

# LISA3-W-PIN

~35° wide beam with location pin installation

#### **SPECIFICATION:**

Dimensions	Ø 9.9 mm
Height	7 mm
Fastening	pin
ROHS compliant	yes 🛈



#### **MATERIALS:**

**Component** LISA3-W LISA3-HLD-PIN

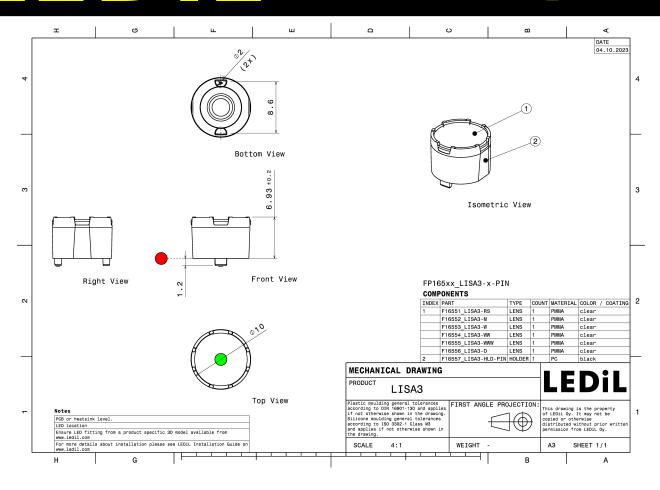
# **Type** Single lens Holder

Material	Colour	Finish
PMMA	clear	
PC	black	

#### **ORDERING INFORMATION:**

Component		Qty in box	MOQ	MPQ	Box weight (kg)
FP16560_LISA3-W-PIN	Single lens	2000	300	100	1.3
» Box size: 310 x 230 x 60 mm					

# PRODUCT DATASHEET FP16560\_LISA3-W-PIN



R

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



# **OPTICAL RESULTS (MEASURED):**

			90* 90*
LED	XD16		
FWHM / FWTM	32.0° / 52.0°		73.
Efficiency	77 %		
Peak intensity	2.3 cd/lm		60*
LEDs/each optic	1		
Light colour	White		g24 43*
Required compone			
			30° 2450 30°
			15° 0° 15°
			90° 90°
LED	XP-E2		
FWHM / FWTM	29.0° / 46.0°		275*
Efficiency	86 %		60 <sup>3</sup> 60 <sup>4</sup>
Peak intensity	3.2 cd/lm		
LEDs/each optic	1		1600
Light colour	White		g- G*
Required compone	ents:		
			30.
			12° 0° 12°
			90° 90°
LEDS	XP-G3		90°
CREE ÷ LED FWHM / FWTM	XP-G3 34.0° / 58.0°		35° - 35'
LED			90' 70' 70' 70' 70' 70' 70' 70'
LED FWHM / FWTM	34.0° / 58.0°		94 <sup>*</sup> 95 <sup>*</sup>
LED FWHM / FWTM Efficiency	34.0° / 58.0° 78 %		60 22 23 24 25 25 25 25 25 25 25
LEDs LED FWHM / FWTM Efficiency Peak intensity	34.0° / 58.0° 78 % 2 cd/lm		gi 99' 99' 99' 99'
LEDs LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	34.0° / 58.0° 78 % 2 cd/lm 1 White		91 <sup>4</sup> 90 91 <sup>4</sup> 00 91 <sup>4</sup> 00 91 <sup>4</sup> 00
LEDs LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	34.0° / 58.0° 78 % 2 cd/lm 1 White		94" 75" 90" 90" 90" 90" 90" 90" 90" 90
LEDs LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	34.0° / 58.0° 78 % 2 cd/lm 1 White		9'
LEDs LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	34.0° / 58.0° 78 % 2 cd/lm 1 White		9'
LEDs LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	34.0° / 58.0° 78 % 2 cd/lm 1 White ents:		900 900 900 900 900 900 900 900 900 900
LEDS LED FWHM / FWTM Efficiency Peak intensity LEDS/each optic Light colour Required compone	34.0° / 58.0° 78 % 2 cd/lm 1 White ents:		9'
LEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	34.0° / 58.0° 78 % 2 cd/lm 1 White ents:		900 900 900 900 900 900 900 900 900 900
LEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	34.0° / 58.0° 78 % 2 cd/lm 1 White ents: EDS LUXEON CZ 29.0° / 47.0°		
LEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	34.0° / 58.0° 78 % 2 cd/lm 1 White ents: EDS LUXEON CZ 29.0° / 47.0° 88 %		
LEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	34.0° / 58.0° 78 % 2 cd/lm 1 White ents: EDS LUXEON CZ 29.0° / 47.0° 88 % 3.4 cd/lm		
LEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	34.0° / 58.0° 78 % 2 cd/lm 1 White ents: EDS LUXEON CZ 29.0° / 47.0° 88 % 3.4 cd/lm 1		9* 300 300 300 300 300 300 300 30
LEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone COMPUTE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	34.0° / 58.0° 78 % 2 cd/lm 1 White ents: EDS LUXEON CZ 29.0° / 47.0° 88 % 3.4 cd/lm 1 White		
LEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	34.0° / 58.0° 78 % 2 cd/lm 1 White ents: EDS LUXEON CZ 29.0° / 47.0° 88 % 3.4 cd/lm 1 White		9* 300 300 300 300 300 300 300 30
LEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone COMPUTE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	34.0° / 58.0° 78 % 2 cd/lm 1 White ents: EDS LUXEON CZ 29.0° / 47.0° 88 % 3.4 cd/lm 1 White		
LEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone COMPUTE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	34.0° / 58.0° 78 % 2 cd/lm 1 White ents: EDS LUXEON CZ 29.0° / 47.0° 88 % 3.4 cd/lm 1 White		
LEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone WILLED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	34.0° / 58.0° 78 % 2 cd/lm 1 White ents: EDS LUXEON CZ 29.0° / 47.0° 88 % 3.4 cd/lm 1 White		



# **OPTICAL RESULTS (MEASURED):**

<b>Ø</b> NICHI∧		90 <sup>4</sup> 90 <sup>4</sup>
LED	NF2x757G	
FWHM / FWTM	32.0° / 57.0°	37
Efficiency	79 %	
Peak intensity	2.2 cd/lm	
LEDs/each optic	1	
Light colour	White	ar ar
Required compone		
		20' 31'
		25% 3300 25%
OSRAM Opto Semiconductors		90 <sup>4</sup> 90 <sup>4</sup>
LED	OSCONIQ C 2424	
FWHM / FWTM	30.0° / 50.0°	
Efficiency	88 %	eye
Peak intensity	3 cd/lm	
LEDs/each optic	1	
Light colour	White	gr Gr
Required compone	nts:	
		20 <sup>4</sup> 20 <sup>1</sup> 20 <sup>4</sup> 20 <sup>4</sup>
OSRAM		
OSRAM Opto Semiconductors		<u>9)*</u>
Opto Semiconductors	OSLON Square CSSRM2/CSSRM3	22 25 26, 26, 26,
Opto Semiconductors LED FWHM / FWTM	39.0° / 60.0°	25. 26. 26.
opto Semiconductors LED FWHM / FWTM Efficiency	39.0° / 60.0° 88 %	804 245 245 245 264 264 264 264 264 264 264 264 264 264
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	39.0° / 60.0° 88 % 1.9 cd/lm	25- 26- 26- 26- 26- 26- 26- 26- 26- 26- 26
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	39.0° / 60.0° 88 % 1.9 cd/lm 1	
Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	39.0° / 60.0° 88 % 1.9 cd/lm 1 White	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	39.0° / 60.0° 88 % 1.9 cd/lm 1 White	
Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	39.0° / 60.0° 88 % 1.9 cd/lm 1 White	
Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	39.0° / 60.0° 88 % 1.9 cd/lm 1 White	150
Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	39.0° / 60.0° 88 % 1.9 cd/lm 1 White	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	39.0° / 60.0° 88 % 1.9 cd/lm 1 White mts:	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	39.0° / 60.0° 88 % 1.9 cd/lm 1 White Ints:	25 <sup>0</sup> 25 <sup>0</sup> 3 <sup>0</sup>
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	39.0° / 60.0° 88 % 1.9 cd/lm 1 White Ints:	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	39.0° / 60.0° 88 % 1.9 cd/lm 1 White ints: JNG LH351C 35.0° / 58.0°	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone <b>SAMSU</b> LED FWHM / FWTM Efficiency	39.0° / 60.0° 88 % 1.9 cd/lm 1 White ints: JNG LH351C 35.0° / 58.0° 88 %	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone <b>SAMSU</b> LED FWHM / FWTM Efficiency Peak intensity	39.0° / 60.0° 88 % 1.9 cd/lm 1 White ints: JNG LH351C 35.0° / 58.0°	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone <b>SAMSU</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	39.0° / 60.0° 88 % 1.9 cd/lm 1 White mts:	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone <b>SAMSU</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	39.0° / 60.0° 88 % 1.9 cd/lm 1 White I White UNG LH351C 35.0° / 58.0° 88 % 2.2 cd/lm 1 White	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone <b>SAMSU</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	39.0° / 60.0° 88 % 1.9 cd/lm 1 White I White UNG LH351C 35.0° / 58.0° 88 % 2.2 cd/lm 1 White	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone <b>SAMSU</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	39.0° / 60.0° 88 % 1.9 cd/lm 1 White I White UNG LH351C 35.0° / 58.0° 88 % 2.2 cd/lm 1 White	
opus Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone <b>SANNSU</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	39.0° / 60.0° 88 % 1.9 cd/lm 1 White I White UNG LH351C 35.0° / 58.0° 88 % 2.2 cd/lm 1 White	



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

SEOUL SEOUL SEMICONDUCTOR			501
LED	Z5M4		75.
FWHM / FWTM	40.0° / 67.0°		400
Efficiency	88 %		
Peak intensity	1.7 cd/lm		$\mathbf{K} \sim \mathbf{K} \sim \mathbf{K} \sim \mathbf{K}$
LEDs/each optic	1		
Light colour	White		
Required compone	ents:		127
			34 10 0, 10 10



bridgelux. LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	CSP 2323 (BXCP) 28.0° / 47.0° 81 % 3.2 cd/lm 1 White	200 200 200 200 200 200 200 200
CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	J Series 2835 31.0° / 54.0° 88 % 2.7 cd/lm 1 White	200 200 200 200 200 200 200 200
CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	XP-E 41.0° / 59.0° 92 % 2.1 cd/lm 1 White	20 20 20 20 20 20 20 20 20 20
CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	XP-G2 39.0° / 58.0° 90 % 2.2 cd/lm 1 White	91 92 93 95 95 96 90 90 90 97 97 97 97 97 97 97 97 97 97 97 97 97



		90° 90°
LED	XP-G2 HE	
FWHM / FWTM	48.0° / 72.0°	73
Efficiency	87 %	400
Peak intensity	1.4 cd/lm	60°
LEDs/each optic	1	
Light colour	White	ggs 200 23*
Required components:		
		$\times$
		30° 15° 0° 15°
		90 <sup>4</sup>
LED	XT-E	
FWHM / FWTM	30.0° / 49.0°	75*
Efficiency	82 %	605
Peak intensity	2.9 cd/lm	
LEDs/each optic	1	
Light colour	White	a. a.
Required components:		2450
		36* 34*
<b>A</b>		133 0 <sup>6</sup> 135
UMILED	IS	90* 90*
LED	LUXEON 2835 Line	
FWHM / FWTM	30.0° / 52.0°	23. 23.
Efficiency	89 %	60 <sup>+</sup> 60 <sup>+</sup>
Peak intensity	3.1 cd/lm	
LEDs/each optic	1	
Light colour	White	gr 65*
Required components:		
		- 200 -
		30° 30° 30°
	)5	
		90 <sup>3</sup>
LED	LUXEON 3030 2D (Round LES)	
LED FWHM / FWTM	LUXEON 3030 2D (Round LES) 30.0° / 50.0°	
LED FWHM / FWTM Efficiency	LUXEON 3030 2D (Round LES) 30.0° / 50.0° 85 %	
LED FWHM / FWTM Efficiency Peak intensity	LUXEON 3030 2D (Round LES) 30.0° / 50.0° 85 % 3.2 cd/m	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LUXEON 3030 2D (Round LES) 30.0° / 50.0° 85 % 3.2 cd/m 1	00 25 26 26 20 20 20 20 20 20 20 20 20 20 20 20 20
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON 3030 2D (Round LES) 30.0° / 50.0° 85 % 3.2 cd/m	90° 25° 000 000 000 000
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LUXEON 3030 2D (Round LES) 30.0° / 50.0° 85 % 3.2 cd/m 1	90° 90° 90° 90° 90° 90° 90° 90° 90° 90°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON 3030 2D (Round LES) 30.0° / 50.0° 85 % 3.2 cd/m 1	90° 90° 90° 90° 90° 90° 90° 90° 90° 90°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON 3030 2D (Round LES) 30.0° / 50.0° 85 % 3.2 cd/m 1	90° 90° 90° 90° 90° 90° 90° 90° 90° 90°



MUMILEC 🖉	)S	90° 90°
LED	LUXEON HL2X	75*
FWHM / FWTM	46.0° / 68.0°	23.
Efficiency	89 %	60° 60°
Peak intensity	1.5 cd/lm	
LEDs/each optic	1	
Light colour	White	gr57
Required components:		
		1200
		30° 150 55°
	5	90° 90°
LED	LUXEON TX	
FWHM / FWTM	36.0° / 55.0°	75*
Efficiency	87 %	
Peak intensity	2.3 cd/lm	60°
LEDs/each optic	1	X / X
Light colour	White	5× 67
Required components:		- 1000
		The second second
		30 30 15° 0° 15°
	DS	90°
	UXEON V2	N*
		29°
LED	LUXEON V2	50° 50° 50° 50° 50° 50° 50° 50° 50° 50°
LED FWHM / FWTM	LUXEON V2 36.0° / 61.0°	00 00 00 00 00 00 00 00 00 00 00 00 00
LED FWHM / FWTM Efficiency	LUXEON V2 36.0° / 61.0° 90 %	92 <sup>4</sup> 95 <sup>4</sup> 95 <sup>4</sup> 96 <sup>4</sup> 000
LED FWHM / FWTM Efficiency Peak intensity	LUXEON V2 36.0° / 61.0° 90 % 2.2 cd/lm	51 00 00 00 00 00 00 00 00 00 00 00 00 00
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LUXEON V2 36.0° / 61.0° 90 % 2.2 cd/lm 1	5° 000 002 50° 000 002
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON V2 36.0° / 61.0° 90 % 2.2 cd/lm 1	50 <sup>4</sup> 50 <sup>4</sup> 50 <sup>4</sup> 60 <sup>6</sup> 60 <sup>5</sup> 50 <sup>5</sup> 60 <sup>5</sup>
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON V2 36.0° / 61.0° 90 % 2.2 cd/lm 1	51 <sup>4</sup> 51 <sup>4</sup> 5
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON V2 36.0° / 61.0° 90 % 2.2 cd/lm 1	20 20 20 20 20 20 20 20 20 20
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON V2 36.0° / 61.0° 90 % 2.2 cd/lm 1 White	39* 39* 39*   39* 300 60*   300 60* 60*   300 60* 60*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON V2 36.0° / 61.0° 90 % 2.2 cd/lm 1 White	30. 30.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON V2 36.0° / 61.0° 90 % 2.2 cd/lm 1 White S LUXEON Z	25- 25- 25- 25- 25- 25- 25- 25- 25- 25-
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON V2 36.0° / 61.0° 90 % 2.2 cd/lm 1 White	25 0° 10° 10° 10° 10° 10° 10° 10° 10° 10°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON V2 36.0° / 61.0° 90 % 2.2 cd/lm 1 White S LUXEON Z 27.5° / 42.0° 88 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON V2 36.0° / 61.0° 90 % 2.2 cd/lm 1 White <b>S</b> LUXEON Z 27.5° / 42.0°	200 200 200 200 200 200 200 200 200 200
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON V2 36.0° / 61.0° 90 % 2.2 cd/lm 1 White S LUXEON Z 27.5° / 42.0° 88 % 4.2 cd/lm	200 200 200 200 200 200 200 200 200 200
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON V2 36.0° / 61.0° 90 % 2.2 cd/lm 1 White S LUXEON Z 27.5° / 42.0° 88 % 4.2 cd/lm 1	99 <sup>4</sup> 99 <sup>4</sup> 9
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON V2 36.0° / 61.0° 90 % 2.2 cd/lm 1 White S LUXEON Z 27.5° / 42.0° 88 % 4.2 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON V2 36.0° / 61.0° 90 % 2.2 cd/lm 1 White S LUXEON Z 27.5° / 42.0° 88 % 4.2 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON V2 36.0° / 61.0° 90 % 2.2 cd/lm 1 White S LUXEON Z 27.5° / 42.0° 88 % 4.2 cd/lm 1	



UMILED	0S		90° 90°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON Z ES 30.0° / 46.0° 89 % 3.4 cd/lm 1 White		
	JS	Polar intensity graph	30* 30*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	SST-10-IR-B90 34.0° / 51.0° 87 % 2.6 cd/lm 1 IR		21, 0, 12, 24, 24, 24, 24, 24, 24, 24, 24, 24, 2
	S		90* <b>A</b> 90*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	SST-20 32.0° / 52.0° 87 % 2.7 cd/lm 1 White		200 200 200 200 200 200 200 200
MICHIΛ			90° 90°
LED FWHM / FWTM Efficiency LEDs/each optic Light colour Required components:	NCSU276C 41.0° / 57.0° 91 % 1 UV-A		31, 12, 0, 13, 3, 21, 0, 10, 12, 14, 14, 14, 14, 14, 14, 14, 14, 14, 14



<b>ΜΝΙCΗΙΛ</b>		90° 90°
LED	NCSxx19B	
FWHM / FWTM	34.0° / 54.0°	75, 75,
Efficiency	84 %	
Peak intensity	2.4 cd/lm	60° 60°
LEDs/each optic	1	$  \times /   \rightarrow \times$
Light colour	White	45* 45*
Required components:		1630
		30. 2000
		15° of 15°
<b>ΜΝΙCΗΙΛ</b>		90* 90*
LED	NVSW219F	75
FWHM / FWTM	46.0° / 68.0°	
Efficiency	88 %	400 60°
Peak intensity	1.5 cd/lm	
LEDs/each optic	1	500
Light colour	White	d5* d3*
Required components:		
		1230
		36* 35* 48% 55*
MAUCHIA		
MICHIΛ		50°
LED	NVSxx19B/NVSxx19C	32 33 36 36 36
LED FWHM / FWTM	38.9° / 62.5°	200 - 200 -
LED FWHM / FWTM Efficiency	38.9° / 62.5° 83 %	60 92 23 20 60 60 60 60 60
LED FWHM / FWTM Efficiency Peak intensity	38.9° / 62.5° 83 % 1.8 cd/lm	90° 90° 72° 72°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	38.9° / 62.5° 83 % 1.8 cd/lm 1	27
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	38.9° / 62.5° 83 % 1.8 cd/lm	57° 1220 65°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	38.9° / 62.5° 83 % 1.8 cd/lm 1	50 50 50 50 50 50 50 50 50 50
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	38.9° / 62.5° 83 % 1.8 cd/lm 1	25 - 25 - 25 - 25 - 25 - 25 - 25 - 25 -
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	38.9° / 62.5° 83 % 1.8 cd/lm 1	775
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	38.9° / 62.5° 83 % 1.8 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	38.9° / 62.5° 83 % 1.8 cd/lm 1	30 <sup>4</sup> 50 57 57 57 57 57 57 57 57 57 57
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	38.9° / 62.5° 83 % 1.8 cd/lm 1 White	9°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	38.9° / 62.5° 83 % 1.8 cd/lm 1 White	27° 60° 60° 100 100 100 100 100 100 100 1
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Opto Semiconductors LED FWHM / FWTM	38.9° / 62.5° 83 % 1.8 cd/lm 1 White Duris S5 (2 chip) 30.0° / 52.0°	9°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency	38.9° / 62.5° 83 % 1.8 cd/lm 1 White Duris S5 (2 chip) 30.0° / 52.0° 87 %	9°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	38.9° / 62.5° 83 % 1.8 cd/lm 1 White Duris S5 (2 chip) 30.0° / 52.0°	9°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Optio Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	38.9° / 62.5° 83 % 1.8 cd/lm 1 White Duris S5 (2 chip) 30.0° / 52.0° 87 % 2.9 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	38.9° / 62.5° 83 % 1.8 cd/lm 1 White Duris S5 (2 chip) 30.0° / 52.0° 87 % 2.9 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Optio Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	38.9° / 62.5° 83 % 1.8 cd/lm 1 White Duris S5 (2 chip) 30.0° / 52.0° 87 % 2.9 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	38.9° / 62.5° 83 % 1.8 cd/lm 1 White Duris S5 (2 chip) 30.0° / 52.0° 87 % 2.9 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	38.9° / 62.5° 83 % 1.8 cd/lm 1 White Duris S5 (2 chip) 30.0° / 52.0° 87 % 2.9 cd/lm 1	



OSRAM Opto Semiconductors		50°
LED	Duris S5 (Single chip)	
FWHM / FWTM	30.0° / 50.0°	75. 25.
Efficiency	86 %	
Peak intensity	3.2 cd/lm	60°
		1630
LEDs/each optic Light colour	1 White	45°
Required components:	White	2000
		30°
OSRAM Opto Semiconductors		50° 50°
LED	OSCONIQ P 3030	
FWHM / FWTM	29.0° / 46.0°	73'
Efficiency	87 %	
Peak intensity	3.4 cd/lm	50°
LEDs/each optic	1	150
Light colour	White	gr et
Required components:		2000
		200
		30° 15° 0° 15° 30°
000445		
		90* 90*
OSRAM Opto Semiconductors	OSLON Black	50°
Opto Semiconductors LED FWHM / FWTM	OSLON Black 25.0° / 40.0°	31 37 97
LED FWHM / FWTM		77
LED FWHM / FWTM Efficiency	25.0° / 40.0°	
LED FWHM / FWTM	25.0° / 40.0° 88 %	77
LED FWHM / FWTM Efficiency Peak intensity	25.0° / 40.0° 88 % 4.5 cd/lm	77
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	25.0° / 40.0° 88 % 4.5 cd/lm 1	73° - 29' 69' - 300. 69'
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	25.0° / 40.0° 88 % 4.5 cd/lm 1	gr 27.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	25.0° / 40.0° 88 % 4.5 cd/lm 1	gr 27.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	25.0° / 40.0° 88 % 4.5 cd/lm 1	200
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	25.0° / 40.0° 88 % 4.5 cd/lm 1	57 64 64 52 52 52 52 52 52 52 52 52 52 52 52 52
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	25.0° / 40.0° 88 % 4.5 cd/lm 1 White	55
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Optio Semiconductors LED	25.0° / 40.0° 88 % 4.5 cd/lm 1 White OSLON Square EC	57 64 57 57 57 57 57 57 57 57 57 57
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OPIS Semiconductors LED FWHM / FWTM	25.0° / 40.0° 88 % 4.5 cd/lm 1 White OSLON Square EC 35.0° / 55.0°	97 97 97 97 97 97 97 97 97 97
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency	25.0° / 40.0° 88 % 4.5 cd/lm 1 White OSLON Square EC 35.0° / 55.0° 88 %	22 23 25 25 25 25 25 25 25 25 25 25
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	25.0° / 40.0° 88 % 4.5 cd/lm 1 White OSLON Square EC 35.0° / 55.0° 88 % 2.4 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	25.0° / 40.0° 88 % 4.5 cd/lm 1 White OSLON Square EC 35.0° / 55.0° 88 % 2.4 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	25.0° / 40.0° 88 % 4.5 cd/lm 1 White OSLON Square EC 35.0° / 55.0° 88 % 2.4 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	25.0° / 40.0° 88 % 4.5 cd/lm 1 White OSLON Square EC 35.0° / 55.0° 88 % 2.4 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	25.0° / 40.0° 88 % 4.5 cd/lm 1 White OSLON Square EC 35.0° / 55.0° 88 % 2.4 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	25.0° / 40.0° 88 % 4.5 cd/lm 1 White OSLON Square EC 35.0° / 55.0° 88 % 2.4 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	25.0° / 40.0° 88 % 4.5 cd/lm 1 White OSLON Square EC 35.0° / 55.0° 88 % 2.4 cd/lm 1	



OSRAM Opto Semiconductors			8°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	OSLON Square Flat 32.0° / 50.0° 89 % 3 cd/lm 1 White		200 200 200 200 200 200 200 200 200 200
OSRAM Opto Semiconductors			90°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	OSLON SSL 150 35.0° / 52.0° 90 % 2.6 cd/lm 1 White		20 20 20 20 20 20 20 20 20 20
OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency LEDs/each optic Light colour Required components:	OSLON SSL 80 35.0° / 53.0° 87 % 1 Far Red	Polar intensity graph	31, 15, 0, 15, 31, 900 22, 900 64, 900 22, 900 22, 900 23, 900 24, 900 25, 900 26, 9
Opto Semiconductors LED FWHM / FWTM Efficiency LEDs/each optic Light colour Required components:	SFH 4715S 26.0° / 40.0° 87 % 1 IR	Polar intensity graph	Rb. Co. Rb. Co. Rb.



OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency LEDs/each optic Light colour Required components:	SFH 4716S 31.0° / 47.0° 86 % 1 IR	Polar intensity graph	200 200 200 200 200 200 200 200
OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	SYNIOS S2222 30.0° / 48.0° 97 % 3.5 cd/lm 1 White		205 205 205 205 205 205 205 205 205 205
SAMSUN LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	G LH351D 41.0° / 73.0° 85 % 1.5 cd/lm 1 White		
SAMSUN LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	C LM301A 29.0° / 48.0° 87 % 3.5 cd/lm 1 White		2000 200 2000 2



SAMSUN	IG	90* 90*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LM302A 30.0° / 51.0° 87 % 3.1 cd/lm 1 White	27 00 27 00 67 67 67 500 500 500 500 500 500 500 500 500 50
LED FWHM / FWTM Efficiency LEDs/each optic Light colour Required components:	FWR1108MS 35.0° / 51.0° 90 % 1 IR	
ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	MFN1108MS 33.0° / 47.0° 91 % 3 cd/lm 1 IR	30° 25 260 25° 25°
ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	MGN1108MS 33.0° / 47.0° 91 % 3 cd/lm 1 IR	20 20 20 20 20 20 20 20 20 20



<b>STANLEY</b>		
LED FWHM / FWTM	MJN1108MS 36.0° / 52.0°	
Efficiency	91 %	
LEDs/each optic	1	
Light colour	IR	g* (g*
Required component	IS:	



#### **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:

As part of our continuous research and improvement processes, and to ensure the best possible quality and availability of our products, LEDiL reserves the right to change material grades without notice.

#### PRODUCT DATA USER AGREEMENT AND DISCLAIMER:

The measured data in the provided downloadable LEDiL Product Datasheets and Mechanical 2D-Drawings is rounded and provided as reference for planning. LEDiL Oy's optical specifications have been verified by conducting performance testing of the products in accordance with the company's quality system. The reported data are averaged results of multiple measurements with typical variation. LEDiL Oy reserves the right to without prior notification make changes and improvements to its products.

LEDiL Oy assumes neither warranty, nor guarantee nor any other liability of any kind for the contents and correctness of the provided data. The provided data has been generated with highest diligence but the provided data may in reality not represent the complete possible variation range of all intrinsic parameters. Therefore, in certain cases a deviation from the provided data could occur.

LEDiL Oy reserves the right to undertake technical changes of its products without further notification which could lead to changes in the provided data. LEDiL Oy assumes no liability of any kind for the possible deviation from any provided data or any other damage resulting from the usage of the provided data.

The user agrees to this disclaimer and user agreement with the download or usage of the provided files.

#### LEDiL Oy

Joensuunkatu 13 FI-24240 SALO Finland

#### LEDiL Inc. 228 West Page Street Suite D Sycamore IL 60178 USA

Ledil Optics Technology (Shenzhen) Co., Ltd. # 405 , Block B Casic Motor Building Shenzhen 518057 P.R.CHINA

#### Local sales and technical support www.ledil.com/ where\_to\_buy

Shipping locations Salo, Finland Hong Kong, China

#### Distribution Partners www.ledil.com/ where\_to\_buy