

# PRODUCT DATASHEET FN14976\_STELLA-DWC2

## STELLA-DWC2

Universal road lighting (IESNA Type II Medium) beam with excellent mixed illuminance and luminance uniformity. Compatible with up to 23 mm LES size COBs. Variant with black frame..

#### **SPECIFICATION:**

Dimensions	Ø 90.0 mm
Height	19.3 mm
Fastening	screw
Ingress protection classes	IP67
ROHS compliant	yes 🛈



#### **MATERIALS:**

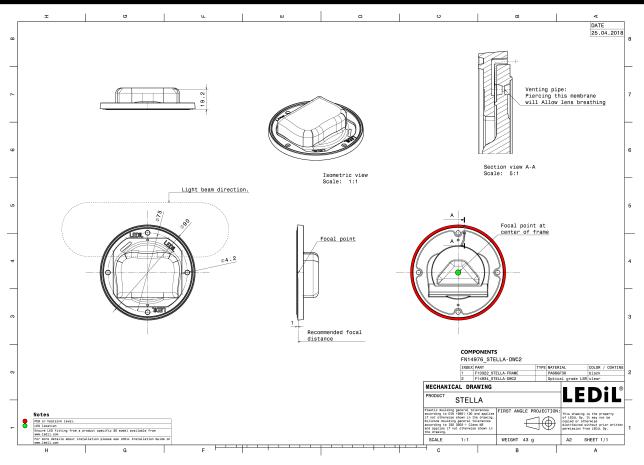
Component	Туре	Material	Colour	Finish
STELLA-DWC2	Single lens	Silicone	clear	
STELLA-FRAME	Holder	PA66	black	

#### **ORDERING INFORMATION:**

Component		Qty in box	MOQ	MPQ	Box weight (kg)
FN14976_STELLA-DWC2	Single lens	135	135	15	7.1
» Box size: 480 x 280 x 300 mm					



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



bridgelux.		50° 50°
LED	V18 Gen7	3
FWHM / FWTM	Asymmetric	75* 100 75*
Efficiency	90 %	
Peak intensity	0.4 cd/lm	60° 200 60°
LEDs/each optic	1	
Light colour	White	20
Required componer		(g) (g)
Bender Wirth: 43		40
Dender Wirth. 40	5 Typ 15	200
		$\times$
		30° 23 <sup>3</sup> 89 15° 30°.
bridgelux.		90° 90°
LED	V18 Gen7	
FWHM / FWTM	Asymmetric	75°70°
Efficiency	89 %	
Peak intensity	0.4 cd/lm	60°
LEDs/each optic	1	
Light colour	White	43°
Required componer		40
		$\times$
		500
		30° 660 30° 30°
bridgelux.		50* 50*
bridgelux. LED	V22 Gen7	95°
LED	V22 Gen7 Asymmetric	29 <sup>4</sup> 29 <sup>4</sup> 29 <sup>4</sup> 29 <sup>4</sup> 29 <sup>4</sup> 29 <sup>4</sup> 29 <sup>4</sup>
LED FWHM / FWTM	Asymmetric	5°* 50
LED FWHM / FWTM Efficiency	Asymmetric 88 %	50° 55° 72° 500 80° 60°
LED FWHM / FWTM Efficiency Peak intensity	Asymmetric 88 % 0.4 cd/m	99 <sup>4</sup> 99 <sup>4</sup> 20 0 <sup>4</sup> 20 0 <sup>4</sup> 0 <sup>4</sup>
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 88 % 0.4 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 88 % 0.4 cd/lm 1 White	99 <sup>3</sup> 73 <sup>4</sup> 6 <sup>4</sup> 6 <sup>4</sup> 6 <sup>4</sup> 500 6 <sup>4</sup> 6 <sup>4</sup> 6 <sup>4</sup> 6 <sup>4</sup> 6 <sup>4</sup>
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 88 % 0.4 cd/lm 1 White	6° <u>80</u> 6° <u>80</u> 9° <u>80</u> 9°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 88 % 0.4 cd/lm 1 White	50 50 50 50 50 50 50 50 50 50 50 50 50 5
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 88 % 0.4 cd/lm 1 White	20
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 88 % 0.4 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 88 % 0.4 cd/lm 1 White	20
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen	Asymmetric 88 % 0.4 cd/lm 1 White	20
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer	Asymmetric 88 % 0.4 cd/lm 1 White hts: V22 Gen7	20
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer	Asymmetric 88 % 0.4 cd/lm 1 White hts: V22 Gen7 Asymmetric	20
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component bridgelux. LED FWHM / FWTM Efficiency	Asymmetric 88 % 0.4 cd/lm 1 White hts: V22 Gen7 Asymmetric 91 %	20
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componer bridgelux. LED FWHM / FWTM Efficiency Peak intensity	Asymmetric 88 % 0.4 cd/lm 1 White hts: V22 Gen7 Asymmetric	20
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component bridgelux. LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 88 % 0.4 cd/m 1 White hts: V22 Gen7 Asymmetric 91 % 0.3 cd/m 1	20
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component bridgelux LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 88 % 0.4 cd/lm 1 White hts: V22 Gen7 Asymmetric 91 % 0.3 cd/lm 1 White	20
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component bridgetux. LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	Asymmetric 88 % 0.4 cd/lm 1 White hts: V22 Gen7 Asymmetric 91 % 0.3 cd/lm 1 White hts:	20
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component bridgelux LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 88 % 0.4 cd/lm 1 White hts: V22 Gen7 Asymmetric 91 % 0.3 cd/lm 1 White hts:	20
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component bridgetux. LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	Asymmetric 88 % 0.4 cd/lm 1 White hts: V22 Gen7 Asymmetric 91 % 0.3 cd/lm 1 White hts:	20



bridgelux.		90° 92°
LED	Vero SE 13	
FWHM / FWTM	Asymmetric	25°
Efficiency	91 %	200
Peak intensity	0.6 cd/lm	60° 60°.
LEDs/each optic	1	
Light colour	' White	400
Required compone		45" 45"
Required compone	113.	
		710
		30° <u>90</u> 30° 30°
bridgelux.		ITY FTI
LED	Vero SE 18	90° 90°
FWHM / FWTM		750 700 75°
	Asymmetric 91 %	
Efficiency		60° 60°.
Peak intensity	0.5 cd/lm	
LEDs/each optic	1	X X
Light colour	White	45° 53'
Required compone	nts:	400
		500
		30° 33°
bridgelux.		90 <sup>4</sup> 90 <sup>4</sup>
LED	VERO13	90 <sup>4</sup>
LED FWHM / FWTM	Asymmetric	90 <sup>4</sup> 90 <sup>4</sup> 70 <sup>4</sup> 70 <sup>5</sup>
LED FWHM / FWTM Efficiency	Asymmetric 89 %	200 754 00 00 00 00 00 00 00 00 00 00 00 00 00
LED FWHM / FWTM Efficiency Peak intensity	Asymmetric 89 % 0.6 cd/lm	200 200 200 200 200 200 200 200
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 89 % 0.6 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 89 % 0.6 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 89 % 0.6 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 89 % 0.6 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 89 % 0.6 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 89 % 0.6 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	Asymmetric 89 % 0.6 cd/lm 1 White	200 / 200 /
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	Asymmetric 89 % 0.6 cd/lm 1 White nts:	200 200 200 200 200 200 200 200
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	Asymmetric 89 % 0.6 cd/lm 1 White nts: VERO18	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	Asymmetric 89 % 0.6 cd/lm 1 White nts: VERO18 Asymmetric	200 200 200 200 200 200 200 200
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone bridgelux. LED FWHM / FWTM Efficiency	Asymmetric 89 % 0.6 cd/lm 1 White nts: VERO18 Asymmetric 90 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	Asymmetric 89 % 0.6 cd/lm 1 White nts: VERO18 Asymmetric 90 % 0.4 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone bridgelux. LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 89 % 0.6 cd/lm 1 White nts: VERO18 Asymmetric 90 % 0.4 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone bridgelux. LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 89 % 0.6 cd/lm 1 White Ints: VERO18 Asymmetric 90 % 0.4 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone bridgelux. LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 89 % 0.6 cd/lm 1 White Ints: VERO18 Asymmetric 90 % 0.4 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone bridgelux. LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 89 % 0.6 cd/lm 1 White Ints: VERO18 Asymmetric 90 % 0.4 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone bridgelux. LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 89 % 0.6 cd/lm 1 White Ints: VERO18 Asymmetric 90 % 0.4 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone bridgelux. LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 89 % 0.6 cd/lm 1 White Ints: VERO18 Asymmetric 90 % 0.4 cd/lm 1 White	



		90* 93*
LED	CMA2550	90°
FWHM / FWTM	Asymmetric	75* 100 75*.
Efficiency	89 %	
Peak intensity	0.4 cd/lm	60 <sup>4</sup> 210 60 <sup>4</sup>
LEDs/each optic Light colour	1 White	300
Required componer		d
Required componen	115.	
		540
		30° <u>660</u> 30° 30°
LED	CMA3090	
FWHM / FWTM	Asymmetric	751 781
Efficiency	89 %	
Peak intensity	0.4 cd/lm	80 <sup>4</sup> 60 <sup>4</sup>
LEDs/each optic	1	200
Light colour	White	er er
Required componer		30
		$\times$ / $\times$
		400
		$\times$ / $\setminus$ $\times$
		(30° 15° 0° 15°
	CMT19yy	20 <sup>1</sup>
LED	CMT19xx Asymmetric	33
LED FWHM / FWTM	Asymmetric	94 <sup>*</sup> 74 <sup>*</sup> 200
LED FWHM / FWTM Efficiency	Asymmetric 90 %	90* 90* 90* 210 60*
LED FWHM / FWTM Efficiency Peak intensity	Asymmetric 90 % 0.6 cd/lm	90 <sup>4</sup> 70 <sup>4</sup> 80 <sup>4</sup> 210 80 <sup>4</sup> 210 80 <sup>4</sup> 80 <sup>4</sup>
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 90 % 0.6 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 90 % 0.6 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 90 % 0.6 cd/lm 1 White nts:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	Asymmetric 90 % 0.6 cd/lm 1 White nts:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component	Asymmetric 90 % 0.6 cd/lm 1 White nts:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen Bender Wirth: 47	Asymmetric 90 % 0.6 cd/lm 1 White nts:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen Bender Wirth: 47	Asymmetric 90 % 0.6 cd/lm 1 White nts:	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen Bender Wirth: 47	Asymmetric 90 % 0.6 cd/lm 1 White nts: 7 Typ Z1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen Bender Wirth: 47	Asymmetric 90 % 0.6 cd/lm 1 White nts: 77 Typ Z1 CXA/B 1816 & CXA/B 1820 & CXA 1850	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen Bender Wirth: 47	Asymmetric 90 % 0.6 cd/lm 1 White nts: 7 Typ Z1 CXA/B 1816 & CXA/B 1820 & CXA 1850 Asymmetric	12 <sup>3</sup> 80 12 <sup>3</sup>
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen Bender Wirth: 47	Asymmetric 90 % 0.6 cd/lm 1 White nts: 7 Typ Z1 CXA/B 1816 & CXA/B 1820 & CXA 1850 Asymmetric 88 %	12 <sup>3</sup> 80 12 <sup>3</sup>
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Bender Wirth: 47	Asymmetric 90 % 0.6 cd/lm 1 White nts: 7 Typ Z1 CXA/B 1816 & CXA/B 1820 & CXA 1850 Asymmetric 88 % 0.6 cd/lm	12 <sup>3</sup> 80 12 <sup>3</sup>
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Bender Wirth: 47 Efficiency Peak intensity LEDs/each optic	Asymmetric 90 % 0.6 cd/lm 1 White nts: 7 Typ Z1 CXA/B 1816 & CXA/B 1820 & CXA 1850 Asymmetric 88 % 0.6 cd/lm 1	15 <sup>2</sup> 80 13 <sup>2</sup>
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Bender Wirth: 47 Ender Wirth: 47 CREE EEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 90 % 0.6 cd/lm 1 White nts: 7 Typ Z1 CXA/B 1816 & CXA/B 1820 & CXA 1850 Asymmetric 88 % 0.6 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Bender Wirth: 47 Efficiency Peak intensity LEDs/each optic	Asymmetric 90 % 0.6 cd/lm 1 White nts: 7 Typ Z1 CXA/B 1816 & CXA/B 1820 & CXA 1850 Asymmetric 88 % 0.6 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Bender Wirth: 47 Ender Wirth: 47 CREE EEDS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 90 % 0.6 cd/lm 1 White nts: 7 Typ Z1 CXA/B 1816 & CXA/B 1820 & CXA 1850 Asymmetric 88 % 0.6 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required componen Bender Wirth: 47 Ender Wirth: 47	Asymmetric 90 % 0.6 cd/lm 1 White nts: 7 Typ Z1 CXA/B 1816 & CXA/B 1820 & CXA 1850 Asymmetric 88 % 0.6 cd/lm 1 White	



LED	CXA/B 25xx	90° 99°
FWHM / FWTM	Asymmetric	75* 75*
	88 %	
Efficiency		60° 200 60°
Peak intensity	0.4 cd/lm	
LEDs/each optic	1	
Light colour	White	45°
Required compone	nts:	
		$\times$
		500
		30° red red 30°
		90* 90*
LED	CXA/B 25xx	750 750
FWHM / FWTM	Asymmetric	
Efficiency	90 %	60 <sup>4</sup> 200 <sup>4</sup> 00
Peak intensity	0.4 cd/lm	
LEDs/each optic	1	X / m X
Light colour	White	42. 43.
Required compone		400
Bender Wirth: 43	39 Typ L3	
		500
		30° 600 30°
A		135 00 15*
ØNICHI∕		90* 90*
LED	СОВ Ј-Туре	
FWHM / FWTM	Asymmetric	75*
Efficiency	89 %	20
Peak intensity	0.6 cd/lm	60*
LEDs/each optic	1	20
Light colour	White	45*
Required compone	nts:	
		500
		30° 13 <sup>2</sup> 0° 15° 30°
OSRAM		
LED	Soleriq S19	*
FWHM / FWTM	Asymmetric	75*
Efficiency	90 %	
Peak intensity	90 % 0.5 cd/lm	60* 200 60*
LEDs/each optic	0.5 ca/m 1	X X X
Light colour	ı White	
		45° 400 45°
Required compone	115.	
		X/TX
		X Toto X
		30°



PHILIP	S		20* 22
LED	Fortimo SLM L19 CoB		
FWHM / FWTM	Asymmetric		750 750
Efficiency	94 %		100
Peak intensity	0.4 cd/lm		.60* 120 60
LEDs/each optic	1		
Light colour	White		
Required componer			es* 20 es
Bender Wirth: 43			300
			XX
			400
			30* 15 <sup>5</sup> 480 15* 30
PHILIP	S		90*
LED	Fortimo SLM L23 CoB		
FWHM / FWTM	Asymmetric		750
Efficiency	94 %		
Peak intensity	0.3 cd/lm	and the second se	60 100
LEDs/each optic	1		
Light colour	White		
Required componer			
Bender Wirth: 43			300
	· · · · · · · · · · · · · · · · · · ·		
			30* 400 15 <sup>3</sup> 0 <sup>*</sup> 15* 30
SAMSL	ING		90*
LED	LC016D / LC019D / LC026D / LC033D		90* 90
FWHM / FWTM	Asymmetric		75* 500 75
Efficiency	88 %		
Peak intensity	0.5 cd/lm		.60* 200 60
LEDs/each optic	1		X 300 X
Light colour	' White		
Required componer			
			X 100
			30° 13° 30
SAMSL			90*
LED	LC040D / LC060D / LC080D		
FWHM / FWTM	Asymmetric		75
Efficiency	90 %		
Peak intensity	0.4 cd/lm		
LEDs/each optic	1		200
Light colour	White		45*
Required componer			K / ***
			X     X
			460
			$\times$ / $\setminus$ $\lambda$



2/11/21	JNG		
LED	LC040D / LC060D / LC080D	. 90°	5
FWHM / FWTM	Asymmetric	75	
Efficiency	88 %		
Peak intensity	0.4 cd/lm	. 614 4	
LEDs/each optic	1	200	
Light colour	White		
Required compone		40"	
		$\times$	
		400	
		/30* 13 <sup>5</sup> 340	15*
<u> </u>	JNG	9*	M
LED	LC040D / LC060D / LC080D	5	
FWHM / FWTM	Asymmetric	785	$\wedge \vee$
Efficiency	88 %		
Peak intensity	0.3 cd/lm		
LEDs/each optic	1	200	
Light colour	White	45.	
Required compone	nts:	300	$f \sim 1$
		400	
		10° 15 <sup>4</sup> 0 <sup>6</sup>	15*
SEOUL SEMICONDUCTOR		80*	FTT
LED	MJT COB LES 14.5		
FWHM / FWTM	Asymmetric	.751	V S
Efficiency	-		XX
EINCIENCY	88 %		
Efficiency Peak intensity		. dat 210	$\langle X \rangle$
Peak intensity	88 % 0.5 cd/lm 1	201	XX
Peak intensity LEDs/each optic	0.5 cd/lm	47 - 24 47	
Peak intensity LEDs/each optic Light colour	0.5 cd/lm 1 White	64* 00 50 67* 60	
Peak intensity LEDs/each optic	0.5 cd/lm 1 White		
Peak intensity LEDs/each optic Light colour	0.5 cd/lm 1 White		
Peak intensity LEDs/each optic Light colour	0.5 cd/lm 1 White	47 - 24 	
Peak intensity LEDs/each optic Light colour Required compone	0.5 cd/lm 1 White	64	13"
Peak intensity LEDs/each optic Light colour Required compone	0.5 cd/lm 1 White		15*
Peak intensity LEDs/each optic Light colour Required compone	0.5 cd/lm 1 White nts:		
Peak intensity LEDs/each optic Light colour Required compone seoul semiconductor LED	0.5 cd/lm 1 White nts: MJT COB LES 14.5		
Peak intensity LEDs/each optic Light colour Required compone scoul semiconductor LED FWHM / FWTM	0.5 cd/lm 1 White nts: MJT COB LES 14.5 Asymmetric		
Peak intensity LEDs/each optic Light colour Required compone seour semiconductor LED FWHM / FWTM Efficiency	0.5 cd/lm 1 White nts: MJT COB LES 14.5 Asymmetric 90 %		
Peak intensity LEDs/each optic Light colour Required compone scour semiconoucror LED FWHM / FWTM Efficiency Peak intensity	0.5 cd/lm 1 White nts: MJT COB LES 14.5 Asymmetric 90 % 0.5 cd/lm		
Peak intensity LEDs/each optic Light colour Required compone SEQUE SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	0.5 cd/lm 1 White Ints: MJT COB LES 14.5 Asymmetric 90 % 0.5 cd/lm 1		
Peak intensity LEDs/each optic Light colour Required compone SEGUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	0.5 cd/lm 1 White Ints: MJT COB LES 14.5 Asymmetric 90 % 0.5 cd/lm 1 White		
Peak intensity LEDs/each optic Light colour Required compone SEGUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	0.5 cd/lm 1 White nts: MJT COB LES 14.5 Asymmetric 90 % 0.5 cd/lm 1 White nts:		
Peak intensity LEDs/each optic Light colour Required compone SEGUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	0.5 cd/lm 1 White nts: MJT COB LES 14.5 Asymmetric 90 % 0.5 cd/lm 1 White nts:		"a
Peak intensity LEDs/each optic Light colour Required compone SEGUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	0.5 cd/lm 1 White nts: MJT COB LES 14.5 Asymmetric 90 % 0.5 cd/lm 1 White nts:		



SEOUL SEOUL SEMICONDUCTOR		95°
LED	MJT COB LES 22	3
FWHM / FWTM	Asymmetric	75*
Efficiency	90 %	
Peak intensity	0.4 cd/lm	64°
LEDs/each optic	1	
Light colour	White	er er
Required compone	nts:	300
Bender Wirth: 43	11 Typ Z1	40
		30° <u>15</u> ° 0° 10° 30°



bridgelux.		90* 90*
LED	V10 Gen7	
FWHM / FWTM	Asymmetric	75°
Efficiency	89 %	
Peak intensity	0.5 cd/lm	.60* 60*.
LEDs/each optic	1	$ X \times  T \setminus X \times  $
Light colour	White	400
Required components:		500
Bender Wirth: 486 Ty	p L1	600
		90° - 30° - 30° - 30°
bridgelux.		
blidgetux		90* 90*
LED	V13 Gen7	750 754
FWHM / FWTM	Asymmetric	200
Efficiency	91 %	.50° 50°.
LEDs/each optic	1	X
Light colour	White	45* 400 42*
Required components:	White	
		200
		600
		30° 700 30° 45° 30°
bridgelux.		90* 90*
LED	V13 Gen7	
FWHM / FWTM	Asymmetric	73°
Efficiency	93 %	210
Peak intensity	40.5 cd/lm	60°.
LEDs/each optic	1	
Light colour	White	45° 400 45°
Required components:		
Bender Wirth: 477 Ty	p Z1	500 X
		640
		30* <u>15</u> <sup>5</sup> 300 <u>15</u> * 33*
$\frown$		15 <sup>2</sup> 790 15*
bridgelux.		90* 90*
LED	V22 Gen7	2
FWHM / FWTM	Asymmetric	73°
Efficiency	94 %	5)*
Peak intensity	0.4 cd/lm	1 million /
LEDs/each optic	1	200
Light colour	White	45° 67*
Required components:		
Bender Wirth: 431 Ty	p Z1	200
		$\times/\top$
		30* <u>500</u> 30* 30*
		19 9° 10°



bridgelux.		90° 90°
LED	VERO10	
FWHM / FWTM	Asymmetric	75°
Efficiency	89 %	
Peak intensity	0.6 cd/lm	504 604
LEDs/each optic	1	
Light colour	White	400
Required components:	white	500
		600
		700
		30° 800 30° 30°
CITIZEN		
		90* 90*
LED	CLL02x/CLU02x (LES10)	710 700
FWHM / FWTM	Asymmetric	
Efficiency	92 %	.60 <sup>4</sup>
Peak intensity	0.6 cd/lm	
LEDs/each optic	1	
Light colour	White	45° 5% 43°
Required components:		60
		710
		20
		90° 15° 80° 15° 30°.
CITIZEN		
CITIZEN		90° 90°
LED	CLL03x/CLU03x	200 200
FWHM / FWTM	Asymmetric	
Efficiency	91 %	504 604
Peak intensity	0.5 cd/lm	
LEDs/each optic	1	
Light colour	White	45* 400 45*
Required components:		200
		$\times$
		600
		30* 35 <sup>5</sup> 700 15* 30*
CITTZEN		
CITIZEN		90° 90°
LED	CLL04x/CLU04x	
FWHM / FWTM	Asymmetric	200
Efficiency	91 %	60° 60°
Peak intensity	0.4 cd/lm	_ 200
LEDs/each optic	1	
Light colour	White	61 61 61
Required components:		
Bender Wirth: 431 Ty	p Z1	
		40
		30°
		18 <sup>2</sup> 0 <sup>8</sup> 15 <sup>6</sup>



LED	CXA/B 1830	90° 90°
FWHM / FWTM	Asymmetric	75* 100 78*
Efficiency	91 %	1 Smile for
	0.5 cd/lm	60* / / / / · · · · · · · · · · · · · · ·
Peak intensity	1	300
LEDs/each optic	u White	$X \times I \times X$
Light colour Required components:	white	45* 400 45*
Required components.		500
		30* <u>15</u> <sup>5</sup> 700 <u>15</u> <sup>*</sup> 30 <sup>*</sup>
	DS	
LED	LUXEON CoB 1208	90° 90°
EED FWHM / FWTM	Asymmetric	75% 100 75%
Efficiency	88 %	
Peak intensity	0.5 cd/lm	64
LEDs/each optic	1	
Light colour	White	
Required components:	WHINE	40 40
Bender Wirth: 431 T	rn 71	
Bender Wirth. 401 1	р <b>2</b> т	× 1 3%
		600
		30° 15° 30°
	זר	TAY YAT
		90* 90*
		90 <sup>4</sup>
LED FWHM / FWTM	LUXEON CoB 1211	20 De 10 DE
LED FWHM / FWTM		29°
LED	LUXEON CoB 1211 Asymmetric	90° 0° 7° 7° 7°
LED FWHM / FWTM Efficiency	LUXEON CoB 1211 Asymmetric 89 %	
LED FWHM / FWTM Efficiency Peak intensity	LUXEON CoB 1211 Asymmetric 89 % 0.4 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LUXEON CoB 1211 Asymmetric 89 % 0.4 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LUXEON CoB 1211 Asymmetric 89 % 0.4 cd/lm 1 White	50 50 50 50 50 50 50 50 50 50 50 50 50 5
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON CoB 1211 Asymmetric 89 % 0.4 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON CoB 1211 Asymmetric 89 % 0.4 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Bender Wirth: 431 T	LUXEON CoB 1211 Asymmetric 89 % 0.4 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON CoB 1211 Asymmetric 89 % 0.4 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Bender Wirth: 431 T	LUXEON CoB 1211 Asymmetric 89 % 0.4 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Bender Wirth: 431 T	LUXEON CoB 1211 Asymmetric 89 % 0.4 cd/lm 1 White yp Z1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Bender Wirth: 431 T	LUXEON CoB 1211 Asymmetric 89 % 0.4 cd/lm 1 White yp Z1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Bender Wirth: 431 T	LUXEON CoB 1211 Asymmetric 89 % 0.4 cd/lm 1 White yp Z1 <b>DS</b> LUXEON CoB 1213/1216/1812 Asymmetric	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Bender Wirth: 431 T Bender Wirth: 431 T Efficiency Peak intensity LEDs/each optic	LUXEON CoB 1211 Asymmetric 89 % 0.4 cd/lm 1 White yp Z1 <b>DS</b> LUXEON CoB 1213/1216/1812 Asymmetric 88 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Bender Wirth: 431 T Bender Wirth: 431 T Efficiency Peak intensity LEDs/each optic	LUXEON CoB 1211 Asymmetric 89 % 0.4 cd/lm 1 White yp Z1 S LUXEON CoB 1213/1216/1812 Asymmetric 88 % 0.3 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Bender Wirth: 431 T Bender Wirth: 431 T Efficiency Peak intensity LEDs/each optic	LUXEON CoB 1211 Asymmetric 89 % 0.4 cd/lm 1 White yp Z1 S LUXEON CoB 1213/1216/1812 Asymmetric 88 % 0.3 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Bender Wirth: 431 T Components: Bender Wirth: 431 T Components: Be	LUXEON CoB 1211 Asymmetric 89 % 0.4 cd/lm 1 White yp Z1 S LUXEON CoB 1213/1216/1812 Asymmetric 88 % 0.3 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Bender Wirth: 431 T CONTINUE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON CoB 1211 Asymmetric 89 % 0.4 cd/lm 1 White yp Z1 S LUXEON CoB 1213/1216/1812 Asymmetric 88 % 0.3 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Bender Wirth: 431 T CONTINUE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LUXEON CoB 1211 Asymmetric 89 % 0.4 cd/lm 1 White yp Z1 S LUXEON CoB 1213/1216/1812 Asymmetric 88 % 0.3 cd/lm 1 White	



	NUS	90'
LED	CxM-22 (28x28)	
FWHM / FWTM	Asymmetric	77
Efficiency	91 %	
Peak intensity	0.4 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required components	s:	340
Bender Wirth: 431 Typ Z1		
		40
		20*
OSRAM Opto Semiconductors		84
LED	Soleriq S13	
FWHM / FWTM	Asymmetric	720 (
Efficiency	91 %	20
Peak intensity	0.6 cd/lm	
LEDs/each optic	1	$\times \times / \top \setminus \times \times$
Light colour	White	40 40
Required components	s:	200
Bender Wirth: 477 Typ Z1		
		20
PHILIP	S	5/* 90
LED	Fortimo SLM L23 + SLM holder (PI)	
FWHM / FWTM	Asymmetric	77
Efficiency	91 %	
Peak intensity	0.3 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required components	s:	
		400
		3° 25 0° 15°