 11.0°	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	6.0° / 11.0° 49 % 35.2 cd/lm	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	6.0° / 11.0° 49 % 35.2 cd/lm 1	gg*
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	6.0° / 11.0° 49 % 35.2 cd/lm 1	gg*
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	6.0° / 11.0° 49 % 35.2 cd/lm 1	gg*
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	6.0° / 11.0° 49 % 35.2 cd/lm 1	gg*
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	6.0° / 11.0° 49 % 35.2 cd/lm 1	200 201 201 201 201 200
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	6.0° / 11.0° 49 % 35.2 cd/lm 1	51 In 62
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	6.0° / 11.0° 49 % 35.2 cd/lm 1 White	9 ¹ 9 ¹ 9 ¹ 9 ¹ 9 ¹ 1 ² 1 ² 1 ² 1 ² 1 ² 1 ² 1 ² 1
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED	6.0° / 11.0° 49 % 35.2 cd/lm 1	9 ¹ 9 ¹ 9 ¹ 9 ¹ 9 ¹ 1 ² 1 ² 1 ² 1 ² 1 ² 1 ² 1 ² 1
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM	6.0° / 11.0° 49 % 35.2 cd/lm 1 White OSTAR Stage (S2WM)	9 ¹ 9 ¹ 9 ¹ 9 ¹ 9 ¹ 1 ² 1 ² 1 ² 1 ² 1 ² 1 ² 1 ² 1
opto semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto semiconductors LED FWHM / FWTM Efficiency	6.0° / 11.0° 49 % 35.2 cd/lm 1 White OSTAR Stage (S2WM) 32.0 + 4.0° / 56.0 + 12.0° 47 %	9 ¹ 9 ¹ 9 ¹ 9 ¹ 9 ¹ 1 ² 1 ² 1 ² 1 ² 1 ² 1 ² 1 ² 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	6.0° / 11.0° 49 % 35.2 cd/lm 1 White OSTAR Stage (S2WM) 32.0 + 4.0° / 56.0 + 12.0°	9 ¹ 9 ¹ 9 ¹ 9 ¹ 9 ¹ 1 ² 1 ² 1 ² 1 ² 1 ² 1 ² 1 ² 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	6.0° / 11.0° 49 % 35.2 cd/lm 1 White OSTAR Stage (S2WM) 32.0 + 4.0° / 56.0 + 12.0° 47 % 4.9 cd/lm 1	9 ¹ 9 ¹ 9 ¹ 9 ¹ 9 ¹ 1 ² 1 ² 1 ² 1 ² 1 ² 1 ² 1 ² 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	6.0° / 11.0° 49 % 35.2 cd/lm 1 White OSTAR Stage (S2WM) 32.0 + 4.0° / 56.0 + 12.0° 47 % 4.9 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 Required components:	6.0° / 11.0° 49 % 35.2 cd/lm 1 White OSTAR Stage (S2WM) 32.0 + 4.0° / 56.0 + 12.0° 47 % 4.9 cd/lm 1 White	
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	6.0° / 11.0° 49 % 35.2 cd/lm 1 White OSTAR Stage (S2WM) 32.0 + 4.0° / 56.0 + 12.0° 47 % 4.9 cd/lm 1 White	
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 Required components:	6.0° / 11.0° 49 % 35.2 cd/lm 1 White OSTAR Stage (S2WM) 32.0 + 4.0° / 56.0 + 12.0° 47 % 4.9 cd/lm 1 White	



OSRAM Opto Semiconductors		90*
LED	SFH 4715AS	75
FWHM / FWTM	29.0 + 4.0° / 56.0 + 12.0°	
Efficiency	53 %	60°
Peak intensity	6.1 cd/lm	
LEDs/each optic	1	
Light colour	White	er er
Required components:		
F16629_LEIA-SUB-C		
		30° 6430 36°
		15° 0° 15°
OSRAM Opto Semiconductors		90* 90*
opic connocitation		
LED	SFH 4715AS	1500
FWHM / FWTM	4.0° / 9.0°	
Efficiency	47 %	60 ⁴
LEDs/each optic	1	\times / / T \setminus \times
Light colour	IR	43 ¹ 43 ²
Required components:		
		352700
		30° 30*
		15 ³ 0 ⁴ 15 ⁹
OSRAM		10000
Opto Semiconductors		5600 5500 5400
LED	SFH 4716AS	2000
FWHM / FWTM	5.0° / 9.0°	2889
Efficiency	36 %	26991
LEDs/each optic	30 % 1	12999
Light colour	I IR	1000 -
Required components:		1000
Required components:		12999
		6000
		609
		2000
		reprint section water Datable Party States and Ander Spice States 2015 12000



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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