

PRODUCT DATASHEET WINNIE-W-C

WINNIE-W-C

~50° spot beam with holder C compatible with LEDiL HEKLA

SPECIFICATION:

Dimensions	Ø 50.0 mm
Height	19.5 mm
Fastening	tape
ROHS compliant	yes 🛈



MATERIALS:

Component C14234_WINNIE-W C15821_WINNIE-HLD-C

Туре
Single lens
Holder

Material	Colour	Finish
PMMA	clear	
PC	black	

ORDERING INFORMATION:

Quantities for one set:

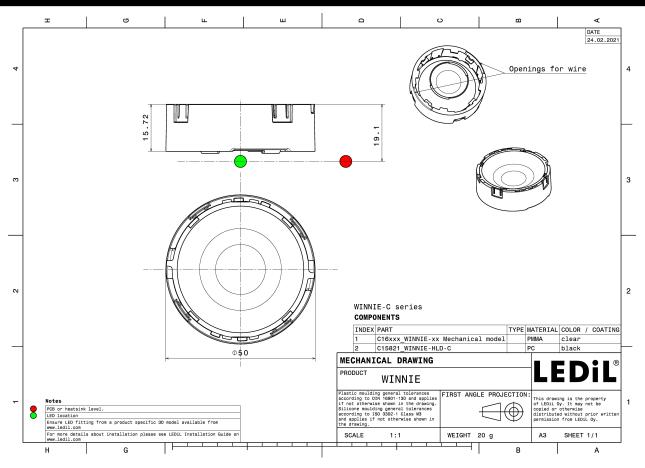
Single lens 1 Holder 1



PRODUCT DATASHEET WINNIE-W-C

Component		Qty in box	MOQ	MPQ	Box weight (kg)
C14234_WINNIE-W » Box size: 480 x 280 x 300 mm	Single lens	364	84	28	5.6
C15821_WINNIE-HLD-C » Box size: 400 x 300 x 300 mm	Holder	420		28	4.1

PRODUCT DATASHEET WINNIE-W-C



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



bridgelux. LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F15253_HEKLA	
bridgelux LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F15253_HEKLA	
bridgelux LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F15255_HEKLA	
bridgelux. LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F15859_HEKLA	





bridgelux.		90 [*]
LED	Vesta TW 6mm DP	
FWHM / FWTM	38.0° / 77.0°	
Efficiency	79 %	60 ⁴
Peak intensity	1.4 cd/lm	
LEDs/each optic	1	
Light colour	White	e ⁴
Required compone	ents:	
C16142_HEKLA	A-SOCKET-K	
Bender Wirth: 5	04 Typ L8	
		20 ⁴ 30 ⁷ 30 ⁴
bridgelux.		94
LED	Vesta TW 9mm (12W) CSP	
FWHM / FWTM	38.0° / 72.0°	78
Efficiency	78 %	
Peak intensity	1.4 cd/lm	
LEDs/each optic	1	
Light colour	White	er
Required compone		
C16142_HEKLA		
		10 10 10 10 10 10 10 10 10 10 10 10 10 1
CITIZE	N	90 ⁴
	N CLC020 Series (Dim-To-Warm)	
		99 ⁴ 72 72
LED	CLC020 Series (Dim-To-Warm)	
LED FWHM / FWTM	CLC020 Series (Dim-To-Warm) 41.0° / 78.0°	
LED FWHM / FWTM Efficiency	CLC020 Series (Dim-To-Warm) 41.0° / 78.0° 79 %	
LED FWHM / FWTM Efficiency Peak intensity	CLC020 Series (Dim-To-Warm) 41.0° / 78.0° 79 % 1.3 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	CLC020 Series (Dim-To-Warm) 41.0° / 78.0° 79 % 1.3 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	CLC020 Series (Dim-To-Warm) 41.0° / 78.0° 79 % 1.3 cd/lm 1 White ents:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	CLC020 Series (Dim-To-Warm) 41.0° / 78.0° 79 % 1.3 cd/lm 1 White ents:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	CLC020 Series (Dim-To-Warm) 41.0° / 78.0° 79 % 1.3 cd/lm 1 White ents:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone C16142_HEKLA	CLC020 Series (Dim-To-Warm) 41.0° / 78.0° 79 % 1.3 cd/lm 1 White ents: A-SOCKET-K	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone C16142_HEKLA	CLC020 Series (Dim-To-Warm) 41.0° / 78.0° 79 % 1.3 cd/lm 1 White ents: A-SOCKET-K	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone C16142_HEKLA	CLC020 Series (Dim-To-Warm) 41.0° / 78.0° 79 % 1.3 cd/lm 1 White ents: A-SOCKET-K	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone C16142_HEKLA CIG142_HEKLA	CLC020 Series (Dim-To-Warm) 41.0° / 78.0° 79 % 1.3 cd/lm 1 White ents: A-SOCKET-K	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone C16142_HEKLA CI6142_HEKLA	CLC020 Series (Dim-To-Warm) 41.0° / 78.0° 79 % 1.3 cd/lm 1 White ents: A-SOCKET-K	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone C16142_HEKLA CI6142_HEKLA EFWHM / FWTM Efficiency Peak intensity	CLC020 Series (Dim-To-Warm) 41.0° / 78.0° 79 % 1.3 cd/Im 1 White ents: A-SOCKET-K N CLC030 Series (Dim-To-Warm) 43.0° / 82.0° 70 % 1 cd/Im	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone C16142_HEKLA CI6142_HEKLA EFMHM / FWTM Efficiency Peak intensity LEDs/each optic	CLC020 Series (Dim-To-Warm) 41.0° / 78.0° 79 % 1.3 cd/lm 1 White ents: A-SOCKET-K	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone C16142_HEKLA CI6142_HEKLA EFWHM / FWTM Efficiency Peak intensity	CLC020 Series (Dim-To-Warm) 41.0° / 78.0° 79 % 1.3 cd/Im 1 White ents: A-SOCKET-K N CLC030 Series (Dim-To-Warm) 43.0° / 82.0° 70 % 1 cd/Im	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone C16142_HEKLA CI6142_HEKLA EFMHM / FWTM Efficiency Peak intensity LEDs/each optic	CLC020 Series (Dim-To-Warm) 41.0° / 78.0° 79 % 1.3 cd/lm 1 White ents: A-SOCKET-K CLC030 Series (Dim-To-Warm) 43.0° / 82.0° 70 % 1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone C16142_HEKLA CI6142_HEKLA EFMHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	CLC020 Series (Dim-To-Warm) 41.0° / 78.0° 79 % 1.3 cd/lm 1 White ents: A-SOCKET-K CLC030 Series (Dim-To-Warm) 43.0° / 82.0° 70 % 1 cd/lm 1 White ents:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone C16142_HEKLA CI6142_HEKLA Efficiency Peak intensity LEDs/each optic Light colour Required compone	CLC020 Series (Dim-To-Warm) 41.0° / 78.0° 79 % 1.3 cd/lm 1 White ents: A-SOCKET-K CLC030 Series (Dim-To-Warm) 43.0° / 82.0° 70 % 1 cd/lm 1 White ents:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone C16142_HEKLA CI6142_HEKLA Efficiency Peak intensity LEDs/each optic Light colour Required compone	CLC020 Series (Dim-To-Warm) 41.0° / 78.0° 79 % 1.3 cd/lm 1 White ents: A-SOCKET-K CLC030 Series (Dim-To-Warm) 43.0° / 82.0° 70 % 1 cd/lm 1 White ents:	



CITIZE	N	50°
LED	CLL02x/CLU02x (LES10)	
FWHM / FWTM	48.0° / 88.0°	
Efficiency	79 %	
Peak intensity	1 cd/lm	
LEDs/each optic	1	
Light colour	White	er
Required compone		
F15255_HEKLA		
		»"·
CITIZE	'N	305 ¹ d ¹ 305 ¹
LED	CLU7A2/7A3	
FWHM / FWTM	48.0° / 90.0°	
Efficiency	84 %	
Peak intensity	1.1 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone		
F15255_HEKLA	A-SOCKET-C	
		30
OITTOT	'NT	
LED	LCN-C01B (Tunable White)	
LED FWHM / FWTM	LCN-C01B (Tunable White) 38.0° / 74.0°	
LED FWHM / FWTM Efficiency	LCN-C01B (Tunable White) 38.0° / 74.0° 78 %	
LED FWHM / FWTM Efficiency Peak intensity	LCN-C01B (Tunable White) 38.0° / 74.0° 78 % 1.4 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LCN-C01B (Tunable White) 38.0° / 74.0° 78 % 1.4 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LCN-C01B (Tunable White) 38.0° / 74.0° 78 % 1.4 cd/lm 1 White	
CITTIZE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LCN-C01B (Tunable White) 38.0° / 74.0° 78 % 1.4 cd/lm 1 White ents:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone C16142_HEKL/	LCN-C01B (Tunable White) 38.0° / 74.0° 78 % 1.4 cd/lm 1 White ents: A-SOCKET-K	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LCN-C01B (Tunable White) 38.0° / 74.0° 78 % 1.4 cd/lm 1 White ents: A-SOCKET-K	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone C16142_HEKL/ Bender Wirth: 4	LCN-C01B (Tunable White) 38.0° / 74.0° 78 % 1.4 cd/lm 1 White ents: A-SOCKET-K	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone C16142_HEKL/	LCN-C01B (Tunable White) 38.0° / 74.0° 78 % 1.4 cd/lm 1 White ents: A-SOCKET-K	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone C16142_HEKL/ Bender Wirth: 4	LCN-C01B (Tunable White) 38.0° / 74.0° 78 % 1.4 cd/lm 1 White ents: A-SOCKET-K	20- 20-
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone C16142_HEKL/ Bender Wirth: 4	LCN-C01B (Tunable White) 38.0° / 74.0° 78 % 1.4 cd/lm 1 White Ponts: A-SOCKET-K 81 Typ L8	20- 20-
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone C16142_HEKL/ Bender Wirth: 4	LCN-C01B (Tunable White) 38.0° / 74.0° 78 % 1.4 cd/lm 1 White ents: A-SOCKET-K 81 Typ L8 CMT14xx	30°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone C16142_HEKL/ Bender Wirth: 4	LCN-C01B (Tunable White) 38.0° / 74.0° 78 % 1.4 cd/lm 1 White ents: A-SOCKET-K 81 Typ L8 CMT14xx 49.0° / 89.0°	30°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone C16142_HEKL/ Bender Wirth: 4	LCN-C01B (Tunable White) 38.0° / 74.0° 78 % 1.4 cd/lm 1 White ents: A-SOCKET-K 81 Typ L8 CMT14xx 49.0° / 89.0° 82 %	34 Jos 35
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone C16142_HEKL/ Bender Wirth: 4 CREECS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LCN-C01B (Tunable White) 38.0° / 74.0° 78 % 1.4 cd/lm 1 White ents: A-SOCKET-K 81 Typ L8 CMT14xx 49.0° / 89.0° 82 % 1 cd/lm	34 Jos 35
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone C16142_HEKL/ Bender Wirth: 4	LCN-C01B (Tunable White) 38.0° / 74.0° 78 % 1.4 cd/lm 1 White ents: A-SOCKET-K 81 Typ L8 CMT14xx 49.0° / 89.0° 82 % 1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone C16142_HEKL/ Bender Wirth: 4 CREEES LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LCN-C01B (Tunable White) 38.0° / 74.0° 78 % 1.4 cd/lm 1 White ents: A-SOCKET-K 81 Typ L8 CMT14xx 49.0° / 89.0° 82 % 1 cd/lm 1 White ents:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone C16142_HEKL/ Bender Wirth: 4 CREEE EDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LCN-C01B (Tunable White) 38.0° / 74.0° 78 % 1.4 cd/lm 1 White ents: A-SOCKET-K 81 Typ L8 CMT14xx 49.0° / 89.0° 82 % 1 cd/lm 1 White ents:	34 Jos 35
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone C16142_HEKL/ Bender Wirth: 4 CREEES LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LCN-C01B (Tunable White) 38.0° / 74.0° 78 % 1.4 cd/lm 1 White ents: A-SOCKET-K 81 Typ L8 CMT14xx 49.0° / 89.0° 82 % 1 cd/lm 1 White ents:	30°



LEDs LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F15859_HEKLA		
CREECS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F15956_HEKLA		
Control Contro	LUXEON CX Plus CoB L08 (Gen2) 48.0° / 86.0° 79 % 1 cd/lm 1 White ents:	
C LUMIL LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F15848_HEKLA	LUXEON CoB 1202HD 50.0° / 89.0° 84 % 1 cd/lm 1 White ents:	



🥙 LUMIL	EDS	50°
LED	LUXEON CoB 1202s	
FWHM / FWTM	48.0° / 88.0°	
Efficiency	83 %	
Peak intensity	1.1 cd/lm	
LEDs/each optic	1	
Light colour	White	gr av
Required compone		
F15848_HEKLA		
		25% Of 15%
UMIL	EDS	90°
LED	LUXEON CoB 1204HD	
FWHM / FWTM	46.0° / 85.0°	
Efficiency	84 %	
Peak intensity	1.1 cd/lm	
LEDs/each optic	1	
Light colour	White	St. St.
Required compone	nts:	
F15858_HEKLA	-SOCKET-H	
		30* 1200 34*
		/ <u>135⁴ op 135⁴</u>
🖉 LUMIL	EDS	95* 95*
LED	LUXEON CoB 1205HD	
FWHM / FWTM	46.0° / 84.0°	
Efficiency	82 %	
Peak intensity	1.1 cd/lm	
LEDs/each optic	1	
Light colour	White	5°
Required compone	nts:	
F15858_HEKLA	-SOCKET-H	
		30° 30° 30°
	EDS	
LED	LUXEON CX Plus CoB - HD S01H4	
FWHM / FWTM	46.0° / 87.0°	
Efficiency	83 %	
Peak intensity	1.1 cd/lm	
LEDs/each optic	1	
Light colour	' White	
Required compone		
Bender Wirth: 63		



LUMIL	EDS	50 ¹⁰ 50 ¹⁰
LED	LUXEON CX Plus CoB - HD S02H6	
FWHM / FWTM	44.0° / 86.0°	
Efficiency	83 %	
Peak intensity	1.2 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required compone		
Bender Wirth: 63	34c Hekla	
	EDS	25 ⁴ 0 ⁴ 25 ⁵
		2 ²
LED FWHM / FWTM	LUXEON CX Plus CoB - HD S04H9 48.0° / 88.0°	
Efficiency	48.0° / 88.0° 82 %	
Peak intensity	oz 70 1 cd/lm	0)* 60
LEDs/each optic	1	
Light colour	White	gr a
Required compone		
Bender Wirth: 63		
		34 25 44 25 34
	EDS	3 24
LED	LUXEON CX Plus CoB L04 / L05 (Gen2)	
FWHM / FWTM	46.0° / 85.0°	
Efficiency	80 %	
Peak intensity	1.1 cd/lm	
LEDs/each optic	1	
Light colour	White	et es
Required compone	White nts:	9 ⁴ 00
	White nts:	
Required compone	White nts:	
Required compone	White nts:	
Required compone	White nts: 37a Hekla	
Required compone Bender Wirth: 63	White nts: 37a Hekla	
Required compone Bender Wirth: 63	White nts: 37a Hekla	
Required compone Bender Wirth: 63	White nts: 37a Hekla EDS LUXEON CX Plus CoB M02 / M03 (Gen2)	
Required compone Bender Wirth: 63	White nts: 37a Hekla EDS LUXEON CX Plus CoB M02 / M03 (Gen2) 45.0° / 85.0°	
Required compone Bender Wirth: 63 LUMIL LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	White nts: 37a Hekla EDS LUXEON CX Plus CoB M02 / M03 (Gen2) 45.0° / 85.0° 82 % 1.1 cd/lm 1	
Required compone Bender Wirth: 63 LUMIL LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	White nts: 37a Hekla EDS LUXEON CX Plus CoB M02 / M03 (Gen2) 45.0° / 85.0° 82 % 1.1 cd/lm 1 White	
Required compone Bender Wirth: 63 CONTINUATION LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	White nts: 37a Hekla EDS LUXEON CX Plus CoB M02 / M03 (Gen2) 45.0° / 85.0° 82 % 1.1 cd/lm 1 White nts:	
Required compone Bender Wirth: 63 LUMIL LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	White nts: 37a Hekla EDS LUXEON CX Plus CoB M02 / M03 (Gen2) 45.0° / 85.0° 82 % 1.1 cd/lm 1 White nts:	
Required compone Bender Wirth: 63 CONTINUATION ED ED EWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	White nts: 37a Hekla EDS LUXEON CX Plus CoB M02 / M03 (Gen2) 45.0° / 85.0° 82 % 1.1 cd/lm 1 White nts:	



UMIL	EDS	50°
LED	LUXEON CX Plus CoB S01 (Gen2)	
FWHM / FWTM	45.0° / 86.0°	72
Efficiency	84 %	
Peak intensity	1.2 cd/lm	
LEDs/each optic	1	
Light colour	White	er.
Required compone	ents:	
Bender Wirth: 63		
		30* 1220
	EDS	15° 0° 15°
LED	LUXEON Fusion 12-up (20x24)	
FWHM / FWTM	39.0° / 77.0°	
Efficiency	80 %	
Peak intensity	1.4 cd/lm	
LEDs/each optic	1	
Light colour	' Tunable White	g
Required compone		
C16142_HEKLA		
Bender Wirth: 44		220
Dender Witth. +	+2 Typ 20	
		155 ⁴ 0 ⁶ 155 ⁴
6		
	INUS	90'
	CxM-14 (19x19)	
LED		35°
LED	CxM-14 (19x19)	59°
LED FWHM / FWTM	CxM-14 (19x19) 48.0° / 86.0°	59° 73 601 400
LED FWHM / FWTM Efficiency	CxM-14 (19x19) 48.0° / 86.0° 78 %	59° 73 64 60 70 70
LED FWHM / FWTM Efficiency Peak intensity	CxM-14 (19x19) 48.0° / 86.0° 78 % 1 cd/lm	59°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	CxM-14 (19x19) 48.0° / 86.0° 78 % 1 cd/lm 1 White	5° 5° 5°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	CxM-14 (19x19) 48.0° / 86.0° 78 % 1 cd/lm 1 White ents:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	CxM-14 (19x19) 48.0° / 86.0° 78 % 1 cd/lm 1 White ents:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	CxM-14 (19x19) 48.0° / 86.0° 78 % 1 cd/lm 1 White ents:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F15859_HEKLA	CxM-14 (19x19) 48.0° / 86.0° 78 % 1 cd/lm 1 White ents: -SOCKET-I	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	CxM-14 (19x19) 48.0° / 86.0° 78 % 1 cd/lm 1 White ents: -SOCKET-I	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F15859_HEKLA	CxM-14 (19x19) 48.0° / 86.0° 78 % 1 cd/lm 1 White ents: -SOCKET-I	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F15859_HEKLA	CxM-14 (19x19) 48.0° / 86.0° 78 % 1 cd/lm 1 White ents: -SOCKET-I	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F15859_HEKLA	CxM-14 (19x19) 48.0° / 86.0° 78 % 1 cd/lm 1 White ents: -SOCKET-I INUS CXM-4 45.0° / 86.0°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F15859_HEKLA	CxM-14 (19x19) 48.0° / 86.0° 78 % 1 cd/lm 1 White ents: -SOCKET-I CXM-4 45.0° / 86.0° 82 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F15859_HEKLA	CxM-14 (19x19) 48.0° / 86.0° 78 % 1 cd/lm 1 White ents: -SOCKET-I CXM-4 45.0° / 86.0° 82 % 1.2 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F15859_HEKLA	CxM-14 (19x19) 48.0° / 86.0° 78 % 1 cd/lm 1 White onts: -SOCKET-I CXM-4 45.0° / 86.0° 82 % 1.2 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F15859_HEKLA	CxM-14 (19x19) 48.0° / 86.0° 78 % 1 cd/lm 1 White ents: -SOCKET-I CXM-4 45.0° / 86.0° 82 % 1.2 cd/lm 1 White ents:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F15859_HEKLA	CxM-14 (19x19) 48.0° / 86.0° 78 % 1 cd/lm 1 White ents: -SOCKET-I CXM-4 45.0° / 86.0° 82 % 1.2 cd/lm 1 White ents:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F15859_HEKLA	CxM-14 (19x19) 48.0° / 86.0° 78 % 1 cd/lm 1 White ents: -SOCKET-I CXM-4 45.0° / 86.0° 82 % 1.2 cd/lm 1 White ents:	



	NUS		90*	9
LED	CxM-9 (13.5x13.5)			
FWHM / FWTM	48.0° / 88.0°		75*	
Efficiency	81 %			
Peak intensity	1 cd/lm		60* 400	K \ `
LEDs/each optic	1			
Light colour	White		47*	
Required compone				X
F15255_HEKLA			800	- 1
			A	
			30 00	15,
PHILIP	PS		909	
LED	Fortimo SLM L09 CoB		75*	
FWHM / FWTM	45.0° / 83.0°			
Efficiency	83 %		60° 400	K/ >
Peak intensity	1.2 cd/lm		$\left[\left[\left$	$\langle \rangle / \langle \rangle$
LEDs/each optic	1		 $ $ \times $/$ $ $ $ $	\times
Light colour	White		954	X
Required compone	nts:			
F15858_HEKLA	-SOCKET-H			\wedge
			\rightarrow	$\Lambda \times$
			36*	,
PHILIP	S		90°	35'
		and the second		
LED	Fortimo SLM L13 CoB	1	75.	
LED FWHM / FWTM	Fortimo SLM L13 CoB 45.0° / 82.0°	1 Fr	3.	
LED FWHM / FWTM Efficiency	Fortimo SLM L13 CoB 45.0° / 82.0° 79 %	1	77 E0 ¹	
LED FWHM / FWTM Efficiency Peak intensity	Fortimo SLM L13 CoB 45.0° / 82.0° 79 % 1.1 cd/lm		95 85 ⁴ 450	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Fortimo SLM L13 CoB 45.0° / 82.0° 79 % 1.1 cd/lm 1		77 60*	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Fortimo SLM L13 CoB 45.0° / 82.0° 79 % 1.1 cd/lm 1 White		77 60* 60 6*	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	Fortimo SLM L13 CoB 45.0° / 82.0° 79 % 1.1 cd/lm 1 White nts:		73 60 ¹ 007 9 ¹ 007	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen C16142_HEKLA	Fortimo SLM L13 CoB 45.0° / 82.0° 79 % 1.1 cd/lm 1 White nts: -SOCKET-K		75 60* 97 90	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	Fortimo SLM L13 CoB 45.0° / 82.0° 79 % 1.1 cd/lm 1 White nts: -SOCKET-K		20 60 60 60 60 80 80	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen C16142_HEKLA Bender Wirth: 43	Fortimo SLM L13 CoB 45.0° / 82.0° 79 % 1.1 cd/lm 1 White nts: -SOCKET-K 32 Typ L8		20 60 60 20 20 20 20 20 20 20 20 20 20 20 20 20	12,
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen C16142_HEKLA Bender Wirth: 43	Fortimo SLM L13 CoB 45.0° / 82.0° 79 % 1.1 cd/lm 1 White nts: -SOCKET-K 32 Typ L8		27 60 90 90 90 127 129 10 10 10 10 10 10 10 10 10 10 10 10 10	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer C16142_HEKLA Bender Wirth: 43	Fortimo SLM L13 CoB 45.0° / 82.0° 79 % 1.1 cd/lm 1 White nts: -SOCKET-K 32 Typ L8		10 0	12,
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer C16142_HEKLA Bender Wirth: 43	Fortimo SLM L13 CoB 45.0° / 82.0° 79 % 1.1 cd/lm 1 White nts: -SOCKET-K 32 Typ L8		10 0	12,
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen C16142_HEKLA Bender Wirth: 43	Fortimo SLM L13 CoB 45.0° / 82.0° 79 % 1.1 cd/lm 1 White nts: -SOCKET-K 32 Typ L8		10 0	12,
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen C16142_HEKLA Bender Wirth: 43 PHILLED FWHM / FWTM Efficiency Peak intensity	Fortimo SLM L13 CoB 45.0° / 82.0° 79 % 1.1 cd/lm 1 White nts: -SOCKET-K 32 Typ L8		10 0	12,
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen C16142_HEKLA Bender Wirth: 43 PHILLO FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Fortimo SLM L13 CoB 45.0° / 82.0° 79 % 1.1 cd/lm 1 White nts: -SOCKET-K 32 Typ L8 S Fortimo SLM L15 CoB 47.0° / 85.0° 77 % 1 cd/lm 1		10 0	15,
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen C16142_HEKLA Bender Wirth: 43 PHILLIP LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Fortimo SLM L13 CoB 45.0° / 82.0° 79 % 1.1 cd/lm 1 White nts: -SOCKET-K 32 Typ L8 S Fortimo SLM L15 CoB 47.0° / 85.0° 77 % 1 cd/lm 1 White		10 0	15,
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen C16142_HEKLA Bender Wirth: 43 PHILLEP FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	Fortimo SLM L13 CoB 45.0° / 82.0° 79 % 1.1 cd/lm 1 White nts: -SOCKET-K 32 Typ L8 Fortimo SLM L15 CoB 47.0° / 85.0° 77 % 1 cd/lm 1 White nts:		10 0	15,
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen C16142_HEKLA Bender Wirth: 43 PHILLE FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen C16142_HEKLA	Fortimo SLM L13 CoB 45.0° / 82.0° 79 % 1.1 cd/lm 1 White nts: -SOCKET-K 32 Typ L8 Fortimo SLM L15 CoB 47.0° / 85.0° 77 % 1 cd/lm 1 White nts: -SOCKET-K		10 0	15,
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen C16142_HEKLA Bender Wirth: 43 PHILLOP LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	Fortimo SLM L13 CoB 45.0° / 82.0° 79 % 1.1 cd/lm 1 White nts: -SOCKET-K 32 Typ L8 Fortimo SLM L15 CoB 47.0° / 85.0° 77 % 1 cd/lm 1 White nts: -SOCKET-K		10 0	15,



S ΛΜS			
	JNG	»*	90*
LED	LC003D / LC006D / LC009D / LC013D	7	75
FWHM / FWTM	48.0° / 88.0°		
Efficiency	81 %		60.
Peak intensity	1 cd/lm		
LEDs/each optic	1		
Light colour	White	4°	45°
Required compone			
F15255_HEKLA	-SOCKET-C		
		30 - 20 - 10"	36.0
S ΛΜSΙ	JNG	B 2,	90*
LED	LC010C		
FWHM / FWTM	49.0° / 90.0°	29	1 75'
Efficiency	82 %		· · · · ·
Peak intensity	1 cd/lm		- 60°
LEDs/each optic	1		
Light colour	White	at the second	45*
Required compone	ents:		
F15848_HEKLA			
		20 ⁴ 25 ⁴ 07 15 ⁴	36.
SAMSU	JNG	90 ⁴	90*
	LC010C G2	89 ⁴	90*
		22	90*
LED	LC010C G2	394 27	90°
LED FWHM / FWTM	LC010C G2 46.0° / 87.0°	95 ⁴ 79 80	90* 25* 60*
LED FWHM / FWTM Efficiency	LC010C G2 46.0° / 87.0° 82 %	27 27 80 0	90°
LED FWHM / FWTM Efficiency Peak intensity	LC010C G2 46.0° / 87.0° 82 % 1.1 cd/lm	54 55 65 65	90 ⁴
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LC010C G2 46.0° / 87.0° 82 % 1.1 cd/lm 1 White	a. b. b. b. b. b. b. b. b. b. b. b. b. b.	90°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LC010C G2 46.0° / 87.0° 82 % 1.1 cd/lm 1 White ents:	91 92 97 97 90	50'
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LC010C G2 46.0° / 87.0° 82 % 1.1 cd/lm 1 White ents:		99 75 61 61
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LC010C G2 46.0° / 87.0° 82 % 1.1 cd/lm 1 White ents:		99' 99' 99' 99' 99' 99'
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LC010C G2 46.0° / 87.0° 82 % 1.1 cd/lm 1 White ents: -SOCKET-C		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F15255_HEKLA	LC010C G2 46.0° / 87.0° 82 % 1.1 cd/lm 1 White ents: -SOCKET-C		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F15255_HEKLA	LC010C G2 46.0° / 87.0° 82 % 1.1 cd/lm 1 White ents: -SOCKET-C JNG LC016D / LC019D / LC026D / LC033D		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F15255_HEKLA	LC010C G2 46.0° / 87.0° 82 % 1.1 cd/lm 1 White ents: -SOCKET-C JNG LC016D / LC019D / LC026D / LC033D 49.0° / 89.0°		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F15255_HEKLA SAMSU LED FWHM / FWTM Efficiency	LC010C G2 46.0° / 87.0° 82 % 1.1 cd/lm 1 White ents: -SOCKET-C JNG LC016D / LC019D / LC026D / LC033D 49.0° / 89.0° 77 %		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F15255_HEKLA SAMSU LED FWHM / FWTM Efficiency Peak intensity	LC010C G2 46.0° / 87.0° 82 % 1.1 cd/lm 1 White ents: -SOCKET-C JNG LC016D / LC019D / LC026D / LC033D 49.0° / 89.0°		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F15255_HEKLA SAMSU LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LC010C G2 46.0° / 87.0° 82 % 1.1 cd/lm 1 White white white SOCKET-C UNG LC016D / LC019D / LC026D / LC033D 49.0° / 89.0° 77 % 1 cd/lm 1		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F15255_HEKLA SAMSU LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LC010C G2 46.0° / 87.0° 82 % 1.1 cd/lm 1 White PMTS: -SOCKET-C JNCG LC016D / LC019D / LC026D / LC033D 49.0° / 89.0° 77 % 1 cd/lm 1 White		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F15255_HEKLA SAMSU LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LC010C G2 46.0° / 87.0° 82 % 1.1 cd/lm 1 White white SOCKET-C UNC LC016D / LC019D / LC026D / LC033D 49.0° / 89.0° 77 % 1 cd/lm 1 White white ites		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F15255_HEKLA SAMSU LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LC010C G2 46.0° / 87.0° 82 % 1.1 cd/lm 1 White white SOCKET-C UNC LC016D / LC019D / LC026D / LC033D 49.0° / 89.0° 77 % 1 cd/lm 1 White white ites		
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone F15255_HEKLA SAMSU LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	LC010C G2 46.0° / 87.0° 82 % 1.1 cd/lm 1 White white SOCKET-C UNC LC016D / LC019D / LC026D / LC033D 49.0° / 89.0° 77 % 1 cd/lm 1 White white ites		

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SAMSL	JNG			90*	90*
LED	LC020C				
FWHM / FWTM	48.0° / 88.0°			75*	27
Efficiency	82 %				
Peak intensity	1 cd/lm			60° 400	
LEDs/each optic	1				
Light colour	White			454	45+
Required component					
F15848_HEKLA				/ \	
				$/$ Λ	
				30.	
0.0.0.0				15° 0°	15,
SAMSL	JNG		-	90*	90*
LED	LC020C G2				
FWHM / FWTM	44.0° / 84.0°				75*
Efficiency	82 %			60° 400	50%
Peak intensity	1.2 cd/lm				
LEDs/each optic	1			\times / \square	X / N
Light colour	White			9°	45*
Required compone	nts:				
F15859_HEKLA	-SOCKET-I				
				$\times \Lambda$	
				30* 123	o
				15° 0°	35°
				í í	
TRIDON			-	90*	90*
LED	SLE G7 LES09	and the second		90*	30,
LED FWHM / FWTM	SLE G7 LES09 48.0° / 87.0°	17		99 ⁴	<u><u> </u></u>
LED FWHM / FWTM Efficiency	SLE G7 LES09 48.0° / 87.0° 80 %	F		94 99	
LED FWHM / FWTM Efficiency Peak intensity	SLE G7 LES09 48.0° / 87.0° 80 % 1 cd/lm	17		99°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	SLE G7 LES09 48.0° / 87.0° 80 % 1 cd/lm 1	0		59°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	SLE G7 LES09 48.0° / 87.0° 80 % 1 cd/lm 1 White	C		¢, 67 35. 56.	50° 50° 60°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	SLE G7 LES09 48.0° / 87.0° 80 % 1 cd/lm 1 White nts:			c, 69 39.	8°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	SLE G7 LES09 48.0° / 87.0° 80 % 1 cd/lm 1 White nts:			97 99 90 90 90 90 90 90 90 90 90 90 90 90	9 9 9 9 9 9 9 9 9
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	SLE G7 LES09 48.0° / 87.0° 80 % 1 cd/lm 1 White nts:			99* 99* 99*	9 9 9 9 9 9 9 9 9 9
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen F15255_HEKLA	SLE G7 LES09 48.0° / 87.0° 80 % 1 cd/lm 1 White nts: -SOCKET-C			99°	12°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen F15255_HEKLA	SLE G7 LES09 48.0° / 87.0° 80 % 1 cd/lm 1 White nts: -SOCKET-C			99" 99" 99" 99"	12° 12° 6° 12° 12° 12° 12° 12° 12°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen F15255_HEKLA:	SLE G7 LES09 48.0° / 87.0° 80 % 1 cd/lm 1 White nts: -SOCKET-C			50°	12°, 12°, 12°, 12°, 12°, 12°, 12°, 12°,
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen F15255_HEKLA:	SLE G7 LES09 48.0° / 87.0° 80 % 1 cd/lm 1 White nts: -SOCKET-C			50° 50° 50° 50° 50° 50° 50° 50° 50° 50°	82°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen F15255_HEKLA: TRIDON LED FWHM / FWTM	SLE G7 LES09 48.0° / 87.0° 80 % 1 cd/lm 1 White nts: -SOCKET-C			99°	100 100 100 100 100 100 100 100 100 100
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen F15255_HEKLAN TRIDON LED FWHM / FWTM Efficiency	SLE G7 LES09 48.0° / 87.0° 80 % 1 cd/lm 1 White nts: -SOCKET-C			64 65 59* 59* 59* 59* 59* 59* 59* 59* 59* 59	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen F15255_HEKLA: TRIDON LED FWHM / FWTM Efficiency Peak intensity	SLE G7 LES09 48.0° / 87.0° 80 % 1 cd/lm 1 White nts: -SOCKET-C SLE G7 LES13 47.0° / 86.0°			99° 99° 99° 99° 99° 99° 99° 99° 99° 99°	2
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen F15255_HEKLA F15255_HEKLA FWHM / FWTM Efficiency Peak intensity LEDs/each optic	SLE G7 LES09 48.0° / 87.0° 80 % 1 cd/lm 1 White nts: -SOCKET-C SLE G7 LES13 47.0° / 86.0° 78 % 1 cd/lm 1			59° 19° 19° 19° 19° 19° 19° 19° 1	20 10 10 10 10 10 10 10 10 10 1
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component F15255_HEKLA F15255_HEKLA FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	SLE G7 LES09 48.0° / 87.0° 80 % 1 cd/lm 1 White nts: -SOCKET-C SLE G7 LES13 47.0° / 86.0° 78 % 1 cd/lm 1 White			99" 99" 99" 99" 99" 99" 99" 99" 99" 99"	50*
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen F15255_HEKLA: TRIDON LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	SLE G7 LES09 48.0° / 87.0° 80 % 1 cd/lm 1 White nts: -SOCKET-C SLE G7 LES13 47.0° / 86.0° 78 % 1 cd/lm 1 White nts:			99° 99° 99° 99° 99° 99°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component F15255_HEKLA F15255_HEKLA FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	SLE G7 LES09 48.0° / 87.0° 80 % 1 cd/lm 1 White nts: -SOCKET-C SLE G7 LES13 47.0° / 86.0° 78 % 1 cd/lm 1 White nts:			99° 99° 99° 99° 99° 99° 99° 99° 99° 99°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen F15255_HEKLA TRIDON LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	SLE G7 LES09 48.0° / 87.0° 80 % 1 cd/lm 1 White nts: -SOCKET-C SLE G7 LES13 47.0° / 86.0° 78 % 1 cd/lm 1 White nts:				



SLE G7 LES15	
49.0° / 88.0° 77 % 1 cd/lm 1 White ts: SOCKET-I	
	8*
XOB 14.5 mm 49.0° / 88.0° 78 % 1 cd/lm 1 White ts: SOCKET-I	
XOB 9.8 mm 47.0° / 88.0° 81 % 1 cd/lm 1 White ts: SOCKET-C	91 92 92 94 90 90
	1 cd/lm 1 White ts: SOCKET-1 XOB 14.5 mm 49.0° / 88.0° 78 % 1 cd/lm 1 White ts: SOCKET-1 XOB 9.8 mm 47.0° / 88.0° 81 % 1 cd/lm 1 White ts: SOCKET-1



OPTICAL RESULTS (SIMULATED):

bridgelux.		90* 90*
LED	VERO10	
FWHM / FWTM	44.0° / 84.0°	73.
Efficiency	85 %	
Peak intensity	1.3 cd/lm	60.0
LEDs/each optic	1	
Light colour	' White	45* 45*
Required components		800
F15616_HEKLA-S		
		30° 36° 36° 36°
CITIZEN	I	90° 90°
LED	- CLL03x/CLU03x	
FWHM / FWTM	46.0° / 86.0°	75*
Efficiency	77 %	
Peak intensity	1.1 cd/lm	60 ^{1.}
LEDs/each optic	1	
Light colour	White	93°
Required components		
F15859_HEKLA-S		
		45% 0 ⁴ 15%
		90* 90*
LED	CXA/B 15xx	
FWHM / FWTM	49.0° / 89.0°	73.
Efficiency	85 %	
Peak intensity	1.1 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required components	:	
F15256_HEKLA-S	DCKET-D	
		30* 36*
1		
CREE ≑		
LEDS		34+ 34+ 422, 64 32,
LED	CXA/B 1816 & CXA/B 1820 & CXA 1850	22 25 25 0 0 25 0 0 25 25 25
LED LED FWHM / FWTM	39.0° / 83.0°	25° 0° 12°
LED LED FWHM / FWTM Efficiency	39.0° / 83.0° 88 %	602 102 102 102 102 102 102 102 1
LEDs LED FWHM / FWTM Efficiency Peak intensity	39.0° / 83.0° 88 % 1.4 cd/lm	Bu 00 05 32 00 32 34 32 34
LEDs LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	39.0° / 83.0° 88 % 1.4 cd/lm 1	61 90 91 22 90 91 22 91 92
LEDs LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	39.0° / 83.0° 88 % 1.4 cd/lm 1 White	25 00 00 00 00 00 00 00 00 00 00 00 00 00
LEDs LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components	39.0° / 83.0° 88 % 1.4 cd/lm 1 White	25
LEDs LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	39.0° / 83.0° 88 % 1.4 cd/lm 1 White	400 100 100 27 400 60° 60° 27 400 60° 60° 27 400 60° 60° 28 400 60° 60°
LEDs LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components	39.0° / 83.0° 88 % 1.4 cd/lm 1 White	100 100 100 100 100 100 100 100
LEDs LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components	39.0° / 83.0° 88 % 1.4 cd/lm 1 White	30 32 0, 32, 34 31 533 60 61 533 60 60 61 53 53 32 60 61 53 53 32 60 61 61 61 32 60 61 61 61 32 63 64 13 61



OPTICAL RESULTS (SIMULATED):

Μ ΝΙCΗΙΛ		9)*
LED	NFSWE11A	
FWHM / FWTM	36.0° / 76.0°	37
Efficiency	75 %	
Peak intensity	1.4 cd/lm	
LEDs/each optic	30	
Light colour	White	er er
Required component	s:	
		1220
		30"
		129 09 251
SEOUL SEOUL SEMICONDUCTOR		90 ⁴ 90
LED	MJT COB LES 14.5	
FWHM / FWTM	52.0° / 92.0°	
Efficiency	79 %	
Peak intensity	0.9 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required component		
F15859_HEKLA-S	OCKET-I	
		304 369
		10 ¹ 10 ¹ 10 ¹
SEOUL		51,*
LED	MJT COB LES 9.8	
FWHM / FWTM	49.0° / 90.0°	
Efficiency	83 %	
Peak intensity	1.1 cd/lm	
LEDs/each optic	1	
Light colour	White	9" () () () () () () () () () (
Required component	s:	
F15255_HEKLA-S	OCKET-C	
		30 / 30
		15' 0° 25'



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.

Due to use of high power COB's with this product, special attention to proper thermal design is highly recommended. LEDiL has no liability for direct, indirect or consecutive damages arising from the LEDiL products being used outside of the recommended temperature range.

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.

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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.

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