

PRODUCT DATASHEET FP16559_LISA3-M-PIN

LISA3-M-PIN

~25° medium beam with location pin installation

SPECIFICATION:

Dimensions	Ø 10.0 mm
Height	7.9 mm
Fastening	glue
ROHS compliant	yes 🛈



MATERIALS:

Component LISA3-M LISA3-HLD-PIN

Type Single lens Holder

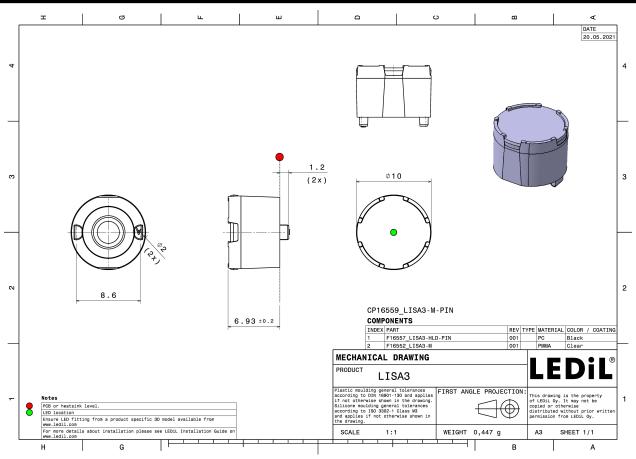
Material	Colour	Finish
PMMA	clear	
PC	black	

ORDERING INFORMATION:

Component		Qty in box	MOQ	MPQ	Box weight (kg)
FP16559_LISA3-M-PIN	Single lens	2000	300	100	1.3
» Box size: 310 x 230 x 60 mm					



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



OPTICAL RESULTS (MEASURED):

		90°
LED	XD16	
FWHM / FWTM	26.0° / 49.0°	28.
Efficiency	76 %	
Peak intensity	3 cd/lm	60
LEDs/each optic	1	
Light colour	White	43
Required compone	nts:	
		200
		30*
		250 250 251
		50°
LED	XP-E2	75
FWHM / FWTM	25.0° / 47.0°	
Efficiency	88 %	
Peak intensity	3.6 cd/lm	
LEDs/each optic	1	
Light colour	White	g
Required compone	nts:	
		30" 30"
		15° 460 15°
		90 ⁴
LED	XP-G3	25° 25°
LED FWHM / FWTM	XP-G3 31.0° / 58.0°	35 ¹ 35 ² 35 ² 35 ²
LED FWHM / FWTM Efficiency	XP-G3 31.0° / 58.0° 81 %	95 ³ 95 ³ 95 ⁴ 90 90 90 90
LED FWHM / FWTM Efficiency Peak intensity	XP-G3 31.0° / 58.0° 81 % 2.3 cd/lm	6 ³ 00 6 ³
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	XP-G3 31.0° / 58.0° 81 % 2.3 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XP-G3 31.0° / 58.0° 81 % 2.3 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	XP-G3 31.0° / 58.0° 81 % 2.3 cd/lm 1 White	ar ar
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XP-G3 31.0° / 58.0° 81 % 2.3 cd/lm 1 White	ar ar
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XP-G3 31.0° / 58.0° 81 % 2.3 cd/lm 1 White	ar 150
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XP-G3 31.0° / 58.0° 81 % 2.3 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XP-G3 31.0° / 58.0° 81 % 2.3 cd/lm 1 White nts:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XP-G3 31.0° / 58.0° 81 % 2.3 cd/lm 1 White nts:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XP-G3 31.0° / 58.0° 81 % 2.3 cd/lm 1 White nts:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XP-G3 31.0° / 58.0° 81 % 2.3 cd/lm 1 White nts:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XP-G3 31.0° / 58.0° 81 % 2.3 cd/lm 1 White nts: EDS LUXEON CZ 23.0° / 43.0° 87 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XP-G3 31.0° / 58.0° 81 % 2.3 cd/lm 1 White nts:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XP-G3 31.0° / 58.0° 81 % 2.3 cd/lm 1 White nts: EDS LUXEON CZ 23.0° / 43.0° 87 % 4.3 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone Composition Required compone Composition LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XP-G3 31.0° / 58.0° 81 % 2.3 cd/lm 1 White nts: EDS LUXEON CZ 23.0° / 43.0° 87 % 4.3 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XP-G3 31.0° / 58.0° 81 % 2.3 cd/lm 1 White nts: EDS LUXEON CZ 23.0° / 43.0° 87 % 4.3 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XP-G3 31.0° / 58.0° 81 % 2.3 cd/lm 1 White nts: EDS LUXEON CZ 23.0° / 43.0° 87 % 4.3 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XP-G3 31.0° / 58.0° 81 % 2.3 cd/lm 1 White nts: EDS LUXEON CZ 23.0° / 43.0° 87 % 4.3 cd/lm 1 White	



OPTICAL RESULTS (MEASURED):

Ø NICHI∕		50° 50°
LED	NF2x757G	
FWHM / FWTM	28.0° / 54.0°	
Efficiency	79 %	
Peak intensity	2.6 cd/lm	
LEDs/each optic	1	
Light colour	White	e"
Required compone	nts:	
		200
		335 of 155
Ø NICHI∧		99 ¹
LED	NVSW219F	
FWHM / FWTM	32.0° / 59.0°	
Efficiency	88 %	000 000 000 000 000 000 000 000 000 00
Peak intensity	2.4 cd/lm	
LEDs/each optic	1	
Light colour	White	er er
Required compone	nts:	
		30*
0000414		<u>33</u> 6 33
OSRAM Opto Semiconductors		30* 30*
LED	OSCONIQ C 2424	
FWHM / FWTM	24.0° / 46.0°	
Efficiency	87 %	
Peak intensity	3.8 cd/lm	
LEDs/each optic	1	
Light colour	White	er 200
Required compone	nts:	
		20
		34. 400 34.
OSRAM		25° 0° 25°
Opto Semiconductors		
	OSLON Square CSSRM2/CSSRM3	
FWHM / FWTM	30.0° / 55.0°	
Efficiency	87 %	6/4 (C)
Peak intensity	2.5 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone	ms.	
		\times / \times / \times
		205
		30 ⁵ 12 ⁵ 0 ⁴ 15 ⁵



OPTICAL RESULTS (MEASURED):

SAMS	UNG	50° 9
LED	LH351C	
FWHM / FWTM	31.0° / 58.0°	
Efficiency	89 %	
Peak intensity	2.5 cd/lm	
LEDs/each optic	1	
Light colour	White	8 ²⁷ 4
Required compone	ents:	30° 15° 0° 55° 3
SEOUL		50° 3
SEOUL SEMICONDUCTOR	Z5M4	
FWHM / FWTM	33.0° / 61.0°	
Efficiency	88 %	
Peak intensity	2.3 cd/lm	
LEDs/each optic	1	
Light colour	White	g. a
Required compone	ents:	20° 200 12°



		90* 90*
LED	J Series 2835	75'
FWHM / FWTM	25.0° / 50.0°	
Efficiency	88 %	60°
Peak intensity	3.5 cd/lm	1000
LEDs/each optic	1	
Light colour	White	43° 43°
Required components:		
		\times / \times /
		3200
		30°
		15° 0° 15°
		90* 90*
LED	XP-E	75'
FWHM / FWTM	28.0° / 45.0°	200
Efficiency	90 %	ee ee
Peak intensity	3.5 cd/lm	1500
LEDs/each optic	1	
Light colour	White	er er
Required components:		
		3200
		30° 30°
LED	XP-G	
LED FWHM / FWTM	30.0° / 50.0°	
LED FWHM / FWTM Efficiency	30.0° / 50.0° 88 %	
LED FWHM / FWTM Efficiency Peak intensity	30.0° / 50.0° 88 % 2.7 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	30.0° / 50.0° 88 % 2.7 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	30.0° / 50.0° 88 % 2.7 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	30.0° / 50.0° 88 % 2.7 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	30.0° / 50.0° 88 % 2.7 cd/lm 1	9° (* * * * * * * * * * * * * * * * * * *
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	30.0° / 50.0° 88 % 2.7 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	30.0° / 50.0° 88 % 2.7 cd/lm 1	9° (* * * * * * * * * * * * * * * * * * *
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	30.0° / 50.0° 88 % 2.7 cd/lm 1	64. 66.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	30.0° / 50.0° 88 % 2.7 cd/lm 1 White	64. 66.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	30.0° / 50.0° 88 % 2.7 cd/lm 1 White XP-G2 HE	64. 66.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	30.0° / 50.0° 88 % 2.7 cd/lm 1 White XP-G2 HE 34.0° / 66.0°	20. 20. 20. 64. 700 44. 65. 700 44.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	30.0° / 50.0° 88 % 2.7 cd/lm 1 White XP-G2 HE 34.0° / 66.0° 86 %	20. 20. 20. 64. 700 44. 65. 700 44.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	30.0° / 50.0° 88 % 2.7 cd/lm 1 White XP-G2 HE 34.0° / 66.0° 86 % 2 cd/lm	20. 20. 20. 64. 700 44. 65. 700 44.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	30.0° / 50.0° 88 % 2.7 cd/lm 1 White XP-G2 HE 34.0° / 66.0° 86 % 2 cd/lm 1	50° 50° 50° 50° 50° 50° 50° 50°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREE LED LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	30.0° / 50.0° 88 % 2.7 cd/lm 1 White XP-G2 HE 34.0° / 66.0° 86 % 2 cd/lm	20. 20. 20. 64. 700 44. 65. 700 44.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	30.0° / 50.0° 88 % 2.7 cd/lm 1 White XP-G2 HE 34.0° / 66.0° 86 % 2 cd/lm 1	20. 20. 20. 64. 700 44. 65. 700 44.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREE LED LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	30.0° / 50.0° 88 % 2.7 cd/lm 1 White XP-G2 HE 34.0° / 66.0° 86 % 2 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREE LED LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	30.0° / 50.0° 88 % 2.7 cd/lm 1 White XP-G2 HE 34.0° / 66.0° 86 % 2 cd/lm 1	



LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	XT-E 24.0° / 46.0° 82 % 3.6 cd/lm 1 White	200 200 91 92 90 100 100 100 100 100 100 100
	S	90° 90°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 2835 Line 23.0° / 46.0° 89 % 4.2 cd/lm 1 White	5 57 64 57 57 57 57 57 57 57 57 57 57 57 57 57
)5	20° 20° 20°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 3030 2D (Round LES) 25.0° / 45.0° 85 % 4.1 cd/lm 1 White	9° 77 9° 9° 9° 109 109 109 109 109 109 109 109
ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON C 28.0° / 52.0° 80 % 2.9 cd/lm 1 White	34. 57. 64. 10.9 10.



M LUMILED)S	90° 90°
LED	LUXEON C	
FWHM / FWTM	28.0° / 54.0°	$\uparrow \land \land \land \uparrow$
Efficiency	75 %	60°
Peak intensity	2.6 cd/lm	
LEDs/each optic	1	
Light colour	Deep Red	95° 45°
Required components:		
		200
		30" 30" 30"
	DS	90 ⁴ 90 ⁴
LED	LUXEON C	
FWHM / FWTM	26.0° / 52.0°	2.
Efficiency	76 %	50° 50°
Peak intensity	2.8 cd/lm	bu ²
LEDs/each optic	1	
Light colour	Green	g" gt
Required components:		
		200
		30° 30°
		132 da 132
		94 ¹
LED	LUXEON C	27 27 29 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20
LED FWHM / FWTM	LUXEON C 27.0° / 51.0°	
LED FWHM / FWTM Efficiency	LUXEON C 27.0° / 51.0° 76 %	77
LED FWHM / FWTM Efficiency Peak intensity	LUXEON C 27.0° / 51.0° 76 % 2.9 cd/lm	77
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LUXEON C 27.0° / 51.0° 76 % 2.9 cd/lm 1	77
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON C 27.0° / 51.0° 76 % 2.9 cd/lm	75 60 60 60 60 60
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LUXEON C 27.0° / 51.0° 76 % 2.9 cd/lm 1	75
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON C 27.0° / 51.0° 76 % 2.9 cd/lm 1	75 60 60 60 60 60
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON C 27.0° / 51.0° 76 % 2.9 cd/lm 1	75 66 67 200 200 200
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON C 27.0° / 51.0° 76 % 2.9 cd/lm 1 Royal Blue	75
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON C 27.0° / 51.0° 76 % 2.9 cd/lm 1 Royal Blue	75
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON C 27.0° / 51.0° 76 % 2.9 cd/lm 1 Royal Blue	94 94 95 95 95 95 95 95 95 95 95 95
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON C 27.0° / 51.0° 76 % 2.9 cd/lm 1 Royal Blue	94 94 95 95 95 95 95 95 95 95 95 95
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON C 27.0° / 51.0° 76 % 2.9 cd/lm 1 Royal Blue	200 200 200 200 200 200 200 200
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON C 27.0° / 51.0° 76 % 2.9 cd/lm 1 Royal Blue S LUXEON TX 28.0° / 50.0° 87 % 3.1 cd/lm	200 200 200 200 200 200 200 200
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: VOLUMILED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LUXEON C 27.0° / 51.0° 76 % 2.9 cd/lm 1 Royal Blue S LUXEON TX 28.0° / 50.0° 87 % 3.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON C 27.0° / 51.0° 76 % 2.9 cd/lm 1 Royal Blue S LUXEON TX 28.0° / 50.0° 87 % 3.1 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON C 27.0° / 51.0° 76 % 2.9 cd/lm 1 Royal Blue S LUXEON TX 28.0° / 50.0° 87 % 3.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON C 27.0° / 51.0° 76 % 2.9 cd/lm 1 Royal Blue S LUXEON TX 28.0° / 50.0° 87 % 3.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON C 27.0° / 51.0° 76 % 2.9 cd/lm 1 Royal Blue S LUXEON TX 28.0° / 50.0° 87 % 3.1 cd/lm 1	25 66 75 66 75 159 159 159 159 159 159 159 15
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: WIM / COMPARENT LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON C 27.0° / 51.0° 76 % 2.9 cd/lm 1 Royal Blue S LUXEON TX 28.0° / 50.0° 87 % 3.1 cd/lm 1	



M LUMILED)S	90° 90°
LED	LUXEON V2	
FWHM / FWTM	30.0° / 56.0°	
Efficiency	90 %	80°
Peak intensity	2.7 cd/lm	$r \times / / / \wedge \times \gamma$
LEDs/each optic	1	
Light colour	White	α ^ν <u>1650</u> α ^ν
Required components:		
		2000
		30° 30°
		15 ⁵ 0 ⁶ 15 ⁵
		90° 90°
LED	LUXEON Z	75'
FWHM / FWTM	20.0° / 38.0°	
Efficiency	88 %	50° 1000 50°
Peak intensity	6.1 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required components:		
		4830
		30° 30° 30°
)S	90° 90°
		90* 90*
LED	LUXEON Z ES	90°
LED FWHM / FWTM	LUXEON Z ES 22.0° / 41.0°	90 ⁴ 25 ⁴ 500
LED FWHM / FWTM Efficiency	LUXEON Z ES 22.0° / 41.0° 89 %	75
LED FWHM / FWTM Efficiency Peak intensity	LUXEON Z ES 22.0° / 41.0°	75
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LUXEON Z ES 22.0° / 41.0° 89 % 5 cd/lm	75°
LED FWHM / FWTM Efficiency Peak intensity	LUXEON Z ES 22.0° / 41.0° 89 % 5 cd/lm 1	73°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON Z ES 22.0° / 41.0° 89 % 5 cd/lm 1	77 60* 50*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON Z ES 22.0° / 41.0° 89 % 5 cd/lm 1	75°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON Z ES 22.0° / 41.0° 89 % 5 cd/lm 1	75°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON Z ES 22.0° / 41.0° 89 % 5 cd/lm 1 White	75°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON Z ES 22.0° / 41.0° 89 % 5 cd/lm 1 White	75°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON Z ES 22.0° / 41.0° 89 % 5 cd/lm 1 White	77 60* 50*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON Z ES 22.0° / 41.0° 89 % 5 cd/lm 1 White US SST-20 26.0° / 46.0°	77 60* 50*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON Z ES 22.0° / 41.0° 89 % 5 cd/lm 1 White US SST-20 26.0° / 46.0° 87 %	00 27 00 <
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON Z ES 22.0° / 41.0° 89 % 5 cd/lm 1 White USS SST-20 26.0° / 46.0° 87 % 3.8 cd/lm	75°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON Z ES 22.0° / 41.0° 89 % 5 cd/lm 1 White US SST-20 26.0° / 46.0° 87 % 3.8 cd/lm 1	00 27 00 <
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON Z ES 22.0° / 41.0° 89 % 5 cd/lm 1 White USS SST-20 26.0° / 46.0° 87 % 3.8 cd/lm	00 27 00 <
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON Z ES 22.0° / 41.0° 89 % 5 cd/lm 1 White US SST-20 26.0° / 46.0° 87 % 3.8 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON Z ES 22.0° / 41.0° 89 % 5 cd/lm 1 White US SST-20 26.0° / 46.0° 87 % 3.8 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON Z ES 22.0° / 41.0° 89 % 5 cd/lm 1 White US SST-20 26.0° / 46.0° 87 % 3.8 cd/lm 1	



ΜΝΙCΗΙΛ		50° 50°
LED FWHM / FWTM Efficiency LEDs/each optic Light colour Required components:	NCSU276C 30.0° / 52.0° 89 % 1 UV-A	20 20 20 20 20 20 20 20 20 20
ΜΝΙCΗΙΛ		90° 90°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	NCSxx19B 26.0° / 49.0° 83 % 3.3 cd/lm 1 White	50 50 50 50 50 50 50 50 50 50 50 50 50 5
~		30° 30° 30°
MICHIA		30* 30*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	NVSxx19B/NVSxx19C 29.0° / 56.0° 86 % 2.7 cd/lm 1 White	
OSERAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Duris E 2835 23.0° / 46.0° 87 % 4.1 cd/lm 1 White	94 [*] 99 [*] 95 [*] 96 [*] 90 [*] 99 [*]



OSRAM		90* 90*
Opto Semiconductors LED		
EED FWHM / FWTM	Duris S5 (2 chip) 25.0° / 45.0°	75°
Efficiency	89 %	
Peak intensity	3.2 cd/lm	60°
LEDs/each optic	1	
Light colour	u White	47° 47°
Required components:	White	
Required components.		
		2400
		\times / \checkmark / \times
		30° 35° 35°
OSRAM Opto Semiconductors		90*
LED	Duris S5 (Single chip)	
FWHM / FWTM	25.0° / 45.0°	75 75
Efficiency	86 %	
Peak intensity	3.7 cd/lm	60° 60°
LEDs/each optic	1	
Light colour	White	az. az.
Required components:		
		A 7 - 399
		340 200 340
		15° 0° 15°
OSRAM Opto Semiconductors		90* 90*
Opto Semiconductors	OSCONIQ P 3030	
Opto Semiconductors	OSCONIQ P 3030 22.0° / 42.0°	57 57 75 57
opto Semiconductors LED FWHM / FWTM	OSCONIQ P 3030 22.0° / 42.0° 85 %	77
opto Semiconductors LED FWHM / FWTM Efficiency	22.0° / 42.0°	
opto Semiconductors LED FWHM / FWTM	22.0° / 42.0° 85 %	77
^{opto Semiconductors} LED FWHM / FWTM Efficiency Peak intensity	22.0° / 42.0° 85 % 4.7 cd/lm	77
^{opto Semiconductors} LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	22.0° / 42.0° 85 % 4.7 cd/lm 1	25°
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	22.0° / 42.0° 85 % 4.7 cd/lm 1	9°
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	22.0° / 42.0° 85 % 4.7 cd/lm 1	9°
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	22.0° / 42.0° 85 % 4.7 cd/lm 1	75 77 77 77 77 77 77 77 77 77
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	22.0° / 42.0° 85 % 4.7 cd/lm 1	200
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	22.0° / 42.0° 85 % 4.7 cd/lm 1 White	75 66 500 500 500 60 60 60 60 60 60 60 60 60
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Posseas Opto Semiconductors LED	22.0° / 42.0° 85 % 4.7 cd/lm 1 White OSLON Black	77 64 64 77 77 77 77 77 77 77 77 77 77 77 77 77
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM	22.0° / 42.0° 85 % 4.7 cd/lm 1 White OSLON Black 18.0° / 34.0°	97 97 97 97 97 97 97 97 97 97
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency	22.0° / 42.0° 85 % 4.7 cd/lm 1 White OSLON Black 18.0° / 34.0° 88 %	
opte Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Posseas Coppo Semiconductors LED FWHM / FWTM Efficiency Peak intensity	22.0° / 42.0° 85 % 4.7 cd/lm 1 White OSLON Black 18.0° / 34.0° 88 % 6.8 cd/lm	
opte Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	22.0° / 42.0° 85 % 4.7 cd/lm 1 White OSLON Black 18.0° / 34.0° 88 % 6.8 cd/lm 1	
opte Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: COSRAM Opte Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	22.0° / 42.0° 85 % 4.7 cd/lm 1 White OSLON Black 18.0° / 34.0° 88 % 6.8 cd/lm	
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OSRAM		90° 90°
Opto Semiconductors		
LED FWHM / FWTM	OSLON Square EC 26.0° / 49.0°	75.
Efficiency	88 %	
Peak intensity	3.4 cd/lm	e0s e0s
LEDs/each optic	1	
Light colour	' White	45"
Required components:	white	
		30° 30° 30° 30°
OSRAM Opto Semiconductors		90* 90*
LED	OSLON Square Flat	
FWHM / FWTM	24.0° / 45.0°	25* 25*
Efficiency	78 %	
Peak intensity	3.6 cd/lm	
LEDs/each optic	1	
Light colour	White	g. d.
Required components:		
		330
		300 310
0000414		13%
OSRAM Opto Semiconductors		90* 99*
OSRAM Opto Semiconductors LED	OSLON SSL 120	
Opto Semiconductors	OSLON SSL 120 23.0° / 41.0°	37 <u>38</u> <u>37</u> <u>37</u>
Opto Semiconductors		
Opto Semiconductors LED FWHM / FWTM	23.0° / 41.0°	77
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	23.0° / 41.0° 91 % 4.8 cd/lm 1	77
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	23.0° / 41.0° 91 % 4.8 cd/lm	77 60 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	23.0° / 41.0° 91 % 4.8 cd/lm 1	77 500 500
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	23.0° / 41.0° 91 % 4.8 cd/lm 1	77 60 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	23.0° / 41.0° 91 % 4.8 cd/lm 1	77 60 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	23.0° / 41.0° 91 % 4.8 cd/lm 1	77 60 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	23.0° / 41.0° 91 % 4.8 cd/lm 1	77 60 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	23.0° / 41.0° 91 % 4.8 cd/lm 1 Hyper Red	77 60 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED	23.0° / 41.0° 91 % 4.8 cd/lm 1 Hyper Red	20 20 20 20 20 20 20 20 20 20
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM	23.0° / 41.0° 91 % 4.8 cd/lm 1 Hyper Red OSLON SSL 150 25.0° / 45.0°	30, 30, 30, 30, 30, 30, 30, 30, 30, 30, 30, 30, 30, 30, 30, 30, 30, 30, 30, 30, 30, 30, 30, 30,
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency	23.0° / 41.0° 91 % 4.8 cd/lm 1 Hyper Red OSLON SSL 150 25.0° / 45.0° 89 %	20 20 20 20 20 20 20 20 20 20
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	23.0° / 41.0° 91 % 4.8 cd/lm 1 Hyper Red OSLON SSL 150 25.0° / 45.0° 89 % 4 cd/lm	20 20 20 20 20 20 20 20 20 20
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	23.0° / 41.0° 91 % 4.8 cd/lm 1 Hyper Red OSLON SSL 150 25.0° / 45.0° 89 % 4 cd/lm 1	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	23.0° / 41.0° 91 % 4.8 cd/lm 1 Hyper Red OSLON SSL 150 25.0° / 45.0° 89 % 4 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	23.0° / 41.0° 91 % 4.8 cd/lm 1 Hyper Red OSLON SSL 150 25.0° / 45.0° 89 % 4 cd/lm 1	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	23.0° / 41.0° 91 % 4.8 cd/lm 1 Hyper Red OSLON SSL 150 25.0° / 45.0° 89 % 4 cd/lm 1	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	23.0° / 41.0° 91 % 4.8 cd/lm 1 Hyper Red OSLON SSL 150 25.0° / 45.0° 89 % 4 cd/lm 1	



OSRAM Opto Semiconductors		90* 90*
LED	OSLON SSL 80	
FWHM / FWTM	21.0° / 40.0°	73.
Efficiency	87 %	
Peak intensity	5 cd/lm	60 ¹
LEDs/each optic	1	
Light colour	White	gr ²
Required components:		3290
		30° 31°
		450 150
OSRAM Opto Semiconductors		90* 0 0*
LED	SYNIOS S2222	
FWHM / FWTM	23.0° / 44.0°	23*
Efficiency	97 %	60° 2000 60°
Peak intensity	4.7 cd/lm	
LEDs/each optic	1	
Light colour	White	gi de
Required components:		200
		300 300
		15° 0° 15°
SAMSUN	IG	90* 90*
LED	LH351D	
FWHM / FWTM	36.0° / 70.0°	25*
Efficiency	85 %	
Peak intensity	1.7 cd/lm	
LEDs/each optic	1	
Light colour	White	gr
Required components:		1270
		1600
		gae dec
СЛЛАСИЛ		15 ⁵ 0 ⁶ 35 ⁵
SAMSUN		90* 90*
LED	LM301A	75
FWHM / FWTM	22.0° / 41.0°	
Efficiency	87 %	60°
Peak intensity	3.6 cd/lm	
LEDs/each optic	1	
Light colour	White	e5° e5
Required components:		
		3232
		30* 4000 40 30*
		15° 0° 15°



SAMSUN LED	IG LM302A	50, 55,
FWHM / FWTM Efficiency Peak intensity LEDs/each optic	25.0° / 47.0° 87 % 3.9 cd/lm 1	60 ¹ 60 ²
Light colour Required components:	White	22, 6, 72, 3, 30, 30, 6, 40, 32, 3, 6, 6, 70, 30, 40, 40, 40, 40, 40, 40, 40, 40, 40, 4
LED FWHM / FWTM	FWR1108MS 25.0° / 46.0°	60- 25- 26- 26- 26- 26- 26- 26- 26- 26- 26- 26
Efficiency LEDs/each optic Light colour Required components:	89 % 1 IR	c [*]
<u>STANLEY</u>		30 ⁺ 25 ⁻ 25 ⁺ 36 ⁺
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	MFN1108MS 21.0° / 37.0° 91 % 6 cd/lm 1 IR	77
Required components:	IK	30° <u>rijo</u> <u>rijo</u> 35°
EED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	MGN1108MS 22.0° / 37.0° 91 % 5.9 cd/lm 1	69°
Light colour Required components:	IR	20° 20° 40° 20° 40°



STANLEY.		<u><u>y</u>t</u>
LED FWHM / FWTM	MJN1108MS 25.0° / 46.0°	27 000 000
Efficiency	90 %	- 1600
LEDs/each optic	1	
Light colour	IR	45 [°]
Required components:		200 200 200 200



PRODUCT DATASHEET FP16559_LISA3-M-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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