

# LISA3-WW-PIN

~45° wide beam with location pin installation

#### **SPECIFICATION:**

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



#### **MATERIALS**:

Component LISA3-WW LISA3-HLD-PIN

# **Type** Single lens Holder

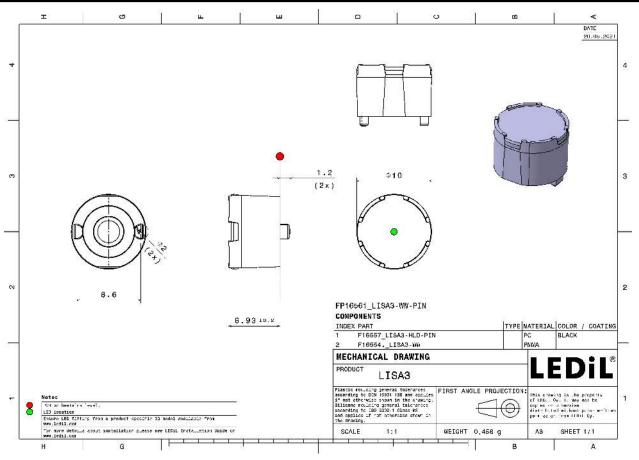
Material	Colour	Finish
PMMA	clear	
PC	black	

#### **ORDERING INFORMATION:**

Component		Qty in box	MOQ	MPQ	Box weight (kg)
FP16561_LISA3-WW-PIN	Single lens	2000	300	100	1.4
» Box size: 310 x 230 x 60 mm					



# PRODUCT DATASHEET FP16561\_LISA3-WW-PIN



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



# **OPTICAL RESULTS (MEASURED):**

LED	XD16	
FWHM / FWTM	39.0° / 69.0°	
Efficiency	75 %	
Peak intensity	1.5 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required componer	nts:	
		/ /
		E.*
LED	XP-E2	
FWHM / FWTM	46.0° / 79.0°	
Efficiency	88 %	
Peak intensity	1.4 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required componer	nts:	
		. · · · · · · · · · · · · · · · · · · ·
LED	XP-G3	
FWHM / FWTM	44.0° / 79.0°	
Efficiency	83 %	5 / - 40. / Vec
Peak intensity	1.3 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required componer	nts:	
		$\times \Lambda \wedge X$
		- 100
		/* \ \ \ \ \ \ \ \
<b>OLUMIL</b>	EDS	5.5
	LUXEON CZ	
FWHM / FWTM	35.0° / 65.0° 88 %	
Efficiency	88 % 2 cd/lm	
Peak intensity LEDs/each optic		
	1 White	
Light colour	White	
	White	
Light colour	White	
Light colour	White	
_ight colour	White	



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

News		
<b>ØNICHI</b>	N Contraction of the second seco	
LED	NF2x757G	
FWHM / FWTM	38.0° / 71.0°	
Efficiency	79 %	
Peak intensity	1.6 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone	ents:	
		$\times$ ( ) ×
ØNICHI/		
	NVSW219F	
FWHM / FWTM	48.0° / 84.0°	
Efficiency	87 %	2 <sup>4</sup>
Peak intensity	1.2 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone	ents:	
OSRAM		
Opto Semiconductors	OSCONIQ C 2424	
FWHM / FWTM	37.0° / 67.0°	
Efficiency	86 %	
Peak intensity	1.9 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone		
OSRAM		
Opto Semiconductors		an
LED	OSLON Square CSSRM2/CSSRM3	
FWHM / FWTM	45.0° / 77.0°	
Efficiency	87 %	e
Peak intensity	1.4 cd/lm	
LEDs/each optic	1	
Light colour	White	w / · · · · · · · · · · · · · · · · · ·
Required compone	ents:	



# **OPTICAL RESULTS (MEASURED):**

SAMS	JNG	E.Y
LED	LH351C	
FWHM / FWTM	47.0° / 83.0°	
Efficiency	87 %	
Peak intensity	1.2 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone	nts:	
		>
		A THE A
REAL		
SEQUE SEMICONDUCTOR		K1
LED	Z5M4	
FWHM / FWTM	46.0° / 81.0°	
Efficiency	86 %	en 1 - m - 1 - m - 1 - m
Peak intensity	1.2 cd/lm	
LEDs/each optic	1	
Light colour	White	11 A A A A A A A A A A A A A A A A A A
Required compone	nts:	



		10 (Jac) #
LED	J Series 2835	
FWHM / FWTM	38.0° / 69.0°	215
Efficiency	88 %	
Peak intensity	1.8 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required components:		
		······································
LED	XP-E	
FWHM / FWTM	51.0° / 79.0°	
Efficiency	91 %	
Peak intensity	1.2 cd/lm	
LEDs/each optic	1	
Light colour	White	• ALAK *
Required components:		
	VD C2	
LED	XP-G2	
LED FWHM / FWTM	49.0° / 78.0°	
LED FWHM / FWTM Efficiency	49.0° / 78.0° 90 %	
LED FWHM / FWTM Efficiency Peak intensity	49.0° / 78.0° 90 % 1.9 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	49.0° / 78.0° 90 % 1.9 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	49.0° / 78.0° 90 % 1.9 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	49.0° / 78.0° 90 % 1.9 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	49.0° / 78.0° 90 % 1.9 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	49.0° / 78.0° 90 % 1.9 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	49.0° / 78.0° 90 % 1.9 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	49.0° / 78.0° 90 % 1.9 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	49.0° / 78.0° 90 % 1.9 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	49.0° / 78.0° 90 % 1.9 cd/lm 1 White XP-G2 HE 53.0° / 87.0°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	49.0° / 78.0° 90 % 1.9 cd/lm 1 White XP-G2 HE 53.0° / 87.0° 86 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	49.0° / 78.0° 90 % 1.9 cd/lm 1 White XP-G2 HE 53.0° / 87.0° 86 % 1 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	49.0° / 78.0° 90 % 1.9 cd/lm 1 White XP-G2 HE 53.0° / 87.0° 86 % 1 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	49.0° / 78.0° 90 % 1.9 cd/lm 1 White XP-G2 HE 53.0° / 87.0° 86 % 1 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	49.0° / 78.0° 90 % 1.9 cd/lm 1 White XP-G2 HE 53.0° / 87.0° 86 % 1 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	49.0° / 78.0° 90 % 1.9 cd/lm 1 White XP-G2 HE 53.0° / 87.0° 86 % 1 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	49.0° / 78.0° 90 % 1.9 cd/lm 1 White XP-G2 HE 53.0° / 87.0° 86 % 1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREE LED EU FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	49.0° / 78.0° 90 % 1.9 cd/lm 1 White XP-G2 HE 53.0° / 87.0° 86 % 1 cd/lm 1	



	XT-E	
FWHM / FWTM	44.0° / 73.0°	
Efficiency	87 %	
Peak intensity	1.5 cd/lm	
LEDs/each optic	1	$\times$ / $\wedge$ $\times$
Light colour	White	
Required components:		
	05	ю
LED	LUXEON 3014	
FWHM / FWTM	38.0° / 65.0°	
Efficiency	90 %	
Peak intensity	2 cd/lm	
LEDs/each optic	1	
Light colour	White	4 / J
Required components:		$\times$ $\land$ $\land$ $\times$
1		* / <b>*</b>
	DS	
LED	LUXEON 3030 2D (Round LES)	
LED FWHM / FWTM	LUXEON 3030 2D (Round LES) 37.0° / 65.0°	
LED FWHM / FWTM Efficiency	LUXEON 3030 2D (Round LES) 37.0° / 65.0° 86 %	
LED FWHM / FWTM Efficiency Peak intensity	LUXEON 3030 2D (Round LES) 37.0° / 65.0° 86 % 1.9 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LUXEON 3030 2D (Round LES) 37.0° / 65.0° 86 % 1.9 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON 3030 2D (Round LES) 37.0° / 65.0° 86 % 1.9 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LUXEON 3030 2D (Round LES) 37.0° / 65.0° 86 % 1.9 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON 3030 2D (Round LES) 37.0° / 65.0° 86 % 1.9 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON 3030 2D (Round LES) 37.0° / 65.0° 86 % 1.9 cd/lm 1	12 12 12 12 12 12 12 12 12 12
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 3030 2D (Round LES) 37.0° / 65.0° 86 % 1.9 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 3030 2D (Round LES) 37.0° / 65.0° 86 % 1.9 cd/lm 1 White	12 12 12 12 12 12 12 12 12 12
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 3030 2D (Round LES) 37.0° / 65.0° 86 % 1.9 cd/lm 1 White S LUXEON Rubix	12 12 12 12 12 12 12 12 12 12
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 3030 2D (Round LES) 37.0° / 65.0° 86 % 1.9 cd/lm 1 White S LUXEON Rubix 46.0° / 72.0°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 3030 2D (Round LES) 37.0° / 65.0° 86 % 1.9 cd/lm 1 White S LUXEON Rubix 46.0° / 72.0° 91 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 3030 2D (Round LES) 37.0° / 65.0° 86 % 1.9 cd/lm 1 White Vhite LUXEON Rubix 46.0° / 72.0° 91 % 1.5 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 3030 2D (Round LES) 37.0° / 65.0° 86 % 1.9 cd/lm 1 White V S LUXEON Rubix 46.0° / 72.0° 91 % 1.5 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 3030 2D (Round LES) 37.0° / 65.0° 86 % 1.9 cd/lm 1 White Vhite LUXEON Rubix 46.0° / 72.0° 91 % 1.5 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 3030 2D (Round LES) 37.0° / 65.0° 86 % 1.9 cd/lm 1 White V S LUXEON Rubix 46.0° / 72.0° 91 % 1.5 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 3030 2D (Round LES) 37.0° / 65.0° 86 % 1.9 cd/lm 1 White V S LUXEON Rubix 46.0° / 72.0° 91 % 1.5 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON 3030 2D (Round LES) 37.0° / 65.0° 86 % 1.9 cd/lm 1 White V S LUXEON Rubix 46.0° / 72.0° 91 % 1.5 cd/lm 1	



	S	
LED	LUXEON TX	
FWHM / FWTM	45.0° / 74.0°	21
Efficiency	87 %	e
Peak intensity	1.4 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required components:		
		24°
	)5	ex
LED	LUXEON V2	
FWHM / FWTM	44.0° / 76.0°	
Efficiency	89 %	er
Peak intensity	1.5 cd/lm	
LEDs/each optic	1	Z MARK N
Light colour	White	
Required components:		
		A State of the second s
	)S	17 A
LED		
1	LUXEON Z	
FWHM / FWTM	LUXEON Z 38.5° / 63.0°	
FWHM / FWTM	38.5° / 63.0°	7
FWHM / FWTM Efficiency Peak intensity LEDs/each optic	38.5° / 63.0° 89 % 2 cd/lm 1	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	38.5° / 63.0° 89 % 2 cd/lm	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic	38.5° / 63.0° 89 % 2 cd/lm 1	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	38.5° / 63.0° 89 % 2 cd/lm 1	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	38.5° / 63.0° 89 % 2 cd/lm 1	5°
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	38.5° / 63.0° 89 % 2 cd/lm 1	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	38.5° / 63.0° 89 % 2 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	38.5° / 63.0° 89 % 2 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	38.5° / 63.0° 89 % 2 cd/lm 1 White S LUXEON Z ES 40.0° / 66.0°	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	38.5° / 63.0° 89 % 2 cd/lm 1 White S LUXEON Z ES 40.0° / 66.0° 90 %	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	38.5° / 63.0° 89 % 2 cd/lm 1 White S LUXEON Z ES 40.0° / 66.0° 90 % 1.9 cd/lm	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	38.5° / 63.0° 89 % 2 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	38.5° / 63.0° 89 % 2 cd/lm 1 White S LUXEON Z ES 40.0° / 66.0° 90 % 1.9 cd/lm	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	38.5° / 63.0° 89 % 2 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	38.5° / 63.0° 89 % 2 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	38.5° / 63.0° 89 % 2 cd/lm 1 White	



	US	Polar intensity graph	*
LED FWHM / FWTM Efficiency LEDs/each optic Light colour Required components:	SST-10-B130 42.0° / 70.0° 88 % 1 White		
	US		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	SST-20 41.0° / 70.0° 88 % 1.6 cd/lm 1 White		
<b>ØNICHIA</b>			
LED FWHM / FWTM Efficiency LEDs/each optic Light colour Required components:	NCSU276C 49.0° / 77.0° 91 % 1 UV-A		
<b>WICHIA</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	NCSxx19B 44.0° / 72.0° 84 % 1.5 cd/lm 1 White		



<b>WNICHIA</b>		E
LED	NVSW219D	
FWHM / FWTM	50.0° / 80.0°	
Efficiency	86 %	
Peak intensity	1.1 cd/lm	
LEDs/each optic	1	
Light colour	White	4°
Required components:	WINC .	T / The A
<b>WNICHIA</b>		
LED	NVSxx19B/NVSxx19C	
FWHM / FWTM	45.0° / 78.0°	
Efficiency	85 %	$\nabla A_{\mu}$
Peak intensity	1.3 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required components:		
		× /
		1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1. 1
OSRAM Opto Semiconductors		
OSRAM Opto Semiconductors	Duris S5 (2 chip)	
LED	Duris S5 (2 chip) 36.0° / 66.0°	
LED FWHM / FWTM	36.0° / 66.0°	
LED FWHM / FWTM Efficiency	36.0° / 66.0° 88 %	
LED FWHM / FWTM Efficiency Peak intensity	36.0° / 66.0°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	36.0° / 66.0° 88 % 1.9 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	36.0° / 66.0° 88 % 1.9 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	36.0° / 66.0° 88 % 1.9 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	36.0° / 66.0° 88 % 1.9 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	36.0° / 66.0° 88 % 1.9 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	36.0° / 66.0° 88 % 1.9 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	36.0° / 66.0° 88 % 1.9 cd/lm 1	1.5 19 19 19 19 19 19 19 19 19 10 10 10
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	36.0° / 66.0° 88 % 1.9 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	36.0° / 66.0° 88 % 1.9 cd/lm 1 White	1.5 19 19 19 19 19 19 19 19 19 10 10 10
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	36.0° / 66.0° 88 % 1.9 cd/lm 1 White Duris S5 (Single chip) 37.0° / 64.0° 86 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	36.0° / 66.0° 88 % 1.9 cd/lm 1 White Duris S5 (Single chip) 37.0° / 64.0°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	36.0° / 66.0° 88 % 1.9 cd/lm 1 White Duris S5 (Single chip) 37.0° / 64.0° 86 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	36.0° / 66.0° 88 % 1.9 cd/lm 1 White Duris S5 (Single chip) 37.0° / 64.0° 86 % 1.9 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	36.0° / 66.0° 88 % 1.9 cd/lm 1 White Duris S5 (Single chip) 37.0° / 64.0° 86 % 1.9 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	36.0° / 66.0° 88 % 1.9 cd/lm 1 White Duris S5 (Single chip) 37.0° / 64.0° 86 % 1.9 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	36.0° / 66.0° 88 % 1.9 cd/lm 1 White Duris S5 (Single chip) 37.0° / 64.0° 86 % 1.9 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	36.0° / 66.0° 88 % 1.9 cd/lm 1 White Duris S5 (Single chip) 37.0° / 64.0° 86 % 1.9 cd/lm 1	



COSRAM Depto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	OSCONIQ P 3030 38.0° / 66.0° 87 % 1.9 cd/lm 1 White	
OSRAM Opto Semiconductors		1.7 W
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	OSLON Black 33.0° / 60.0° 90 % 2.4 cd/lm 1 White	
OSRAM Opto Semiconductors		
LED		
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	OSLON Black Flat (LUW HWQP) 36.0° / 64.0° 90 % 2.1 cd/lm 1 Red	22 20 20 20 20 20 20 20 20 20 20 20 20 2



OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	OSLON SSL 150 45.0° / 73.0° 90 % 1.4 cd/lm 1 White		
COSRAM Opto Semiconductors	SFH 4715AS 30.0° / 57.0° 89 % 1 IR		
OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency LEDs/each optic Light colour Required components:	SFH 4715S 31.0° / 58.0° 89 % 1 IR	Polor intensity groph	C
Cost Semiconductors LED FWHM / FWTM Efficiency LEDs/each optic Light colour Required components:	SFH 4716S 38.0° / 65.0° 87 % 1 IR	Polar intensity graph	



OSRAM		a.v
Opto Semiconductors	Synios P2720 1 mm	$\wedge$
FWHM / FWTM	37.0° / 64.0°	
Efficiency	90 %	$ \land \land \land \land$
Peak intensity	2 cd/lm	e** 60 <sup>4</sup>
LEDs/each optic	1	
Light colour	' Red	
Required components:	Red	
Required components.		
OSRAM Opto Semiconductors		1.1 (a)
LED	SYNIOS S2222	
FWHM / FWTM	37.0 + 38.0° / 66.0°	
Efficiency	97 %	>
Peak intensity	2 cd/lm	
LEDs/each optic	1	
Light colour	White	er lan
Required components:		
		/ Marken / Marken
		w →
SAMSUN	IG	1." 30"
LED		
LED FWHM / FWTM	LH351B	
FWHM / FWTM	LH351B 47.0° / 80.0°	
FWHM / FWTM Efficiency	LH351B 47.0° / 80.0° 88 %	25 57 67 67
FWHM / FWTM Efficiency Peak intensity	LH351B 47.0° / 80.0°	25
FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LH351B 47.0° / 80.0° 88 % 1.3 cd/lm	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH351B 47.0° / 80.0° 88 % 1.3 cd/lm 1	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LH351B 47.0° / 80.0° 88 % 1.3 cd/lm 1	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH351B 47.0° / 80.0° 88 % 1.3 cd/lm 1	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH351B 47.0° / 80.0° 88 % 1.3 cd/lm 1	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LH351B 47.0° / 80.0° 88 % 1.3 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LH351B 47.0° / 80.0° 88 % 1.3 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LH351B 47.0° / 80.0° 88 % 1.3 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LH351B 47.0° / 80.0° 88 % 1.3 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>SAMSUN</b> LED FWHM / FWTM	LH351B 47.0° / 80.0° 88 % 1.3 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>SAMSUN</b> LED FWHM / FWTM Efficiency	LH351B 47.0° / 80.0° 88 % 1.3 cd/lm 1 White LH351D 47.0° / 86.0° 84 %	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>SAMSUN</b> LED FWHM / FWTM Efficiency Peak intensity	LH351B 47.0° / 80.0° 88 % 1.3 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>SAMSUN</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LH351B 47.0° / 80.0° 88 % 1.3 cd/lm 1 White LH351D 47.0° / 86.0° 84 % 1.1 cd/lm 1	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>SAMSUN</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH351B 47.0° / 80.0° 88 % 1.3 cd/lm 1 White LH351D 47.0° / 86.0° 84 % 1.1 cd/lm	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>SAMSUN</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LH351B 47.0° / 80.0° 88 % 1.3 cd/lm 1 White LH351D 47.0° / 86.0° 84 % 1.1 cd/lm 1	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>SAMSUN</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH351B 47.0° / 80.0° 88 % 1.3 cd/lm 1 White LH351D 47.0° / 86.0° 84 % 1.1 cd/lm 1	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>SAMSUN</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH351B 47.0° / 80.0° 88 % 1.3 cd/lm 1 White LH351D 47.0° / 86.0° 84 % 1.1 cd/lm 1	



LED INSTA FWHM /FWTM 36.0° / 76.0° Efficiency 88 % Peak intensity 2 cd/m LEDs/each optic 1 LEDs/each optic 1 LED FWR1108MS FWHM /FWTM 54.0° / 22.0° Efficiency 90 % LED INSTA Components: White Required components: FWR1108MS FWHM /FWTM 54.0° / 22.0° Efficiency 92 % Peak intensity 1,2 cd/m LEDs/each optic 1 LEDs/each opti		al.*	IG	SAMSUN
Peak intensity 2 cd/m LEDs/each optic 1 LEDs/each optic 1 LEDs/each optic 1 LED KORKUNG LED KING SUNG LED KING 38.0° / 68.0° Fficiency 88.% Peak intensity 1.9 cd/m LEDs/each optic 1 LED/ FWR108MS FWHM / FWTM 44.0° / 71.0° Efficiency 90.% LEDS/each optic 1 LED FWR1108MS FWHM / FWTM 44.0° / 71.0° Efficiency 90.% LEDS/each optic 1 LED Required components: R Required components: R R R R R R R R R R R R R R	K	n A	LM301A 36.0° / 76.0°	LED FWHM / FWTM
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LED FWR1108MS FWHM / FWTM 44.0° / 71.0° Efficiency 90 % LEDs/each optic 1 Light colour IR Required components:	A			STANLEY
FWHM / FWTM   44.0° / 71.0°     Efficiency   90 %     LEDs/each optic   1     Light colour   IR     Required components:		X  X  X  X  X  X  X  X  X  X  X  X  X	FWR1108MS	LED
LEDs/each optic 1 Light colour IR Required components: LED MFN1108MS FWHM / FWTM 54.0° / 82.0° Efficiency 92 % Peak intensity 1.2 col/m		r / / /	44.0° / 71.0°	FWHM / FWTM
Light colour Required components:   IR     SETURE LED   MFN1108MS     FWHM / FWTM   54.0° / 82.0°     Efficiency   92 %     Peak intensity   1.2 cd/lm				
Required components:	$X^{}$			
LED MFN1108MS FWHM / FWTM 54.0° / 82.0° Efficiency 92 % Peak intensity 1.2 cd/lm	K		1	LEDs/each optic
LED MFN1108MS   FWHM / FWTM 54.0° / 82.0°   Efficiency 92 %   Peak intensity 1.2 cd/lm	K		1	LEDs/each optic Light colour
FWHM / FWTM 54.0° / 82.0°   Efficiency 92 %   Peak intensity 1.2 cd/lm	K		1	LEDs/each optic Light colour
FWHM / FWTM 54.0° / 82.0°   Efficiency 92 %   Peak intensity 1.2 cd/lm			1	LEDs/each optic Light colour Required components:
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			1 IR MFN1108MS 54.0° / 82.0°	LEDs/each optic Light colour Required components:
LEUS/each optic 1	- 100		1 IR MFN1108MS 54.0° / 82.0° 92 %	LEDs/each optic Light colour Required components:
	- 100		1 IR MFN1108MS 54.0° / 82.0° 92 % 1.2 cd/m	LEDs/each optic Light colour Required components:
Light colour IR Required components:	- 100		1 IR MFN1108MS 54.0° / 82.0° 92 % 1.2 cd/m 1	LEDs/each optic Light colour Required components:



LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	MGN1108MS 54.0° / 82.0° 92 % 1.2 cd/lm 1 IR	
LED FWHM / FWTM Efficiency LEDs/each optic Light colour Required components:	MJN1108MS 45.0° / 71.0° 91 % 1 IR	



#### **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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