

# LISA3-RS-PIN

~15° spot beam with location pin installation

#### **SPECIFICATION:**

Dimensions	Ø 10.0 mm
Height	6.9 mm
Fastening	glue
ROHS compliant	yes 🛈



#### **MATERIALS**:

**Component** LISA3-RS LISA3-HLD-PIN

# **Type** Single lens Holder

Material	Colour	Finish
PMMA	clear	
PC	black	

#### **ORDERING INFORMATION:**

Component		Qty in box	MOQ	MPQ	Box weight (kg)
FP16558_LISA3-RS-PIN	Single lens	2000	300	100	1.3
» Box size: 310 x 230 x 60 mm					

# PRODUCT DATASHEET FP16558\_LISA3-RS-PIN



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See also our general installation guide: www.ledil.com/installation\_guide



## **OPTICAL RESULTS (MEASURED):**

CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XD16 19.0° / 34.0° 78 % 5.4 cd/lm 1 White	
CREE LED FWHM / FWTM Efficiency Peak intensity	XP-E2 16.0° / 31.0° 90 % 8.1 cd/lm	94 <sup>4</sup> 72 60 <sup>4</sup> 300
LEDs/each optic Light colour Required compone	1 White ints:	90° 20° 80°
		9 <sup>3</sup>
LED FWHM / FWTM Efficiency	XP-G3 26.0° / 51.0° 84 %	77
Peak intensity LEDs/each optic	3.1 cd/lm 1	
Light colour Required compone	White ints:	
	EDS	5° A 50°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LUXEON CZ 12.0° / 23.0° 89 % 14.6 cd/lm 1 White	75
		200° 100° 20° 20°



## **OPTICAL RESULTS (MEASURED):**

Maria		
ØNICHI/		90° 90°
LED	NF2x757G	
FWHM / FWTM	25.0° / 52.0°	
Efficiency	88 %	50°
Peak intensity	3.3 cd/lm	
LEDs/each optic	1	
Light colour	White	g. at
Required compone	ents:	
		30
		25% 0° 352
ØNICHI/		30°
LED	NVSW219F	75
FWHM / FWTM	26.0° / 52.0°	
Efficiency	90 %	800
Peak intensity	3.2 cd/lm	
LEDs/each optic	1	- 500
Light colour	White	à. di
Required compone	ents:	
		315 00 00 00
OSRAM		
Opto Semiconductors		90°
L		
LED	OSCONIQ C 2424	39
FWHM / FWTM	18.0° / 35.0°	75 500
FWHM / FWTM Efficiency	18.0° / 35.0° 88 %	57
FWHM / FWTM Efficiency Peak intensity	18.0° / 35.0° 88 % 6.3 cd/lm	6) <sup>2</sup>
FWHM / FWTM Efficiency Peak intensity LEDs/each optic	18.0° / 35.0° 88 % 6.3 cd/lm 1	77 92 92 520 520
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	18.0° / 35.0° 88 % 6.3 cd/lm 1 White	6) <sup>2</sup>
FWHM / FWTM Efficiency Peak intensity LEDs/each optic	18.0° / 35.0° 88 % 6.3 cd/lm 1 White	6) <sup>2</sup>
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	18.0° / 35.0° 88 % 6.3 cd/lm 1 White	97
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	18.0° / 35.0° 88 % 6.3 cd/lm 1 White	97
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	18.0° / 35.0° 88 % 6.3 cd/lm 1 White	9 <sup>1</sup> 9 <sup>1</sup> 9 <sup>1</sup>
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	18.0° / 35.0° 88 % 6.3 cd/lm 1 White	97
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	18.0° / 35.0° 88 % 6.3 cd/lm 1 White ents:	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	18.0° / 35.0° 88 % 6.3 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	18.0° / 35.0° 88 % 6.3 cd/lm 1 White ents: OSLON Square CSSRM2/CSSRM3	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone OSRAM Opto Semiconductors LED FWHM / FWTM	18.0° / 35.0° 88 % 6.3 cd/lm 1 White ents: OSLON Square CSSRM2/CSSRM3 21.0° / 40.0°	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone Opto Semiconductors LED FWHM / FWTM Efficiency	18.0° / 35.0° 88 % 6.3 cd/lm 1 White ents: OSLON Square CSSRM2/CSSRM3 21.0° / 40.0° 88 %	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone Optio Semiconductors LED FWHM / FWTM Efficiency Peak intensity	18.0° / 35.0° 88 % 6.3 cd/lm 1 White ents: OSLON Square CSSRM2/CSSRM3 21.0° / 40.0° 88 % 4.8 cd/lm	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone OSRAM Optic Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	18.0° / 35.0° 88 % 6.3 cd/lm 1 White ents: OSLON Square CSSRM2/CSSRM3 21.0° / 40.0° 88 % 4.8 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	18.0° / 35.0° 88 % 6.3 cd/lm 1 White ents: OSLON Square CSSRM2/CSSRM3 21.0° / 40.0° 88 % 4.8 cd/lm 1 White	
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	18.0° / 35.0° 88 % 6.3 cd/lm 1 White ents: OSLON Square CSSRM2/CSSRM3 21.0° / 40.0° 88 % 4.8 cd/lm 1 White	
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	18.0° / 35.0° 88 % 6.3 cd/lm 1 White ents: OSLON Square CSSRM2/CSSRM3 21.0° / 40.0° 88 % 4.8 cd/lm 1 White	



## **OPTICAL RESULTS (MEASURED):**

SAMS	UNG		90* 90*
LED	LH351C		
FWHM / FWTM	28.0° / 51.0°		23.
Efficiency	90 %		
Peak intensity	3.1 cd/lm		
LEDs/each optic	1		
Light colour	White		95° 42°
Required compone	ents:		200
			30 <sup>4</sup> 35 <sup>50</sup> 0 <sup>4</sup> 35 <sup>6</sup> 36 <sup>4</sup>
SECUL			
SEOUL SEMICONDUCTOR			90* 90*
LED	Z5M4		
	Z5M4 29.0° / 51.0°		75
LED			79°
LED FWHM / FWTM	29.0° / 51.0°		
LED FWHM / FWTM Efficiency	29.0° / 51.0° 89 %		
LED FWHM / FWTM Efficiency Peak intensity	29.0° / 51.0° 89 % 3.1 cd/lm		80 <sup>2</sup>
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	29.0° / 51.0° 89 % 3.1 cd/lm 1 White		91 - 100 - 92 92 - 100 - 92
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	29.0° / 51.0° 89 % 3.1 cd/lm 1 White		60°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	29.0° / 51.0° 89 % 3.1 cd/lm 1 White		91 - 100 - 92 92 - 100 - 92
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	29.0° / 51.0° 89 % 3.1 cd/lm 1 White		91 - 100 - 92 92 - 100 - 92



CREES LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	J Series 2835 19.0° / 44.0° 88 % 4.7 cd/lm 1 White	20- 20- 20- 20- 20- 20- 20- 20-
CREES LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	XP-E 16.0° / 32.0° 91 % 7.8 cd/lm 1 White	5° 6° 6° 600 500 600 600 600 600 600 600
CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	XP-G2 20.0° / 40.0° 89 % 5.3 cd/lm 1 White	5° 12° 15° 15° 25°
CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	XP-G2 HE 27.0° / 57.0° 86 % 2.8 cd/lm 1 White	



Γ		
CREE ≑		90°
LEDS	XP-P	
FWHM / FWTM	12.0° / 26.0°	75* 75*
Efficiency	97 %	3200
Peak intensity	12.7 cd/lm	60° 60°
LEDs/each optic	1	600
Light colour	White	9° (
Required components:		
		$\times$ / $\vee$ $\times$
		30" 30" 30"
		90° A 90°
LED	XQ-E HI	
FWHM / FWTM	18.0° / 34.0°	25
Efficiency	82 %	50° 50°
Peak intensity	6.4 cd/lm	
LEDs/each optic	1	300
Light colour	White	gr er
Required components:		
		30° 30°
		15° 0° 15°
-		
	)S	90° 90°
	LUXEON 2835 Line	
		90° 90° 90° 90° 90° 90° 90° 90° 90° 90°
LED	LUXEON 2835 Line	
LED FWHM / FWTM	LUXEON 2835 Line 16.0° / 36.0°	75°
LED FWHM / FWTM Efficiency	LUXEON 2835 Line 16.0° / 36.0° 89 %	
LED FWHM / FWTM Efficiency Peak intensity	LUXEON 2835 Line 16.0° / 36.0° 89 % 7 cd/lm	75°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LUXEON 2835 Line 16.0° / 36.0° 89 % 7 cd/lm 1	75° 1000 1229
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON 2835 Line 16.0° / 36.0° 89 % 7 cd/lm 1	5°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON 2835 Line 16.0° / 36.0° 89 % 7 cd/lm 1	5°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON 2835 Line 16.0° / 36.0° 89 % 7 cd/lm 1	5°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 2835 Line 16.0° / 36.0° 89 % 7 cd/lm 1 White	200 22 22 22 22 22 22 22 22 22 22 22 22
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 2835 Line 16.0° / 36.0° 89 % 7 cd/lm 1 White	5°.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 2835 Line 16.0° / 36.0° 89 % 7 cd/lm 1 White S LUXEON C	229 57 655 655 655 1300 65 65 65 72 72 72 72 72 72 72 72 72 72
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 2835 Line 16.0° / 36.0° 89 % 7 cd/lm 1 White <b>S</b> LUXEON C 16.0° / 32.0°	Ba.         Ba.           Ba.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 2835 Line 16.0° / 36.0° 89 % 7 cd/lm 1 White <b>S</b> LUXEON C 16.0° / 32.0° 78 %	No.         No.           No.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 2835 Line 16.0° / 36.0° 89 % 7 cd/lm 1 White S LUXEON C 16.0° / 32.0° 78 % 6.3 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 2835 Line 16.0° / 36.0° 89 % 7 cd/lm 1 White S LUXEON C 16.0° / 32.0° 78 % 6.3 cd/lm 1	No.         No.           No.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 2835 Line 16.0° / 36.0° 89 % 7 cd/lm 1 White S LUXEON C 16.0° / 32.0° 78 % 6.3 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 2835 Line 16.0° / 36.0° 89 % 7 cd/lm 1 White S LUXEON C 16.0° / 32.0° 78 % 6.3 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 2835 Line 16.0° / 36.0° 89 % 7 cd/lm 1 White S LUXEON C 16.0° / 32.0° 78 % 6.3 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 2835 Line 16.0° / 36.0° 89 % 7 cd/lm 1 White S LUXEON C 16.0° / 32.0° 78 % 6.3 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>WIM / COMPARENT</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON 2835 Line 16.0° / 36.0° 89 % 7 cd/lm 1 White S LUXEON C 16.0° / 32.0° 78 % 6.3 cd/lm 1	



EUMILED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON CZ 12.0° / 25.0° 90 % 13.4 cd/lm 1 Red	24. 26. 26. 27. 27. 27. 27. 27. 27. 27. 27
	S	30* 33*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON V2 22.0° / 51.0° 90 % 3.8 cd/lm 1 White	200
		153 000 153
CUMILED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON Z 12.0° / 23.0° 87 % 13.2 cd/lm 1 White	34° 35° 35° 35° 35° 35° 35° 35° 35° 35° 35
UMILED	S	90° 90°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON Z ES 15.0° / 30.0° 88 % 9 cd/lm 1 White	25 64 640 64



	S		90* 90*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	SST-10-B130 19.0° / 36.0° 89 % 6 cd/lm 1 Deep Red		
	S	Polar intensity graph	30 <sup>4</sup>
LED FWHM / FWTM Efficiency LEDs/each optic Light colour Required components:	SST-10-IR-B90 17.0° / 38.0° 87 % 1 IR		21 - 25 - 0 <sup>2</sup> - 13 - 25
	JS		90° A 90°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	SST-20 20.0° / 40.0° 86 % 5.2 cd/lm 1 White		21- 21- 21- 22- 220 200 200 200 200 200 20
ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	NCSxx19B 18.0° / 37.0° 84 % 5.9 cd/lm 1 White		



MICHIΛ		90° 90°
LED	NV4WB35AM	
FWHM / FWTM	32.0° / 65.0°	75. 75.
Efficiency	84 %	
Peak intensity	1.9 cd/lm	60° / 80°
LEDs/each optic	1	
	White	ay
Light colour	white	1200
Required components:		$\times$ $\land$ $\land$ $\times$
		1600
		$\times$ / $\checkmark$ ×
		30° 2000 30° 30°
<b>Μ</b> ΝΙCΗΙΛ		50°
LED	NVSxx19B/NVSxx19C	
FWHM / FWTM	26.0° / 50.0°	73*
Efficiency	85 %	
Peak intensity	3.3 cd/lm	60°
LEDs/each optic	1	
Light colour	White	45*
Required components:	white	
		$\times$ / $\times$ /
		200
		36° 36° 36°
<b>Μ</b> ΝΙCΗΙΛ		50° 50°
	NVSxx19B/NVSxx19C	50°
	NVSxx19B/NVSxx19C 25.0° / 50.0°	27 29 29 29
LED		78
LED FWHM / FWTM Efficiency	25.0° / 50.0°	64 60 60 F
LED FWHM / FWTM	25.0° / 50.0° 85 %	73
LED FWHM / FWTM Efficiency Peak intensity	25.0° / 50.0° 85 % 3.5 cd/lm	6°*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	25.0° / 50.0° 85 % 3.5 cd/lm 1	13° 66° 1600
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	25.0° / 50.0° 85 % 3.5 cd/lm 1	6. 6. 23. 24. 26. 26. 26. 26. 26. 26. 26. 26. 26. 26
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	25.0° / 50.0° 85 % 3.5 cd/lm 1	6. 6. 23. 24. 26. 26. 26. 26. 26. 26. 26. 26. 26. 26
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	25.0° / 50.0° 85 % 3.5 cd/lm 1	5 5 6 6 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	25.0° / 50.0° 85 % 3.5 cd/lm 1	200 200 200 200 200 200 200 200
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	25.0° / 50.0° 85 % 3.5 cd/lm 1 White	200 200 200 200 200 200 200 200
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	25.0° / 50.0° 85 % 3.5 cd/lm 1 White Duris S5 (2 chip)	200 200 200 200 200 200 200 200 200 200
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM	25.0° / 50.0° 85 % 3.5 cd/lm 1 White Duris S5 (2 chip) 20.0° / 44.0°	30.         22.         0.         22.           60.         500         64.         65.           60.         800         65.         65.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	25.0° / 50.0° 85 % 3.5 cd/lm 1 White Duris S5 (2 chip) 20.0° / 44.0° 87 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	25.0° / 50.0° 85 % 3.5 cd/lm 1 White Duris S5 (2 chip) 20.0° / 44.0° 87 % 7.1 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	25.0° / 50.0° 85 % 3.5 cd/lm 1 White Duris S5 (2 chip) 20.0° / 44.0° 87 % 7.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	25.0° / 50.0° 85 % 3.5 cd/lm 1 White Duris S5 (2 chip) 20.0° / 44.0° 87 % 7.1 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	25.0° / 50.0° 85 % 3.5 cd/lm 1 White Duris S5 (2 chip) 20.0° / 44.0° 87 % 7.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	25.0° / 50.0° 85 % 3.5 cd/lm 1 White Duris S5 (2 chip) 20.0° / 44.0° 87 % 7.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	25.0° / 50.0° 85 % 3.5 cd/lm 1 White Duris S5 (2 chip) 20.0° / 44.0° 87 % 7.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	25.0° / 50.0° 85 % 3.5 cd/lm 1 White Duris S5 (2 chip) 20.0° / 44.0° 87 % 7.1 cd/lm 1	



OSRAM		90* 90*
Opto Semiconductors	Duris S5 (Single chip)	
FWHM / FWTM	20.0° / 43.0°	25* 25*
Efficiency	86 %	
Peak intensity	4.5 cd/lm	60° 60°
LEDs/each optic	1	
Light colour	White	g
Required components:	white	220
required componente.		
		30* 36*
		30 4600 30 15° 0° 15°
OSRAM Opto Semiconductors		90° 90°
LED	OSCONIQ P 3030	
FWHM / FWTM	14.0° / 30.0°	25
Efficiency	86 %	60°
Peak intensity	8.5 cd/lm	3300
LEDs/each optic	1	
Light colour	White	gr (
Required components:		6100
		30° 30°
		152 00 153
0000414		
OSRAM Opto Semiconductors		50° 50°
OSRAM Opto Semiconductors LED	OSCONIQ P 3737 (2W version)	50°
Opto Semiconductors	OSCONIQ P 3737 (2W version) 20.0° / 40.0°	39° 99°
Opto Semiconductors		
opto Semiconductors LED FWHM / FWTM	20.0° / 40.0°	90° 90° 75° 75° 760 80°
opto Semiconductors LED FWHM / FWTM Efficiency	20.0° / 40.0° 88 %	99° 90°
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	20.0° / 40.0° 88 % 5.1 cd/lm	g. g. 100 100 100 100 100 100 100 10
<sup>opto Semiconductors</sup> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	20.0° / 40.0° 88 % 5.1 cd/lm 1	2 <sup>2</sup>
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	20.0° / 40.0° 88 % 5.1 cd/lm 1	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	20.0° / 40.0° 88 % 5.1 cd/lm 1	2 <sup>2</sup>
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	20.0° / 40.0° 88 % 5.1 cd/lm 1	2 <sup>2</sup>
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	20.0° / 40.0° 88 % 5.1 cd/lm 1	30. 20. 21. 22. 21. 20. 20. 20. 20. 20. 21. 22. 22. 22.
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	20.0° / 40.0° 88 % 5.1 cd/lm 1 White	30. 20. 20. 20. 20. 20. 20. 20. 2
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSSRAM Opto Semiconductors LED	20.0° / 40.0° 88 % 5.1 cd/lm 1 White OSCONIQ P 3737 (3W version)	30. 20. 20. 20. 20. 20. 20. 20. 2
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM	20.0° / 40.0° 88 % 5.1 cd/lm 1 White OSCONIQ P 3737 (3W version) 29.0° / 58.0°	25 25 25 25 25 25 25 25 25 25
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency	20.0° / 40.0° 88 % 5.1 cd/lm 1 White OSCONIQ P 3737 (3W version) 29.0° / 58.0° 88 %	30. 20. 21. 22. 21. 20. 20. 20. 20. 20. 21. 22. 22. 22.
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	20.0° / 40.0° 88 % 5.1 cd/lm 1 White OSCONIQ P 3737 (3W version) 29.0° / 58.0° 88 % 2.5 cd/lm	25 25 25 25 25 25 25 25 25 25
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	20.0° / 40.0° 88 % 5.1 cd/lm 1 White OSCONIQ P 3737 (3W version) 29.0° / 58.0° 88 % 2.5 cd/lm 1	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	20.0° / 40.0° 88 % 5.1 cd/lm 1 White OSCONIQ P 3737 (3W version) 29.0° / 58.0° 88 % 2.5 cd/lm	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	20.0° / 40.0° 88 % 5.1 cd/lm 1 White OSCONIQ P 3737 (3W version) 29.0° / 58.0° 88 % 2.5 cd/lm 1	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	20.0° / 40.0° 88 % 5.1 cd/lm 1 White OSCONIQ P 3737 (3W version) 29.0° / 58.0° 88 % 2.5 cd/lm 1	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	20.0° / 40.0° 88 % 5.1 cd/lm 1 White OSCONIQ P 3737 (3W version) 29.0° / 58.0° 88 % 2.5 cd/lm 1	



000444		
OSRAM Opto Semiconductors		90* 90*
LED	OSLON Boost HX (KW CULPM1.TG)	
FWHM / FWTM	16.0° / 32.0°	73*
Efficiency	90 %	
Peak intensity	8.4 cd/lm	3200
LEDs/each optic	1	
Light colour	White	
Required components:		
		6430
		30* 30.
OSRAM		15 <sup>5</sup> 0 <sup>4</sup> 15 <sup>6</sup>
Opto Semiconductors	OSI ON Signal	
LED FWHM / FWTM	OSLON Signal 14.0° / 29.0°	78*
Efficiency	88 %	
Peak intensity	9.9 cd/lm	60 <sup>4</sup>
LEDs/each optic	1	
Light colour	White	\$7 A
Required components:		6430
required compendito.		K / $M$ $N$
		30"
		30° 30° 30°
OSRAM Opto Semiconductors		50° A 50°
LEU	OSLON Square Flat	
LED FWHM / FWTM	OSLON Square Flat 16.0° / 33.0°	73
FWHM / FWTM		37
FWHM / FWTM Efficiency	16.0° / 33.0°	23°
FWHM / FWTM	16.0° / 33.0° 89 %	1000 1000
FWHM / FWTM Efficiency Peak intensity	16.0° / 33.0° 89 % 7.5 cd/lm	1000 1000
FWHM / FWTM Efficiency Peak intensity LEDs/each optic	16.0° / 33.0° 89 % 7.5 cd/lm 1	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	16.0° / 33.0° 89 % 7.5 cd/lm 1	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	16.0° / 33.0° 89 % 7.5 cd/lm 1	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	16.0° / 33.0° 89 % 7.5 cd/lm 1	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	16.0° / 33.0° 89 % 7.5 cd/lm 1	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	16.0° / 33.0° 89 % 7.5 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	16.0° / 33.0° 89 % 7.5 cd/lm 1 White	30 <sup>3</sup> 20 <sup>3</sup> 60 <sup>3</sup> 20 <sup>3</sup> 30 <sup>3</sup> 20 <sup>3</sup> 60 <sup>3</sup> 20 <sup>3</sup> 60 <sup>3</sup> 30 <sup>3</sup> 20 <sup>3</sup> 60 <sup>3</sup> 20 <sup>3</sup> 60 <sup>3</sup>
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OBSRAM Opto Semiconductors LED FWHM / FWTM	16.0° / 33.0° 89 % 7.5 cd/lm 1 White OSLON SSL 120 16.0° / 29.0°	20,         00,         20,         00,
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency	16.0° / 33.0° 89 % 7.5 cd/m 1 White OSLON SSL 120 16.0° / 29.0° 90 %	20,         00,         20,         00,
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	16.0° / 33.0° 89 % 7.5 cd/lm 1 White OSLON SSL 120 16.0° / 29.0° 90 % 9 cd/lm	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	16.0° / 33.0° 89 % 7.5 cd/lm 1 White OSLON SSL 120 16.0° / 29.0° 90 % 9 cd/lm 1	33.         200         60           35.         50         50           36.         20         60           36.         20         60           36.         20         60           20.         60         60           20.         60         60
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	16.0° / 33.0° 89 % 7.5 cd/lm 1 White OSLON SSL 120 16.0° / 29.0° 90 % 9 cd/lm	33.         200         60           35.         50         50           36.         20         60           36.         20         60           36.         20         60           20.         60         60           20.         60         60
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	16.0° / 33.0° 89 % 7.5 cd/lm 1 White OSLON SSL 120 16.0° / 29.0° 90 % 9 cd/lm 1	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	16.0° / 33.0° 89 % 7.5 cd/lm 1 White OSLON SSL 120 16.0° / 29.0° 90 % 9 cd/lm 1	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	16.0° / 33.0° 89 % 7.5 cd/lm 1 White OSLON SSL 120 16.0° / 29.0° 90 % 9 cd/lm 1	



OCDAM			
OSRAM Opto Semiconductors			90* 90*
LED	OSLON SSL 150		
FWHM / FWTM	14.5° / 29.0°		23.
Efficiency	88 %		
Peak intensity	8.7 cd/lm		
LEDs/each optic	1		
Light colour	White		97°
Required components:			6430
			366 36.
OSRAM		Polar intensity graph	15° 8%0 15°
Opto Semiconductors		Ford menally group we	90°
			75
LED	OSLON SSL 80		1500
FWHM / FWTM	17.0° / 40.0°		60* 60*
Efficiency	87 %		
LEDs/each optic	1		2200
Light colour	White		a.
Required components:			
			30* <u>640</u> 30* 30*
OSRAM			90° 90°
Opto Semiconductors	OSLON SSL 80		
FWHM / FWTM	15.0° / 31.0°		75* 75*
Efficiency	87 %		
2			50° 60°
Peak intensity	7.6 cd/lm		$   X \times     X \times   1 $
Peak intensity LEDs/each optic	7.6 cd/lm 1		
LEDs/each optic	1		g
LEDs/each optic Light colour			
LEDs/each optic	1		gi at
LEDs/each optic Light colour	1		gi at
LEDs/each optic Light colour	1		gi at
LEDs/each optic Light colour Required components:	1	Polar intensity graph.	e <sup>+</sup>
LEDs/each optic Light colour	1	Polar intensity graph	e <sup>+</sup>
LEDs/each optic Light colour Required components:	1 White	Polar intensity graph	e <sup>+</sup>
LEDs/each optic Light colour Required components: Opto Semiconductors LED	1 White SFH 4716S	Polar intensity graph	<u><u><u></u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u>
LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM	1 White SFH 4716S 16.0° / 29.0°	Polar intensity graph	<u><u><u></u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u><u></u></u>
LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency	1 White SFH 4716S 16.0° / 29.0° 86 %	Polar intensity graph	Re- 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.
LEDs/each optic Light colour Required components: OSSRAM Opto Semiconductors LED FWHM / FWTM Efficiency LEDs/each optic	1 White SFH 4716S 16.0° / 29.0° 86 % 1	Polar intensity graph	01         000         001           02         020         02           03         02         02
LEDs/each optic Light colour Required components: Opto SERAM Opto Semiconductors LED FWHM / FWTM Efficiency LEDs/each optic Light colour	1 White SFH 4716S 16.0° / 29.0° 86 %	Polar intensity graph	Re- 2. 2. 2. 2. 2. 2. 2. 2. 2. 2.
LEDs/each optic Light colour Required components: OSSRAM Opto Semiconductors LED FWHM / FWTM Efficiency LEDs/each optic	1 White SFH 4716S 16.0° / 29.0° 86 % 1	Polar intensity graph	01         000         001           02         020         02           03         02         02
LEDs/each optic Light colour Required components: Opto SERAM Opto Semiconductors LED FWHM / FWTM Efficiency LEDs/each optic Light colour	1 White SFH 4716S 16.0° / 29.0° 86 % 1	Polar intensity graph	01         000         001           02         020         02           03         02         02
LEDs/each optic Light colour Required components: Opto SERAM Opto Semiconductors LED FWHM / FWTM Efficiency LEDs/each optic Light colour	1 White SFH 4716S 16.0° / 29.0° 86 % 1	Polar intensity graph	01         000         001           02         020         02           03         02         02



OSRAM Opto Semiconductors		Polar intensity graph	50*
LED FWHM / FWTM Efficiency LEDs/each optic Light colour Required components:	SFH 4770S 14.0° / 30.0° 87 % 1 IR		20° 0° 12° 0° 220 0° 0° 220 0° 0° 10° 0° 10° 10° 10° 10° 10° 10° 10° 1
OSRAM Opto Semiconductors			90° A 90°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Synios P2720 1 mm 12.0° / 24.0° 88 % 13.6 cd/lm 1 Red		30.         30.         30.           40.         40.0         40.0           40.         40.0         40.0           53.         50.0         40.0           53.         50.0         50.0
OSRAM Opto Semiconductors			90° 90°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	SYNIOS S2222 16.0° / 34.0 + 32.0° 97 % 8.1 cd/lm 1 White		50° C, 22° C, 22
SAMSUN LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	G LH351B 26.0° / 49.0° 88 % 3.5 cd/lm 1 White		200 200 200 200 200 200 200 200



SAMSUN	IG	90° 90°
		30"
LED	LH351D	25.
FWHM / FWTM	34.0° / 66.0°	
Efficiency	85 %	60* 60'
Peak intensity	1.9 cd/lm	
LEDs/each optic	1 White	
Light colour Required components:	White	
Required components.		
		30
		30° 2000 30° 15° 0° 15°
SAMSUN	IG	50 <sup>4</sup> 50 <sup>4</sup>
LED	LM301A	
FWHM / FWTM	14.5° / 33.0°	750
Efficiency	87 %	1500 C
Peak intensity	7.1 cd/lm	
LEDs/each optic	1	
Light colour	White	a
Required components:		1630
		30° 30°
		15° 0° 35°
СЛЛАСИА	10	
SAMSUN	IG	90°
LED	I G LM302A	90 <sup>+</sup> 90 <sup>+</sup>
LED FWHM / FWTM	LM302A 16.0° / 40.0°	37
LED FWHM / FWTM Efficiency	LM302A	90° 90 73° 72 100 80
LED FWHM / FWTM Efficiency Peak intensity	LM302A 16.0° / 40.0° 87 % 5.3 cd/lm	90 <sup>4</sup> 75 90 <sup>4</sup> 100 60 <sup>4</sup>
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LM302A 16.0° / 40.0° 87 % 5.3 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LM302A 16.0° / 40.0° 87 % 5.3 cd/lm	99° 99' 725 72 99° 725 72 90° 725 72 90° 725 72 90° 725 72 90° 725 72 90° 725 725 725 725 725 725 725 725 725 725
FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LM302A 16.0° / 40.0° 87 % 5.3 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LM302A 16.0° / 40.0° 87 % 5.3 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LM302A 16.0° / 40.0° 87 % 5.3 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LM302A 16.0° / 40.0° 87 % 5.3 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LM302A 16.0° / 40.0° 87 % 5.3 cd/lm 1	25 25 25 25 25 25 25 25 25 25 25 25 25 2
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LM302A 16.0° / 40.0° 87 % 5.3 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LM302A 16.0° / 40.0° 87 % 5.3 cd/lm 1 White Z5M3	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LM302A 16.0° / 40.0° 87 % 5.3 cd/lm 1 White Z5M3 24.0° / 51.0°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: seoul semconouctor LED FWHM / FWTM Efficiency	LM302A 16.0° / 40.0° 87 % 5.3 cd/lm 1 White Z5M3 24.0° / 51.0° 86 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity	LM302A 16.0° / 40.0° 87 % 5.3 cd/lm 1 White Z5M3 24.0° / 51.0° 86 % 3.3 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: secoul semiconouctor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LM302A 16.0° / 40.0° 87 % 5.3 cd/lm 1 White Z5M3 24.0° / 51.0° 86 % 3.3 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: seoul semiconouctor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LM302A 16.0° / 40.0° 87 % 5.3 cd/lm 1 White Z5M3 24.0° / 51.0° 86 % 3.3 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: secoul semiconouctor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LM302A 16.0° / 40.0° 87 % 5.3 cd/lm 1 White Z5M3 24.0° / 51.0° 86 % 3.3 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: seoul semiconouctor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LM302A 16.0° / 40.0° 87 % 5.3 cd/lm 1 White Z5M3 24.0° / 51.0° 86 % 3.3 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: seoul semiconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LM302A 16.0° / 40.0° 87 % 5.3 cd/lm 1 White Z5M3 24.0° / 51.0° 86 % 3.3 cd/lm 1	



LED FWHM / FWTM Efficiency LEDs/each optic Light colour Required components:	MGN1108MS 15.0° / 30.0° 89 % 1 IR	Polar intensity graph	200 B2 21 22 20 20 20 20 20 20 20 20 20
LED FWHM / FWTM Efficiency LEDs/each optic Light colour Required components:	MJN1108MS 15.0° / 31.0° 90 % 1 IR	Polor intensity graph	500 500 500 500 500 500 500 500



# PRODUCT DATASHEET FP16558\_LISA3-RS-PIN

#### **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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