

# PRODUCT DATASHEET FP16563\_LISA3-O-PIN

## LISA3-O-PIN

 ${\sim}15^\circ\ x\ 50^\circ$  oval beam with location pin installation

#### **SPECIFICATION:**

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



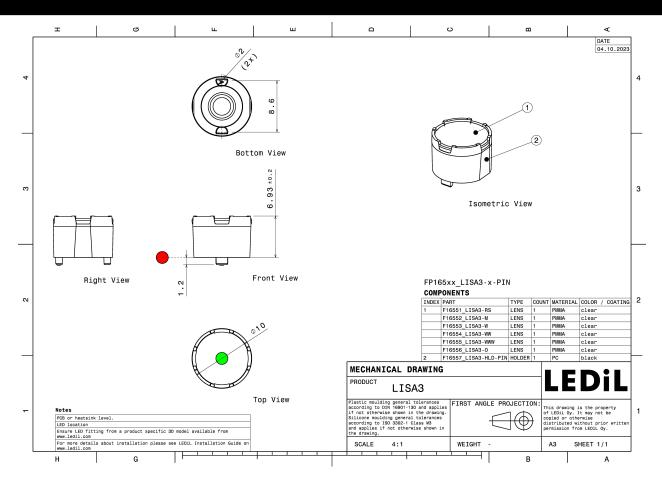
#### **MATERIALS:**

Component	Туре	Material	Colour	Finish
LISA3-O	Single lens	PMMA	clear	
LISA3-HLD-PIN	Holder	PC	black	

#### **ORDERING INFORMATION:**

Component		Qty in box	MOQ	MPQ	Box weight (kg)
FP16563_LISA3-O-PIN	Single lens	2000	300	100	1.3
» Box size: 310 x 230 x 60 mm					

## PRODUCT DATASHEET FP16563\_LISA3-O-PIN



R

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



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

CREE ≑		50* 50*
LED	XD16	
		8. 8.
FWHM / FWTM	45.0 + 20.0° / 78.0 + 43.0°	
Efficiency	65 %	90° (0°
Peak intensity	1.9 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone	ents:	
		100
		30, 300 40
		10% 00% 10%
		50° 50°
LED	XP-E2	
FWHM / FWTM	48.0 + 20.0° / 79.0 + 41.0°	
Efficiency	78 %	
Peak intensity	2.3 cd/lm	
LEDs/each optic	1	
Light colour	White	ar ar
Required compone		
	5115.	
		30 <sup>6</sup> 30 <sup>9</sup> 30 <sup>9</sup>
	.EDS	90 <sup>4</sup> 90 <sup>5</sup>
LED	LUXEON CZ	
FWHM / FWTM	49.0 + 14.0° / 76.0 + 31.0°	77
Efficiency	76 %	
Peak intensity	3.1 cd/lm	
LEDs/each optic	1	
Light colour	White	g. de la companya de
Required compone		
	5110.	200
		30 <sup>10</sup> 3000 30 <sup>10</sup>
ØNICHI/	1	50° 50°
LED	NF2x757G	
ED FWHM / FWTM		79 72
	33.0° / 64.0° 66 %	
Efficiency		
Peak intensity	1.6 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone	ents:	220
		20° 20° 20°
1		10 AV



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

<b>ØNICHI</b>		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	NVSW219F 45.0 + 29.0° / 81.0 + 58.0° 77 % 1.6 cd/lm 1 White	
Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	OSCONIQ C 2424 44.0 + 20.0° / 77.0 + 43.0° 74 % 2.2 cd/lm 1 White ents:	
OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	OSLON Square CSSRM2/CSSRM3 46.0 + 24.0° / 80.0 + 50.0° 75 % 1.8 cd/lm 1 White ents:	
SAMS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LH351C 45.0 + 28.0° / 81.0 + 59.0° 77 % 1.6 cd/lm 1 White	



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

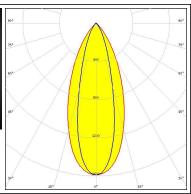
SEOUL	
SEOUL SEMICONDUCTOR	
LED	
FWHM / FWTM	

Efficiency

Light colour

Z5M4 44.0 + 28.0° / 81.0 + 59.0° 75 % Peak intensity 1.6 cd/lm LEDs/each optic 1 White Required components:







		90° 90°
LED	J Series 2835	
FWHM / FWTM	48.0 + 20.0° / 78.0 + 44.0°	73
Efficiency	82 %	
Peak intensity	2.2 cd/lm	60° 60°
LEDs/each optic	1	
Light colour	White	42*
Required components:	WINC .	
		1600
		36° 15° 31°
		90* 90*
	Series 2025	
	J Series 2835	75.
FWHM / FWTM	46.0 + 22.0° / 78.0 + 48.0°	
Efficiency	81 % 2 cd/lm	50* 60*
Peak intensity		
LEDs/each optic	1	
Light colour	White	
Required components:		1690
		30* 36*
1		15° 0° 15°
CREE <del>\$</del>		
		94 <sup>*</sup> 99 <sup>*</sup> 99 <sup>*</sup>
LED	XP-E	32 <sup>n</sup> 32 <sup>n</sup>
LED FWHM / FWTM	17.0 + 48.0° / 36.0 + 74.0°	
LED FWHM / FWTM Efficiency	17.0 + 48.0° / 36.0 + 74.0° 85 %	
LED FWHM / FWTM Efficiency Peak intensity	17.0 + 48.0° / 36.0 + 74.0° 85 % 2.7 cd/lm	69, 62,
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	17.0 + 48.0° / 36.0 + 74.0° 85 % 2.7 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	17.0 + 48.0° / 36.0 + 74.0° 85 % 2.7 cd/lm	69, 62,
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	17.0 + 48.0° / 36.0 + 74.0° 85 % 2.7 cd/lm 1	g. 100
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	17.0 + 48.0° / 36.0 + 74.0° 85 % 2.7 cd/lm 1	69, 62,
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	17.0 + 48.0° / 36.0 + 74.0° 85 % 2.7 cd/lm 1	g. 169
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	17.0 + 48.0° / 36.0 + 74.0° 85 % 2.7 cd/lm 1	g. 169 C.
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	17.0 + 48.0° / 36.0 + 74.0° 85 % 2.7 cd/lm 1	200 200 200 200 200 200 200 200
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	17.0 + 48.0° / 36.0 + 74.0° 85 % 2.7 cd/lm 1 White	25
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	17.0 + 48.0° / 36.0 + 74.0° 85 % 2.7 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	17.0 + 48.0° / 36.0 + 74.0° 85 % 2.7 cd/lm 1 White XP-G2 46.0 + 22.0° / 78.0 + 46.0°	90,     90,     90,       30,     30,     30,     30,       20,     30,     30,     90,       60,     90,     90,     90,       100,     90,     90,     90,
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREE LED FWHM / FWTM Efficiency	17.0 + 48.0° / 36.0 + 74.0° 85 % 2.7 cd/lm 1 White XP-G2 46.0 + 22.0° / 78.0 + 46.0° 83 %	99° 99°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREE LED FWHM / FWTM Efficiency Peak intensity	17.0 + 48.0° / 36.0 + 74.0° 85 % 2.7 cd/lm 1 White XP-G2 46.0 + 22.0° / 78.0 + 46.0° 83 % 2.3 cd/lm	25 26 20 20 20 20 20 20 20 20 20 20
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	17.0 + 48.0° / 36.0 + 74.0° 85 % 2.7 cd/lm 1 White XP-G2 46.0 + 22.0° / 78.0 + 46.0° 83 % 2.3 cd/lm 1	60 60 60 60 60 60 60 60 60 60
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREE ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	17.0 + 48.0° / 36.0 + 74.0° 85 % 2.7 cd/lm 1 White XP-G2 46.0 + 22.0° / 78.0 + 46.0° 83 % 2.3 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	17.0 + 48.0° / 36.0 + 74.0° 85 % 2.7 cd/lm 1 White XP-G2 46.0 + 22.0° / 78.0 + 46.0° 83 % 2.3 cd/lm 1	60 60 60 60 60 60 60 60 60 60
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREE ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	17.0 + 48.0° / 36.0 + 74.0° 85 % 2.7 cd/lm 1 White XP-G2 46.0 + 22.0° / 78.0 + 46.0° 83 % 2.3 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREE ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	17.0 + 48.0° / 36.0 + 74.0° 85 % 2.7 cd/lm 1 White XP-G2 46.0 + 22.0° / 78.0 + 46.0° 83 % 2.3 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREES LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	17.0 + 48.0° / 36.0 + 74.0° 85 % 2.7 cd/lm 1 White XP-G2 46.0 + 22.0° / 78.0 + 46.0° 83 % 2.3 cd/lm 1	d.     000     005       30.     30.     30. <



		50° 50°
LED	XP-G2 HE	
FWHM / FWTM	46.0 + 29.0° / 84.0 + 61.0°	75* 75*
Efficiency	77 %	400
Peak intensity	1.5 cd/lm	
LEDs/each optic	1	
Light colour	White	95* 45*
Required components:		1239
		34' 555 34'
CREE ≑		125° 0° 255'
LEDS		
	XP-G3	73.
FWHM / FWTM	44.0 + 29.0° / 81.0 + 59.0°	400
Efficiency Peak intensity	73 % 1.5 cd/lm	60 <sup>4</sup> 60 <sup>4</sup>
LEDs/each optic	1 Milia	45*
Light colour	White	
Required components:		1200
		30° 1600 30° 30°
	DS	50°
LED	LUXEON HL2X	
FWHM / FWTM	44.0 + 25.0° / 80.0 + 53.0°	75* 75*
Efficiency	81 %	
Peak intensity	1.9 cd/im	60* 60*
LEDs/each optic	1	
Light colour	White	1220
Required components:		
		30° 30°
		2000 15° 0° 15°
UMILE	DS Contraction of the second se	90* 90*
LED	LUXEON TX	
FWHM / FWTM	22.0 + 46.0° / 46.0 + 80.0°	
Efficiency	80 %	60 <sup>5</sup> 60°
Peak intensity	2.1 cd/lm	- 900 -
LEDs/each optic	1	
Light colour	White	974 est
Required components:		
		150
		30. 30.
		15° 0° 15°



	DS	5°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON V2 25.0 + 47.0° / 53.0 + 81.0° 83 % 1.9 cd/lm 1 White	25° 250° 25° 25° 25° 25° 25° 25° 25° 25° 25° 25
	DS	50°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON Z 12.0 + 50.0° / 25.0 + 74.0° 84 % 3.3 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON Z ES 17.0 + 49.0° / 34.0 + 76.0° 84 % 2.7 cd/lm 1 White	
	US	90* 90*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	SST-20 48.0 + 20.0° / 78.0 + 41.0° 81 % 2.2 cd/lm 1 White	



Г		
MICHIΛ		90* 90*
LED	NVSxx19B/NVSxx19C	
FWHM / FWTM	25.0 + 45.0° / 52.0 + 81.0°	75* 75*
Efficiency	78 %	
Peak intensity	1.8 cd/lm	60°
LEDs/each optic	1	
Light colour	White	er
Required components:		120
		1630
		300 300
		153 00 353
OSRAM Opto Semiconductors		90* 90*
LED	Duris S5 (2 chip)	
FWHM / FWTM	20.0 + 45.0° / 40.0 + 75.0°	
Efficiency	80 %	60* 000
Peak intensity	2.1 cd/lm	
LEDs/each optic	1	
Light colour	White	43° 43°
Required components:		
		30* 30?
OSRAM		
OSRAM Opto Semiconductors		50° - 50°
LED	Duris S5 (Single chip)	25
LED FWHM / FWTM	19.0 + 45.0° / 40.0 + 75.0°	25 25 25 25 25 25
LED FWHM / FWTM Efficiency	19.0 + 45.0° / 40.0 + 75.0° 79 %	
LED FWHM / FWTM Efficiency Peak intensity	19.0 + 45.0° / 40.0 + 75.0° 79 % 2.1 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	19.0 + 45.0° / 40.0 + 75.0° 79 % 2.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	19.0 + 45.0° / 40.0 + 75.0° 79 % 2.1 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	19.0 + 45.0° / 40.0 + 75.0° 79 % 2.1 cd/lm 1	5°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	19.0 + 45.0° / 40.0 + 75.0° 79 % 2.1 cd/lm 1	99* 97* 99* 99* 99* 99*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	19.0 + 45.0° / 40.0 + 75.0° 79 % 2.1 cd/lm 1	99 <sup>4</sup> 99 <sup>4</sup> 9
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	19.0 + 45.0° / 40.0 + 75.0° 79 % 2.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	19.0 + 45.0° / 40.0 + 75.0° 79 % 2.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	19.0 + 45.0° / 40.0 + 75.0° 79 % 2.1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	19.0 + 45.0° / 40.0 + 75.0° 79 % 2.1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	19.0 + 45.0° / 40.0 + 75.0° 79 % 2.1 cd/lm 1 White OSCONIQ P 3030 50.0 + 17.0° / 75.0 + 34.0°	20 20 20 20 20 20 20 20 20 20
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	19.0 + 45.0° / 40.0 + 75.0° 79 % 2.1 cd/lm 1 White OSCONIQ P 3030 50.0 + 17.0° / 75.0 + 34.0° 79 %	94 250 250 250 250 250 250 250 250
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: COSRAM Optis Semiconductors LED FWHM / FWTM Efficiency Peak intensity	19.0 + 45.0° / 40.0 + 75.0° 79 % 2.1 cd/lm 1 White OSCONIQ P 3030 50.0 + 17.0° / 75.0 + 34.0° 79 % 2.5 cd/lm	20 20 20 20 20 20 20 20 20 20
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	19.0 + 45.0° / 40.0 + 75.0° 79 % 2.1 cd/lm 1 White OSCONIQ P 3030 50.0 + 17.0° / 75.0 + 34.0° 79 % 2.5 cd/lm 1	59 <sup>4</sup> 10 <sup>9</sup> 10
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 Light colour	19.0 + 45.0° / 40.0 + 75.0° 79 % 2.1 cd/lm 1 White OSCONIQ P 3030 50.0 + 17.0° / 75.0 + 34.0° 79 % 2.5 cd/lm	250 250 250 250 250 250 250 250
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	19.0 + 45.0° / 40.0 + 75.0° 79 % 2.1 cd/lm 1 White OSCONIQ P 3030 50.0 + 17.0° / 75.0 + 34.0° 79 % 2.5 cd/lm 1	59 <sup>4</sup> 10 <sup>9</sup> 10
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 Light colour	19.0 + 45.0° / 40.0 + 75.0° 79 % 2.1 cd/lm 1 White OSCONIQ P 3030 50.0 + 17.0° / 75.0 + 34.0° 79 % 2.5 cd/lm 1	50 50 50 50 50 50 50 50 50 50
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	19.0 + 45.0° / 40.0 + 75.0° 79 % 2.1 cd/lm 1 White OSCONIQ P 3030 50.0 + 17.0° / 75.0 + 34.0° 79 % 2.5 cd/lm 1	59 <sup>4</sup> 10 <sup>9</sup> 10



OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	OSLON SSL 150 16.5 + 48.0° / 36.0 + 76.0° 83 % 2.8 cd/lm 1 White		20 20 20 20 20 20 20 20 20 20
OSRAM Opto Semiconductors LED FWHM / FWTM	OSLON SSL 80 16.0 + 45.0° / 38.0 + 72.0°		32
Efficiency Peak intensity LEDs/each optic Light colour	81 % 2.8 cd/lm 1 White		01 00 00 0. 100 00
Required components:			34° 237 26 23°
OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency LEDs/each optic Light colour Required components:	SFH 4716S 48.0 + 17.0° / 75.0 + 32.0° 82 % 1 IR	Polor intensity graph	9° 9° 9° 9° 9° 9° 90 90 9° 9° 9° 9° 9° 9° 9° 9° 9° 9° 9° 9° 9°
OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	SYNIOS S2222 50.0 + 18.0° / 77.0 + 36.0° 95 % 2.6 cd/lm 1 White		20 20 20 20 20 20 20 20 20 20



SAMSUN	IG	90* 90*
LED	LH351B	
FWHM / FWTM	44.0 + 24.0° / 80.0 + 48.0°	25. 75.
Efficiency	81 %	
Peak intensity	2 cd/lm	60 ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° ° °
LEDs/each optic	1	
Light colour	White	gzi (100
Required components:		
		1600
		30° 30° 30° 30°
SAMSUN	IG	90° 90'
LED	LM101B	
FWHM / FWTM	14.5 + 50.0° / 29.0 + 72.0°	75
Efficiency	81 %	800
Peak intensity	2.7 cd/lm	60° X 80°
LEDs/each optic	1	
Light colour	White	gr 55
Required components:		
		2430
		30 30
		15° 0° 15°
SAMSUN	IG	25 <sup>4</sup> 0 <sup>4</sup> 15 <sup>5</sup>
SAMSUN		90 <sup>4</sup>
LED	LM301A	90 <sup>4</sup> 30 <sup>4</sup> 30 <sup>4</sup> 30 <sup>5</sup> 30 <sup>5</sup> 3
LED FWHM / FWTM	LM301A 16.0 + 50.0° / 40.0 + 75.0°	25 <sup>1</sup> 0 <sup>1</sup> 15 <sup>2</sup>
LED FWHM / FWTM Efficiency	LM301A 16.0 + 50.0° / 40.0 + 75.0° 81 %	60 60 60 20 50 60 20 50 50 20 50 20 50 20 50 20 50 20 20 20 20 20 20 20 20 20 20 20 20 20
LED FWHM / FWTM Efficiency Peak intensity	LM301A 16.0 + 50.0° / 40.0 + 75.0° 81 % 2.4 cd/lm	601 902 903 904 905 905 905 905 905 905 905 905
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LM301A 16.0 + 50.0° / 40.0 + 75.0° 81 % 2.4 cd/lm 1	25 <sup>1</sup> 0 <sup>1</sup> 15 <sup>2</sup>
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LM301A 16.0 + 50.0° / 40.0 + 75.0° 81 % 2.4 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LM301A 16.0 + 50.0° / 40.0 + 75.0° 81 % 2.4 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LM301A 16.0 + 50.0° / 40.0 + 75.0° 81 % 2.4 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LM301A 16.0 + 50.0° / 40.0 + 75.0° 81 % 2.4 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LM301A 16.0 + 50.0° / 40.0 + 75.0° 81 % 2.4 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LM301A 16.0 + 50.0° / 40.0 + 75.0° 81 % 2.4 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LM301A 16.0 + 50.0° / 40.0 + 75.0° 81 % 2.4 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: second semiconductor LED	LM301A 16.0 + 50.0° / 40.0 + 75.0° 81 % 2.4 cd/lm 1 White Z5M1/Z5M2	50°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: stoou: staniconductor LED FWHM / FWTM	LM301A 16.0 + 50.0° / 40.0 + 75.0° 81 % 2.4 cd/lm 1 White Z5M1/Z5M2 46.0 + 22.0° / 80.0 + 47.0°	50°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: scoul semiconductor LED FWHM / FWTM Efficiency	LM301A 16.0 + 50.0° / 40.0 + 75.0° 81 % 2.4 cd/lm 1 White Z5M1/Z5M2 46.0 + 22.0° / 80.0 + 47.0° 83 %	50°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: stoll semiconductor LED FWHM / FWTM Efficiency Peak intensity	LM301A 16.0 + 50.0° / 40.0 + 75.0° 81 % 2.4 cd/lm 1 White Z5M1/Z5M2 46.0 + 22.0° / 80.0 + 47.0° 83 % 2.1 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: scoul semiconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LM301A 16.0 + 50.0° / 40.0 + 75.0° 81 % 2.4 cd/lm 1 White Z5M1/Z5M2 46.0 + 22.0° / 80.0 + 47.0° 83 % 2.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: scoul semiconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LM301A 16.0 + 50.0° / 40.0 + 75.0° 81 % 2.4 cd/lm 1 White Z5M1/Z5M2 46.0 + 22.0° / 80.0 + 47.0° 83 % 2.1 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: scoul semiconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LM301A 16.0 + 50.0° / 40.0 + 75.0° 81 % 2.4 cd/lm 1 White Z5M1/Z5M2 46.0 + 22.0° / 80.0 + 47.0° 83 % 2.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: scoul semiconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LM301A 16.0 + 50.0° / 40.0 + 75.0° 81 % 2.4 cd/lm 1 White Z5M1/Z5M2 46.0 + 22.0° / 80.0 + 47.0° 83 % 2.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LM301A 16.0 + 50.0° / 40.0 + 75.0° 81 % 2.4 cd/lm 1 White Z5M1/Z5M2 46.0 + 22.0° / 80.0 + 47.0° 83 % 2.1 cd/lm 1	



LED FWHM / FWTM Efficiency LEDs/each optic Light colour Required components:	FWR1108MS 48.0 + 20.0° / 76.0 + 40.0° 84 % 1 IR	200 200 200 200 200 200 200 200
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	MFN1108MS 50.0 + 14.0° / 72.0 + 37.0° 84 % 2.9 cd/lm 1 IR	50 50 50 50 50 50 50 50 50 50
<b>STANLEY</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	MGN1108MS 50.0 + 14.0° / 72.0 + 36.0° 84 % 3 cd/lm 1 IR	200 200 200 200 200 200 200 200
ED FWHM / FWTM Efficiency LEDs/each optic Light colour Required components:	MJN1108MS 48.0 + 19.0° / 76.0 + 39.0° 85 % 1 IR	22, 0, 22, 9, 2, 0, 22, 9, 2, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0, 0,