

# PRODUCT DATASHEET C17360\_SPORT-2X2-FT60

# SPORT-2X2-FT60

Narrow forward throw beam for high masts

#### **SPECIFICATION:**

Dimensions	50.0 x 50.0 mm
Height	15.5 mm
Fastening	screw
ROHS compliant	yes 🕕



#### MATERIALS:

Component SPORT-2X2-FT60

Туре	
Multi-lens	

Material	Colour	Finish
PMMA	clear	

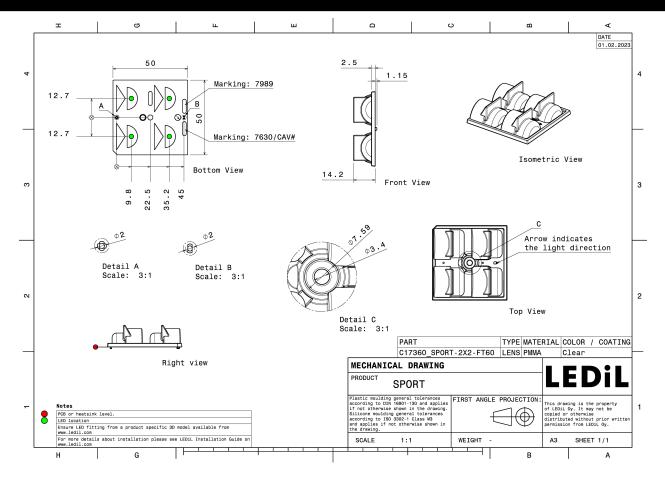
#### **ORDERING INFORMATION:**

Component		
C17360_SPORT-2X2-FT60		
» Box size: 480 x 280 x 300 mm		

Qty in box	MOQ	MPQ	Box weight (kg)
640	128	128	9.5

# 

# PRODUCT DATASHEET C17360\_SPORT-2X2-FT60



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



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

	30* 50*
OSCONIQ C 3030	
Asymmetric	25% 400 78*
94 %	
1.4 cd/lm	.00° 000 60°
1	1220
White	45* 43*
ts:	100
	30° 24bo 30° 15° 0° 15°
	90* 90*
PassivePAQ-R-222x50.OS1.9.7K-750-5 V1.0	
Asymmetric	751 400 751
94 %	
1.5 cd/lm	.60*
1	1200
White	45* 1600 45*
ts:	$X \top X$
	200
	24,50
	94 % 1.4 cd/lm 1 White tts: PassivePAQ-R-222x50.OS1.9.7K-750-5 V1.0 Asymmetric 94 % 1.5 cd/lm 1



CREE ≑		
LEDS	J Series 5050 Round LES	×
FWHM / FWTM		750 750
Efficiency	Asymmetric 78 %	400
	1 cd/lm	.50*
Peak intensity		80
LEDs/each optic	1	
Light colour	White	- 6°*
Required components:		
Protective plate	e glass	
		1600
		30 <sup>4</sup> 15 <sup>5</sup> 0 <sup>6</sup> 15 <sup>4</sup> 39 <sup>4</sup>
	L Carica 5050 David L E C	90* 90*
	J Series 5050 Round LES	750 770
FWHM / FWTM	Asymmetric	400
Efficiency	91 % 4.0 c d//m	.50*
Peak intensity	1.2 cd/lm	$\times$ / $\rightarrow$
LEDs/each optic	1	
Light colour	White	45* 1200 55*
Required components:		
		1600
		30° 15° 0° 15° 30°
CREE ≑		
		10°
LED	J Series 5050B 6V K Class	8 <sup>1</sup>
LED FWHM / FWTM	Asymmetric	90° 90° 90°
LED FWHM / FWTM Efficiency	Asymmetric 89 %	90 <sup>1</sup> 73 60 <sup>0</sup> 60 <sup>0</sup>
LED FWHM / FWTM Efficiency Peak intensity	Asymmetric 89 % 1.1 cd/lm	90° 90° 73° 600 90°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 89 % 1.1 cd/lm 1	90° 90° 80° 80° 80° 80°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 89 % 1.1 cd/lm	2 <sup>1</sup> 2 <sup>3</sup> 6 <sup>3</sup> 6 <sup>3</sup> 6 <sup>3</sup> 6 <sup>3</sup> 6 <sup>3</sup> 6 <sup>3</sup> 6 <sup>3</sup> 6
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 89 % 1.1 cd/lm 1	97 73 60 60 67 72 60 67 67 67
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 89 % 1.1 cd/lm 1	97 97 97 90 90 90 90 90 90 90 90 90 90 90 90 90
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 89 % 1.1 cd/lm 1	90° 90° 90° 90° 90° 90° 90° 90° 90° 90°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 89 % 1.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 89 % 1.1 cd/lm 1	109
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 89 % 1.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 89 % 1.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 89 % 1.1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREE LED FWHM / FWTM Efficiency	Asymmetric 89 % 1.1 cd/lm 1 White J Series 5050C 6V E Class Asymmetric 89 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREE ED FWHM / FWTM Efficiency Peak intensity	Asymmetric 89 % 1.1 cd/lm 1 White J Series 5050C 6V E Class Asymmetric	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREE LED FWHM / FWTM Efficiency	Asymmetric 89 % 1.1 cd/lm 1 White J Series 5050C 6V E Class Asymmetric 89 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREE ED FWHM / FWTM Efficiency Peak intensity	Asymmetric 89 % 1.1 cd/lm 1 White J Series 5050C 6V E Class Asymmetric 89 % 1.1 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	Asymmetric 89 % 1.1 cd/lm 1 White J Series 5050C 6V E Class Asymmetric 89 % 1.1 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	Asymmetric 89 % 1.1 cd/lm 1 White J Series 5050C 6V E Class Asymmetric 89 % 1.1 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	Asymmetric 89 % 1.1 cd/lm 1 White J Series 5050C 6V E Class Asymmetric 89 % 1.1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREECS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 89 % 1.1 cd/lm 1 White J Series 5050C 6V E Class Asymmetric 89 % 1.1 cd/lm 1	



CREE ≑		THATCHEI
LEDS	XHP35.2 HD	90* 90* 300
FWHM / FWTM		730 750
Efficiency	Asymmetric 89 %	400
		50% 500 60%
Peak intensity	1 cd/lm	
LEDs/each optic	1	1000
Light colour	White	
Required components:		1220
		1430
		1600
		30° 15 <sup>3</sup> 0° 15° 30°
		THY YHT
LEDS	XHP35.2 HD	90 <sup>+</sup> 80 <sup>+</sup>
		736 200 75°
FWHM / FWTM	Asymmetric 73 %	200
Efficiency	73 % 0.8 cd/lm	50° 60°
Peak intensity		00
LEDs/each optic	1	
Light colour	White	42,
Required components:		1000
Protective plate	e, glass	1200
	, 9	1400
1		
		30° 15 <sup>2</sup> 0° 15° 30°
		20* <u>20</u> 0 <sup>4</sup> 20* 30 <sup>4</sup>
		89°
LED	XHP35.2 HI	20* <u>10</u> 0* <u>10</u> 0*
LED FWHM / FWTM	Asymmetric	90° 50° 50° 50° 50° 50° 50° 50° 50° 50° 5
LED FWHM / FWTM Efficiency	Asymmetric 77 %	20° 10° 10° 10° 10° 10° 10° 10° 10° 10° 1
LED FWHM / FWTM Efficiency Peak intensity	Asymmetric 77 % 1 cd/lm	20° 12° 20° 20° 20° 20° 20° 20° 20° 20° 20° 2
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 77 % 1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 77 % 1 cd/lm	20° 20° 20° 20° 20° 20° 20° 20° 20° 20°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 77 % 1 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 77 % 1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 77 % 1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 77 % 1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate	Asymmetric 77 % 1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate	Asymmetric 77 % 1 cd/lm 1 White	100
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate	Asymmetric 77 % 1 cd/lm 1 White P, glass XHP35.2 HI	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate	Asymmetric 77 % 1 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate	Asymmetric 77 % 1 cd/lm 1 White a, glass XHP35.2 HI Asymmetric 92 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate Protective plate EED FWHM / FWTM Efficiency Peak intensity	Asymmetric 77 % 1 cd/lm 1 White 2, glass XHP35.2 HI Asymmetric	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate Protective plate ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 77 % 1 cd/lm 1 White p, glass XHP35.2 HI Asymmetric 92 % 1.2 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate Protective plate ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 77 % 1 cd/lm 1 White Asymmetric 92 % 1.2 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate Protective plate ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 77 % 1 cd/lm 1 White p, glass XHP35.2 HI Asymmetric 92 % 1.2 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 77 % 1 cd/lm 1 White p, glass XHP35.2 HI Asymmetric 92 % 1.2 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 77 % 1 cd/lm 1 White p, glass XHP35.2 HI Asymmetric 92 % 1.2 cd/lm 1	



LED	XHP50.3 HI	
FWHM / FWTM	Asymmetric	
Efficiency	92 %	
Peak intensity	1.2 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required components:		
CREE 🔶		
		90* 90*
LED	XHP50.3 HI	A A
FWHM / FWTM	Asymmetric	73* 400 77*
Efficiency	77 %	
Peak intensity	1 cd/lm	60 <sup>-</sup>
LEDs/each optic	1	800
Light colour	White	45*
Required components:		1230
Protective plate	e, glass	1500
		$\angle$ / $\Box$ $\rangle$ $\rangle$
		130, 12, 0, 12, 30,
LED	XM-L3	
FWHM / FWTM	Asymmetric	73° 78°
Efficiency	74 %	400
Peak intensity	1.1 cd/lm	60* 60*
		800
LEDs/each optic	1	
Light colour	White	45° 420 47°
Required components:		
Protective plate	a dass	1650
	, 9000	$\times$ / $\times$ /
		30* <u>200</u> 10* 30*
CREE ≑		
LED	XM-L3	90° 90°
EED FWHM / FWTM	Asymmetric	75* 400 77*
	90 %	
Efficiency		60 <sup>4</sup> 800 60 <sup>4</sup>
Peak intensity	1.3 cd/lm	
LEDs/each optic	1 White	1230
Light colour	White	6°
Required components:		1600
		2000
		2000 200 129 00 129 30



CREE ≑		90* 90*
LED LEDS	XP-E2	No. No.
EED FWHM / FWTM	Asymmetric	750 750
	88 %	000
Efficiency		. 60°
Peak intensity	2 cd/lm	1690
LEDs/each optic	1	
Light colour	Green	45* 45*
Required components:		
		30* m <sup>2</sup> 0 <sup>0</sup> 15 <sup>8</sup> 30 <sup>°</sup>
		THA KHI
	XP-G2	90* 90*
		750 400 750
FWHM / FWTM	Asymmetric 77 %	
Efficiency	1.5 cd/lm	60* 60*
Peak intensity		X
LEDs/each optic	1	1600
Light colour	White	6° 6°
Required components:		200
Protective plate	e, glass	2400
	, 9	
		30* <u>2850</u> 15 <sup>5</sup> 0* 15* 30*
	XP-G2	90° N°
LED	XP-G2 Asymmetric	90 <sup>4</sup> 73 <sup>4</sup> 00 73 <sup>4</sup>
LED FWHM / FWTM	Asymmetric	A A A A A A A A A A A A A A A A A A A
LED FWHM / FWTM Efficiency	Asymmetric 90 %	731 400 751
LED FWHM / FWTM Efficiency Peak intensity	Asymmetric 90 % 1.8 cd/lm	23
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 90 % 1.8 cd/lm 1	73 <sup>3</sup> 40 <sup>3</sup> 72 <sup>4</sup>
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 90 % 1.8 cd/lm	25
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 90 % 1.8 cd/lm 1	73 <sup>3</sup> 40 <sup>3</sup> 72 <sup>4</sup>
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 90 % 1.8 cd/lm 1	75°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 90 % 1.8 cd/lm 1	29 49 72 200 120 69 40 120 69 40 120 69 40 120 69 100 69
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 90 % 1.8 cd/lm 1	73° 400 72° 000 60° 1220 60° 1220 60° 1220 60° 1220 60° 1220 60° 1220 60° 1220 60° 1220 1200 120
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 90 % 1.8 cd/lm 1	75°         400         72°           60°         70°         70°           60°         1100         60°           45°         3000         65°           3000         50°         50°           3000         50°         50°           3000         50°         50°           3000         50°         50°           3000         50°         50°           3000         50°         50°           3000         50°         50°           50°         10°         10°           50°         10°         10°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 90 % 1.8 cd/lm 1 White	50 50 50 100 50 50 50 50 50 50 50 50 50
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 90 % 1.8 cd/m 1 White XP-G2 HE	75°         60°         72°           60°         72°         60°         72°           60°         1120         60°         60°           45°         3000         65°         65°           3000         3000         65°         50°           3000         3000         65°         3000         65°           3000         3000         50°         30°         65°           3000         30°         50°         30°         5°           3000         12°         10°         10°         30°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 90 % 1.8 cd/m 1 White XP-G2 HE Asymmetric	50° 50° 50° 50° 50° 50° 50° 50° 50° 50°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 90 % 1.8 cd/m 1 White XP-G2 HE Asymmetric 88 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 90 % 1.8 cd/lm 1 White XP-G2 HE Asymmetric 88 % 1.8 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREEES LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 90 % 1.8 cd/lm 1 White XP-G2 HE Asymmetric 88 % 1.8 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREEES LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 90 % 1.8 cd/lm 1 White XP-G2 HE Asymmetric 88 % 1.8 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREEES LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 90 % 1.8 cd/lm 1 White XP-G2 HE Asymmetric 88 % 1.8 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREEES LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 90 % 1.8 cd/lm 1 White XP-G2 HE Asymmetric 88 % 1.8 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREECS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 90 % 1.8 cd/lm 1 White XP-G2 HE Asymmetric 88 % 1.8 cd/lm 1	



CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: C17929_SPORT-2X2	XP-G2 HE Asymmetric 61 % 1.6 cd/lm 1 White FT-SHD-BLK	5° 500 60 6° 150 6 6° 150 6 700 150 6 700 150 6 700 150 6 700 150 6 700 150 6 700 150 150 150 150 150 150 150 150 150 1
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: C17929_SPORT-2X2	Asymmetric 61 % 1.6 cd/lm 1 White	65° (1) 67° (2) 800 (1) 800 (1
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: C17929_SPORT-2X2	Asymmetric 61 % 1.6 cd/lm 1 White	65° (1) 67° (2) 800 (1) 800 (1
Efficiency Peak intensity LEDs/each optic Light colour Required components: C17929_SPORT-2X2	61 % 1.6 cd/lm 1 White	65° (1) 67° (2) 800 (1) 800 (1
Peak intensity LEDs/each optic Light colour Required components: C17929_SPORT-2X2	1.6 cd/lm 1 White	6° 100 C
LEDs/each optic Light colour Required components: C17929_SPORT-2X2	1 White	6° 100 C
Light colour Required components: C17929_SPORT-2X2	White	
Required components: C17929_SPORT-2X2		
C17929_SPORT-2X2	-FT-SHD-BLK	202
CREE 🚖	-FI-SHD-BLK	202
CREE <del>\$</del>		201-
CREE ≑		30* 30
CREE 🚖		15 <sup>5</sup> 0 <sup>6</sup> 15 <sup>*</sup>
		THY YAT
LED	XP-G2 HE	1907
EED FWHM / FWTM	Asymmetric	73° 400 72
Efficiency	73 %	
Peak intensity	1.6 cd/lm	65* 65
LEDs/each optic	1	1200
Light colour	White	1590
Required components:	Wille	45°
C18069_SPORT-2X2	FT-SHD-WHT	
010003_01 01(1-2/2		2400
		200
		30° 15° 30
		901
LED	XP-G3	A
FWHM / FWTM	Asymmetric	75° 400 72
Efficiency	73 %	
Peak intensity	1.2 cd/lm	60 <sup>4</sup> 900 62
LEDs/each optic	1	
Light colour	White	45* 1220
Required components:		1000
Protective plate	, glass	2000
		30* 30
CREE ≑		250 15
LEDS		90° 94
	XP-G4	750 400 72
FWHM / FWTM	Asymmetric	200
Efficiency	90 %	604 1220 64
Peak intensity	1.9 cd/lm	1600
LEDs/each optic	1	
Light colour	White	45° 2000 42
Required components:		2430
		× + 200
		200
		30° 15° 380 15° 36
		30*



CREE ÷		
LED LEDS	XP-L HD	30°
FWHM / FWTM	Asymmetric	75° 75°
Efficiency	75 %	
Peak intensity	1.1 cd/lm	60* 60*
	1	
LEDs/each optic Light colour	White	
Required components:	Wine	45* 1200 95*
Required components.		
Protective plate	glass	1600
		30* 2000 15 <sup>5</sup> 0 <sup>6</sup> 15* 30*
		90° 90°
LED	XP-L HD	Real Provide American Ame American American Am American American A
FWHM / FWTM	Asymmetric	75° 400 75°
Efficiency	91 %	
Peak intensity	1.3 cd/lm	60* 800 60*
LEDs/each optic	1	1270
Light colour	White	45* 45
Required components:		1600
		2000
		24,00
		30° 13° 0° 15° 30°
		90* 90*
LED	XP-L HI	A A A
FWHM / FWTM	Asymmetric	75° 400 75°
Efficiency	76 %	
Peak intensity	1.4 cd/lm	60°
LEDs/each optic	1	1200
Light colour	White	459
Required components:		
		2000
Protective plate	glass	
		2400
		30° 30°
CREE ≑		20° 10° 10° 20°
LEDS		Da D
LED LEDS	XP-L HI	
LEDs LED FWHM / FWTM	Asymmetric	90°
LEDs LED FWHM / FWTM Efficiency	Asymmetric 92 %	91°
LEDs LED FWHM / FWTM Efficiency Peak intensity	Asymmetric 92 % 1.7 cd/lm	91* 92* 73* 000 77* 64* 129 66*
LEDs LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 92 % 1.7 cd/lm 1	91* 92* 73* 000 72* 64* 1222 6* 1002
LEDs LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 92 % 1.7 cd/lm	91* 73* 64* 120 64* 120 66* 67* 67* 67* 67* 67* 67* 67* 67* 67*
LEDs LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 92 % 1.7 cd/lm 1	
LEDs LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 92 % 1.7 cd/lm 1	21 <sup>4</sup> 20
LEDs LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 92 % 1.7 cd/lm 1	40° 40° 40° 40° 40° 40° 40° 40° 40° 40°



CREE ≑		
LEDS		90* 90*
	XP-L2	730 782
FWHM / FWTM	Asymmetric	400
Efficiency	72 %	60°
Peak intensity	1 cd/lm	200
LEDs/each optic	1	$\wedge$
Light colour	White	-65*
Required components:		
Protective plate	e, glass	
		30* <u>15</u> <sup>3</sup> 0 <sup>8</sup> 15 <sup>4</sup> 30 <sup>5</sup>
LED	XP-L2	A A
FWHM / FWTM	Asymmetric	25° 400 75°
Efficiency	87 %	$X \times /   $
Peak intensity	1.2 cd/lm	.50 <sup>4</sup> 200 60*.
LEDs/each optic	1	
Light colour	White	45* <u>1230</u> 45*
Required components:		$\times$
		1690
		(30° 30° 30°
CREE ÷		
	XP-P	90° - 90°
LED	XP-P Asymmetric	90° - 90° - 72°
LED FWHM / FWTM	XP-P Asymmetric 93 %	
LED FWHM / FWTM Efficiency	Asymmetric 93 %	
LED FWHM / FWTM Efficiency Peak intensity	Asymmetric	
LED FWHM / FWTM Efficiency	Asymmetric 93 % 2.2 cd/lm	90° 90° 7° 60° 80° 60° 80° 60° 60°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 93 % 2.2 cd/lm 1	90° 70° 80° 80° 80° 80° 80° 80° 80° 80° 80° 8
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 93 % 2.2 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 93 % 2.2 cd/lm 1	200 Pr 200 Pr
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 93 % 2.2 cd/lm 1	64* 169 6* 64* 169 6* 67* 80% 6* 100 7* 100 7* 10
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 93 % 2.2 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 93 % 2.2 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 93 % 2.2 cd/lm 1	9° 9° 9° 9° 10° 10° 10° 10° 10° 10° 10° 10
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 93 % 2.2 cd/lm 1 White	5° 209 6° 209 6° 209 8° 209 8° 209 8° 209 8° 209 8° 209 8° 209 8° 209 8°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 93 % 2.2 cd/lm 1 White XP-P	6° 209 6° 10° 10° 10° 10° 10° 10° 10° 10°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 93 % 2.2 cd/lm 1 White XP-P Asymmetric	5° 209 6° 209 6° 209 8° 209 8° 209 8° 209 8° 209 8° 209 8° 209 8° 209 8°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 93 % 2.2 cd/lm 1 White XP-P Asymmetric 77 %	
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	Asymmetric 93 % 2.2 cd/lm 1 White XP-P Asymmetric 77 % 1.7 cd/lm	6° - 200 200 200 200 200 200 200 200 200 200
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 93 % 2.2 cd/lm 1 White XP-P Asymmetric 77 % 1.7 cd/lm 1	6° 200 200 200 200 200 200 200 200 200 200
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CEEE EU FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 93 % 2.2 cd/lm 1 White XP-P Asymmetric 77 % 1.7 cd/lm 1 White	6° 10° 10° 10° 10° 10° 10° 10° 10
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CEEE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 93 % 2.2 cd/lm 1 White XP-P Asymmetric 77 % 1.7 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CEEE EU FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 93 % 2.2 cd/lm 1 White XP-P Asymmetric 77 % 1.7 cd/lm 1 White	



	S	
LED	LUXEON 3030 2D (Round LES)	90° 5
FWHM / FWTM	Asymmetric	75° 400
Efficiency	76 %	
Peak intensity	1.4 cd/lm	60*
LEDs/each optic	1	1200
Light colour	White	
Required components:		
Protective plate	alaes	2000
		20* 10 <sup>2</sup> 01 01 3
	S	
LED	LUXEON 5050 HE	E C
FWHM / FWTM	Asymmetric	75 400 75
Efficiency	89 %	
Peak intensity	1.1 cd/lm	.60° 60
LEDs/each optic	1	$\times// \times$
Light colour	White	45* 1220 45
Required components:		
		1500
		13 <sup>5</sup> 0 <sup>6</sup> 10 <sup>6</sup>
UMILEC	IS and the second s	90* 90
LED	LUXEON 5050 HE	and the second sec
FWHM / FWTM	Asymmetric	77
Efficiency	74 %	460
Peak intensity	0.9 cd/lm	60° 60
LEDs/each optic	1	
Light colour	White	45* 1000 45
Required components:		1200
Protective plate	, glass	1600
		30 <sup>4</sup> 15 <sup>5</sup> 30
	S	90°
LED	LUXEON 5050 Round LES	A A
FWHM / FWTM	Asymmetric	736 400 77
Efficiency	78 %	
LINGICIUS	1.1 cd/lm	60°
Peak intensity		
Peak intensity	1	
Peak intensity LEDs/each optic	1 White	51
Peak intensity		57 129 0
Peak intensity LEDs/each optic Light colour Required components:	White	
Peak intensity LEDs/each optic Light colour	White	-67 120 4



COMPLET	DS	
LED	LUXEON 5050 Square LES	
FWHM / FWTM	Asymmetric	750 200
Efficiency	76 %	400
Peak intensity	0.9 cd/lm	60° 600 6
LEDs/each optic	1	
Light colour	White	45
Required components:		- 100
Protective plat	e, glass	100
		30 <sup>4</sup> 15 <sup>5</sup> 0 <sup>6</sup> 10 <sup>4</sup> 30
	DS	90*
LED	LUXEON 5050 Square LES	
FWHM / FWTM	Asymmetric	739 73
Efficiency	70 %	40
Peak intensity	1 cd/lm	60* 600 60
LEDs/each optic	1	200
Light colour	White	45* 1000 45
Required components:		1200
C18069_SPORT-2X	2-FT-SHD-WHT	
_		1400
		1500
		30° 15° 30'
	DS	99* 999
LED	LUXEON 5050 Square LES	4
LED FWHM / FWTM	LUXEON 5050 Square LES Asymmetric	73°
FWHM / FWTM	LUXEON 5050 Square LES Asymmetric 89 %	73 400
FWHM / FWTM Efficiency	Asymmetric	
FWHM / FWTM Efficiency Peak intensity	Asymmetric 89 %	25
FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 89 % 1.1 cd/lm	
FWHM / FWTM Efficiency Peak intensity	Asymmetric 89 % 1.1 cd/lm 1	67 120 G
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 89 % 1.1 cd/lm 1	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 89 % 1.1 cd/lm 1	23 <sup>1</sup> 40 50 <sup>1</sup> 00 6 <sup>2</sup> 120 6 <sup>2</sup> 120 6 <sup>2</sup> 40 6 <sup>2</sup> 6 <sup>2</sup>
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 89 % 1.1 cd/lm 1	120
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 89 % 1.1 cd/lm 1	120
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 89 % 1.1 cd/lm 1 White	150
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 89 % 1.1 cd/lm 1 White	120
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 89 % 1.1 cd/lm 1 White S LUXEON 5050 Square LES	120 1300 130 13 <sup>3</sup> 13 <sup>3</sup>
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 89 % 1.1 cd/lm 1 White	100
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 89 % 1.1 cd/lm 1 White S LUXEON 5050 Square LES Asymmetric 58 %	20 20 20 20 20 20 20 20 20 20
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 89 % 1.1 cd/lm 1 White UXEON 5050 Square LES Asymmetric	120 130 13 <sup>3</sup> 13 <sup>3</sup> 15 <sup>3</sup>
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>WIM / COMPARENT</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 89 % 1.1 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>With Compose State</b> <b>ED</b> FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 89 % 1.1 cd/lm 1 White Vhite LUXEON 5050 Square LES Asymmetric 58 % 0.9 cd/lm 1	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>WHM / EVTM</b> Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 89 % 1.1 cd/lm 1 White VNite LUXEON 5050 Square LES Asymmetric 58 % 0.9 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>With Compose State</b> <b>ED</b> FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 89 % 1.1 cd/lm 1 White VNite LUXEON 5050 Square LES Asymmetric 58 % 0.9 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 89 % 1.1 cd/lm 1 White VNite LUXEON 5050 Square LES Asymmetric 58 % 0.9 cd/lm 1 White	120 100 100 100 100 100 100 100



	)S	
LED	LUXEON HL2X	90° 80'
FWHM / FWTM	Asymmetric	75° 400 75'
Efficiency	88 %	200
Peak intensity	1.7 cd/lm	60 <sup>4</sup> 607
LEDs/each optic	1	$X \times I \to X \times$
Light colour	White	45" 45"
Required components:		200
		2400
		30* 30*
		90* 90*
LED	LUXEON TX	700 700
FWHM / FWTM	Asymmetric	
Efficiency	88 %	.60* 010
Peak intensity	1.6 cd/lm	1220
LEDs/each optic	1	1630
Light colour	White	45°
Required components:		
		2430
		200
		30* 15 <sup>2</sup> 9% 15 <sup>4</sup> 30*
	S	INA PHI
LED	LUXEON XR-HL2X (L2H2-xxxxxxMLU010)	90* 90*
FWHM / FWTM		400
	Asymmetric	$\pi$ $\wedge$ $\wedge$ $// $
	Asymmetric 92 %	
Efficiency	92 %	200
Efficiency Peak intensity	92 % 1.5 cd/lm	
Efficiency Peak intensity LEDs/each optic	92 % 1.5 cd/lm 1	50° (61
Efficiency Peak intensity LEDs/each optic Light colour	92 % 1.5 cd/lm	64 (1)))
Efficiency Peak intensity LEDs/each optic	92 % 1.5 cd/lm 1	64 109
Efficiency Peak intensity LEDs/each optic Light colour	92 % 1.5 cd/lm 1	55° (54)
Efficiency Peak intensity LEDs/each optic Light colour	92 % 1.5 cd/lm 1	64 69 57 109 309 309
Efficiency Peak intensity LEDs/each optic Light colour Required components:	92 % 1.5 cd/lm 1 White	59 <sup>4</sup> -0 <sup>5</sup> -0
Efficiency Peak intensity LEDs/each optic Light colour Required components:	92 % 1.5 cd/lm 1 White	
Efficiency Peak intensity LEDs/each optic Light colour Required components:	92 % 1.5 cd/lm 1 White S LUXEON XR-HL2X (L2H2-xxxxxMLU010)	50° (0) 60° 100 (0) 300 (0)
Efficiency Peak intensity LEDs/each optic Light colour Required components:	92 % 1.5 cd/lm 1 White S LUXEON XR-HL2X (L2H2-xxxxxMLU010) Asymmetric	
Efficiency Peak intensity LEDs/each optic Light colour Required components:	92 % 1.5 cd/lm 1 White S LUXEON XR-HL2X (L2H2-xxxxxMLU010) Asymmetric 76 %	
Efficiency Peak intensity LEDs/each optic Light colour Required components:	92 % 1.5 cd/lm 1 White S LUXEON XR-HL2X (L2H2-xxxxxMLU010) Asymmetric 76 % 1.2 cd/lm	
Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>Control Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>C</b>	92 % 1.5 cd/lm 1 White S LUXEON XR-HL2X (L2H2-xxxxxMLU010) Asymmetric 76 % 1.2 cd/lm 1	
Efficiency Peak intensity LEDs/each optic Light colour Required components:	92 % 1.5 cd/lm 1 White S LUXEON XR-HL2X (L2H2-xxxxxMLU010) Asymmetric 76 % 1.2 cd/lm	
Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>Control Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>Control</b> <b>C</b>	92 % 1.5 cd/lm 1 White S LUXEON XR-HL2X (L2H2-xxxxxMLU010) Asymmetric 76 % 1.2 cd/lm 1	
Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>WENTIME CONTINUES</b> EVHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	92 % 1.5 cd/lm 1 White S LUXEON XR-HL2X (L2H2-xxxxxMLU010) Asymmetric 76 % 1.2 cd/lm 1 White	
Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Components:</b> <b>Comp</b>	92 % 1.5 cd/lm 1 White S LUXEON XR-HL2X (L2H2-xxxxxMLU010) Asymmetric 76 % 1.2 cd/lm 1 White	



	US	TAYAH
LED	SFT-40-WCS	90* 90
ED FWHM / FWTM		75° 400 75
Efficiency	90.0 + 15.0° / 142.0 + 61.0° 92 %	
	92 % 1.9 cd/lm	60 <sup>4</sup> 1230 60
Peak intensity		1600
LEDs/each optic	1	$X \times I \to X \times$
Light colour Required components:	White	45° 2000 45'
Required components.		2400
		X 7 300
		200
		30° 19 <sup>5</sup> 3690 15° 30
	JS	90* 99
LED	SFT-70X-WCS	A A A A A A A A A A A A A A A A A A A
FWHM / FWTM	87.0 + 18.0° / 141.0 + 65.0°	756 400 55
Efficiency	92 %	500
Peak intensity	1.6 cd/lm	50 <sup>4</sup> 50 <sup>4</sup>
LEDs/each optic	1	1220
Light colour	White	45* 1600 45*
Required components:		2000
		2400
		2000
		(30° 15 <sup>3</sup> 0° 15° 30°
	JS	90* 90*
LED	SST-70X-WCS	Real Contraction of the second
LED FWHM / FWTM	SST-70X-WCS Asymmetric	20 60 73
		2 <sup>1</sup>
FWHM / FWTM	Asymmetric	50 <sup>4</sup> 500 64
FWHM / FWTM Efficiency	Asymmetric 92 %	197 - 607 - 727 60 <sup>4</sup> - 909 - 607
FWHM / FWTM Efficiency Peak intensity	Asymmetric 92 % 1.1 cd/lm	40° 1130 467
FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 92 % 1.1 cd/lm 1	60 <sup>4</sup> 00 60 <sup>4</sup>
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 92 % 1.1 cd/lm 1	60 <sup>4</sup> 00 60 <sup>4</sup>
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 92 % 1.1 cd/lm 1	60 <sup>4</sup> 00 60 <sup>4</sup>
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 92 % 1.1 cd/lm 1	20
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 92 % 1.1 cd/lm 1 White	25 - 40 - 72 60 <sup>4</sup> - 00 - 60
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 92 % 1.1 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 92 % 1.1 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 92 % 1.1 cd/lm 1 White	Bay
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 92 % 1.1 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 92 % 1.1 cd/lm 1 White SST-70X-WCS Asymmetric 76 % 0.9 cd/lm	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 92 % 1.1 cd/lm 1 White SST-70X-WCS Asymmetric 76 % 0.9 cd/lm 1	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 92 % 1.1 cd/lm 1 White SST-70X-WCS Asymmetric 76 % 0.9 cd/lm	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 92 % 1.1 cd/lm 1 White SST-70X-WCS Asymmetric 76 % 0.9 cd/lm 1	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 92 % 1.1 cd/lm 1 White	
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 92 % 1.1 cd/lm 1 White	



<b>ΜΝΙCΗΙΛ</b>			20*
LED	NFSx757G		
FWHM / FWTM	Asymmetric		750 400
Efficiency	76 %		
Peak intensity	1.4 cd/lm		80*
LEDs/each optic	1		1220
Light colour	White		45*
Required components:			350
Protective pla	te, glass		200
			30° 13 <sup>5</sup> 0 <sup>6</sup> 13°
<b>Μ</b> ΝΙCΗΙΛ			20*
LED	NV4WB35AM		200
FWHM / FWTM	Asymmetric		
Efficiency	61 %		
Peak intensity	1 cd/lm		60° 600
LEDs/each optic	1		800
Light colour	White		45* 1000
Required components:			1200
C18069_SPORT-2X	2-FT-SHD-WHT		1430
Protective pla	te, glass		1600
<b>Μ</b> ΝΙCΗΙΛ		 	25 15 <sup>1</sup> 15 <sup>2</sup>
			90°
	NV4WB35AM		750
FWHM / FWTM	Asymmetric		75 40
FWHM / FWTM Efficiency	Asymmetric 75 %		29 (0) 60
FWHM / FWTM Efficiency Peak intensity	Asymmetric 75 % 1.1 cd/lm		23° 609 60°
FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 75 % 1.1 cd/lm 1		21 60 60 60
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 75 % 1.1 cd/lm 1 White		er 129 190
FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 75 % 1.1 cd/lm 1 White		6° 120
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 75 % 1.1 cd/lm 1 White		90 90 90 90 90 90 90 90 90
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 75 % 1.1 cd/lm 1 White		-0- 
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 75 % 1.1 cd/lm 1 White		20° 20° 20° 20° 20° 20° 20° 20° 20° 20°
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 75 % 1.1 cd/lm 1 White		
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective pla	Asymmetric 75 % 1.1 cd/lm 1 White		
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective pla	Asymmetric 75 % 1.1 cd/lm 1 White te, glass		109 30 <sup>4</sup> 30 <sup>9</sup> 30 <sup>4</sup> 20 30 <sup>4</sup> 20
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective pla	Asymmetric 75 % 1.1 cd/lm 1 White te, glass		
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective pla	Asymmetric 75 % 1.1 cd/lm 1 White te, glass		109 30 <sup>4</sup> 30 <sup>9</sup> 30 <sup>4</sup> 20 30 <sup>4</sup> 20
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective pla	Asymmetric 75 % 1.1 cd/lm 1 White te, glass NV4WB35AM Asymmetric 49 %		50 <sup>-0</sup> 50 <sup>-0</sup> 50 <sup>-0</sup> 60 <sup>-0</sup> 60 <sup>-0</sup>
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective pla	Asymmetric 75 % 1.1 cd/lm 1 White te, glass NV4WB35AM Asymmetric 49 % 0.9 cd/lm		50 <sup>-0</sup> 50 <sup>-0</sup> 50 <sup>-0</sup> 60 <sup>-0</sup> 60 <sup>-0</sup>
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective pla <b>WICHIN</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 75 % 1.1 cd/lm 1 White te, glass NV4WB35AM Asymmetric 49 % 0.9 cd/lm 1 White		
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective pla	Asymmetric 75 % 1.1 cd/lm 1 White te, glass NV4WB35AM Asymmetric 49 % 0.9 cd/lm 1 White		
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective pla <b>WICHIN</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: C17929_SPORT-2X	Asymmetric 75 % 1.1 cd/lm 1 White te, glass NV4WB35AM Asymmetric 49 % 0.9 cd/lm 1 White t2-FT-SHD-BLK		
FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective pla <b>WICHIN</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 75 % 1.1 cd/lm 1 White te, glass NV4WB35AM Asymmetric 49 % 0.9 cd/lm 1 White t2-FT-SHD-BLK		



MICHIΛ		
LED	NV4x144A	90* 90*
EED FWHM / FWTM		750 200 750
Efficiency	Asymmetric 86 %	400
Peak intensity	0.9 cd/lm	.50° 60°.
LEDs/each optic	1	
Light colour	White	
Required components:	White	100
		1200
		1430
		1000
		30* 15 <sup>5</sup> 0 <sup>6</sup> 10* 30*
<b>ΜΝΙCΗΙΛ</b>		90* 90*
LED	NVSW219D	
FWHM / FWTM	Asymmetric	750 400 750
Efficiency	75 %	
Peak intensity	1.5 cd/lm	.50° 60°.
LEDs/each optic	1	1259
Light colour	White	45* 1500 45*
Required components:		
		X/T/X
Protective plate	e, glass	2400
		30° 2200 30° 30° 30°
<b>ΜΝΙCΗΙΛ</b>		
	NV/SW219E	8° 8 8°
LED	NVSW219F Asymmetric	
LED FWHM / FWTM	Asymmetric	30 <sup>2</sup> 400 52 <sup>2</sup>
LED FWHM / FWTM Efficiency	Asymmetric 76 %	
LED FWHM / FWTM Efficiency Peak intensity	Asymmetric	30 <sup>2</sup> 600 75 <sup>2</sup>
LED FWHM / FWTM Efficiency	Asymmetric 76 % 1.3 cd/lm	50° 50° 50°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 76 % 1.3 cd/lm 1	50° 50° 50°
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 76 % 1.3 cd/lm 1 White	6°. 120 120 100 100 100 100 100 100
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 76 % 1.3 cd/lm 1 White	6°. 120 120 100 100 100 100 100 100
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 76 % 1.3 cd/lm 1 White	6°. 120 120 100 100 100 100 100 100
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate	Asymmetric 76 % 1.3 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate	Asymmetric 76 % 1.3 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate	Asymmetric 76 % 1.3 cd/lm 1 White a, glass	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate	Asymmetric 76 % 1.3 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate Protective plate ED FWHM / FWTM Efficiency	Asymmetric 76 % 1.3 cd/lm 1 White e, glass NVSW3x9A Asymmetric	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate	Asymmetric 76 % 1.3 cd/lm 1 White a, glass NVSW3x9A Asymmetric 76 %	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate Protective plate ED FWHM / FWTM Efficiency Peak intensity	Asymmetric 76 % 1.3 cd/lm 1 White e, glass NVSW3x9A Asymmetric 76 % 1.2 cd/lm	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate Protective plate ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 76 % 1.3 cd/lm 1 White e, glass NVSW3x9A Asymmetric 76 % 1.2 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate Protective plate ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 76 % 1.3 cd/lm 1 White a, glass NVSW3x9A Asymmetric 76 % 1.2 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate Protective plate ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 76 % 1.3 cd/lm 1 White a, glass NVSW3x9A Asymmetric 76 % 1.2 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate Protective plate ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 76 % 1.3 cd/lm 1 White a, glass NVSW3x9A Asymmetric 76 % 1.2 cd/lm 1 White	



- (		
<b>ΜΝΙCΗΙΛ</b>		90* 90*
LED	NVSxE21A	R.
FWHM / FWTM	Asymmetric	75° 400 75
Efficiency	77 %	
Peak intensity	1.3 cd/lm	.50* 800 60*
LEDs/each optic	1	
Light colour	White	45* 45*
Required components:		1000
Deste stive what		
Protective plat	e, glass	2000
		30* 15 <sup>5</sup> 380 15* 30*
OSRAM Opto Semiconductors		90 <sup>4</sup> 80 <sup>4</sup>
LED	Duris S8	
FWHM / FWTM	Asymmetric	73° 200 70°
Efficiency	57 %	400
Peak intensity	0.8 cd/lm	50° 600
LEDs/each optic	1	$X \times / I \times X$
Light colour	White	45° 000 45°
Required components:		1000
C17929_SPORT-2X	2-FT-SHD-BLK	1200
		1490 30* 30*
		15 <sup>2</sup> 0 <sup>0</sup> 10 <sup>4</sup>
OSRAM Opto Semiconductors		997 997
OSRAM Opto Semiconductors LED	Duris S8	54 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5
Opto Semiconductors	Duris S8 Asymmetric	90° 90° 90° 90° 90° 90° 90° 90° 90° 90°
Opto Semiconductors		90° 92° 70° 70° 70° 70° 70° 70° 70° 70° 70° 70°
opto Semiconductors LED FWHM / FWTM	Asymmetric	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 70 % 0.9 cd/lm 1	400 - 604
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 70 % 0.9 cd/lm	61° 660 61° 600 800
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 70 % 0.9 cd/lm 1 White	64°
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 70 % 0.9 cd/lm 1 White	61° 660 61° 600 800
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 70 % 0.9 cd/lm 1 White	6° 60 6°
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 70 % 0.9 cd/lm 1 White	64 69 69 69 69 69 69 69 69 69 69 69
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: C18069_SPORT-2X	Asymmetric 70 % 0.9 cd/lm 1 White	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: C18069_SPORT-2X OSRAM Opto Semiconductors	Asymmetric 70 % 0.9 cd/lm 1 White 2-FT-SHD-WHT	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: C18069_SPORT-2X OSRAM Opto Semiconductors LED	Asymmetric 70 % 0.9 cd/lm 1 White 2-FT-SHD-WHT Duris S8	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: C18069_SPORT-2X OSRAM Opto Semiconductors LED FWHM / FWTM	Asymmetric 70 % 0.9 cd/lm 1 White 2-FT-SHD-WHT Duris S8 Asymmetric	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: C18069_SPORT-2X Opto Semiconductors LED FWHM / FWTM Efficiency	Asymmetric 70 % 0.9 cd/lm 1 White 2-FT-SHD-WHT Duris S8 Asymmetric 91 %	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: C18069_SPORT-2X OSSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	Asymmetric 70 % 0.9 cd/lm 1 White 2-FT-SHD-WHT Duris S8 Asymmetric 91 % 1 cd/lm	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: C18069_SPORT-2X OSSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 70 % 0.9 cd/lm 1 White 2-FT-SHD-WHT Duris S8 Asymmetric 91 % 1 cd/lm 1	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: C18069_SPORT-2X  OSSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 70 % 0.9 cd/lm 1 White 2-FT-SHD-WHT Duris S8 Asymmetric 91 % 1 cd/lm	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: C18069_SPORT-2X OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 70 % 0.9 cd/lm 1 White 2-FT-SHD-WHT Duris S8 Asymmetric 91 % 1 cd/lm 1	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: C18069_SPORT-2X OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 70 % 0.9 cd/lm 1 White 2-FT-SHD-WHT Duris S8 Asymmetric 91 % 1 cd/lm 1	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: C18069_SPORT-2X OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 70 % 0.9 cd/lm 1 White 2-FT-SHD-WHT Duris S8 Asymmetric 91 % 1 cd/lm 1	



OSRAM Opto Semiconductors		90*
LED	Duris S8	
FWHM / FWTM	Asymmetric	75° 200 78'
Efficiency	78 %	400
Peak intensity	0.9 cd/lm	60%
LEDs/each optic	1	640
Light colour	' White	20
Required components:	White	1000
Required components.		1200
Protective plat	e, glass	
		1400
		20° 15° 30°
OSRAM Opto Semiconductors		90* 90*
LED	OSCONIQ C 2424	
FWHM / FWTM	Asymmetric	73°
Efficiency	89 %	400
Peak intensity	0.8 cd/lm	60* 600 60*
LEDs/each optic	4	× × ×
Light colour	White	451 451
Required components:		1000
		1200
		1400
		30* 1600 ar
		20 123 <sup>2</sup> 0 <sup>4</sup> 15 <sup>4</sup>
OSRAM Opto Semiconductors		90° 90°
LED	OSCONIQ C 3030	R
FWHM / FWTM	Asymmetric	75° 400 77°
Efficiency	78 %	
Peak intensity		60* 800 60*
	1.3 cd/lm	$\square$
LEDs/each optic	1.3 cd/lm 1	1220
		6 6
LEDs/each optic	1	
LEDs/each optic Light colour Required components:	1 White	
LEDs/each optic Light colour	1 White	
LEDs/each optic Light colour Required components:	1 White	
LEDs/each optic Light colour Required components: Protective plat	1 White	6° 60 700 700 700 700 700 700 700 700 700
LEDs/each optic Light colour Required components: Protective plat	1 White	
LEDs/each optic Light colour Required components: Protective plat	1 White e, glass OSCONIQ P 3737 (2W version)	
LEDs/each optic Light colour Required components: Protective plat OSRAM Opto Semiconductors LED FWHM / FWTM	1 White e, glass OSCONIQ P 3737 (2W version) Asymmetric	
LEDs/each optic Light colour Required components: Protective plat Opto Semiconductors LED FWHM / FWTM Efficiency	1 White e, glass OSCONIQ P 3737 (2W version) Asymmetric 51 %	
LEDs/each optic Light colour Required components: Protective plat Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	1 White e, glass OSCONIQ P 3737 (2W version) Asymmetric 51 % 1.3 cd/lm	
LEDs/each optic Light colour Required components: Protective plat OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	1 White e, glass OSCONIQ P 3737 (2W version) Asymmetric 51 % 1.3 cd/lm 1	
LEDs/each optic Light colour Required components: Protective plat Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	1 White e, glass OSCONIQ P 3737 (2W version) Asymmetric 51 % 1.3 cd/lm	
LEDs/each optic Light colour Required components: Protective plat OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	1 White e, glass OSCONIQ P 3737 (2W version) Asymmetric 51 % 1.3 cd/lm 1 White	
LEDs/each optic Light colour Required components: Protective plat Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	1 White e, glass OSCONIQ P 3737 (2W version) Asymmetric 51 % 1.3 cd/lm 1 White	
LEDs/each optic Light colour Required components: Protective plat Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	1 White e, glass OSCONIQ P 3737 (2W version) Asymmetric 51 % 1.3 cd/lm 1 White 2-FT-SHD-BLK	



Tensenterial service plates and the service plate service plates and the service plates and	OSRAM Opto Semiconductors LED FWHM / FWTM		50° 50°
D OSCONIQ P 3737 (2W version) H/H / FWTM Asymmetric iciency 76 % ak intensity 1.5 cd/m Ds/each optic 1 ht colour White quired components: Protective plate, glass	LED FWHM / FWTM		
VHM / FWTM Asymetric iciency 76 % ak intensity 1.5 cd/m De/each optic 1 ht colour White quired components:          Protective plate, glass         Protective plate, glass             STAMM ak intensity 1.2 cd/m Ds/each optic 1 ht colour White quired components:             Protective plate, glass             State             State             Image: state             State             Image: state             Image: state             Image: state             Image: state             Image: state             Image: state	FWHM / FWTM		
iciency 76 % ak intensity 1.5 cd/lm Ds/each optic 1 ht colour White quired components: Protective plate, glass		Asymmetric	75° 400 78°
ak intensity 1.5 cd/lm Ds/each optic 1 th t colour White quired components: Protective plate, glass			
Develophic 1 thi colour White quired components: Protective plate, glass			604
ht colour White quired components: Protective plate, glass			1200
quired components: Protective plate, glass   SERMAND  D O O SCONIQ P 3737 (3W version)  VHM / FWTM Asymmetric  iciency C SCONIQ P 3737 (3W version)  VHM / FWTM Asymmetric  iciency SCONIQ P 3737 Flat  VHM / FWTM Asymmetric  iciency S3 %			$X \times I \times X$
Protective plate, glass  SRAM Sensence D O OSCONIQ P 3737 (3W version)  HM / FWTM Asymmetric  iciency 75 % ak intensity 1.2 cd/lm Ds/each optic 1 th colour White quired components:  Protective plate, glass  SRAM Sensence Sensence D D OSCONIQ P 3737 Flat HM / FWTM Asymmetric  iciency 93 %		Wille	45*
SERVE Server	Required components.		200
Server Server Server Server Server Server Server Server D OSCONIQ P 3737 (3W version) VHM / FWTM Asymmetric iciency 75 % ak intensity 1.2 cd/lm DS/each optic 1 ht colour White equired components: Protective plate, glass Server Server Server D OSCONIQ P 3737 Flat VHM / FWTM Asymmetric iciency 93 %	Protective plate	, glass	2000
Server Server Server Server Server Server Server Server D OSCONIQ P 3737 (3W version) VHM / FWTM Asymmetric iciency 75 % ak intensity 1.2 cd/lm DS/each optic 1 ht colour White equired components: Protective plate, glass Server Server Server D OSCONIQ P 3737 Flat VHM / FWTM Asymmetric iciency 93 %			
Isemicentuctors D O OSCONIQ P 3737 (3W version) WHM / FWTM Asymmetric iciency 75 % ak intensity 1.2 cd/lm Ds/each optic 1 . toclour White quired components: Protective plats Protective plats SEREMS Semeentation D OSCONIQ P 3737 Flat WHM / FWTM Asymmetric iciency 93 %			30* 12 <sup>6</sup> 280 15* 30*
D OSCONIQ P 3737 (3W version) VHM / FWTM Asymmetric iciency 75 % ak intensity 1.2 cd/lm Ds/each optic 1 ht colour White quired components: Protective plate, glass SERME Semiconductors D OSCONIQ P 3737 Flat VHM / FWTM Asymmetric iciency 93 %	OSRAM Opto Semiconductors		90* 90*
VHM / FWTM     Asymmetric       iciency     75 %       ak intensity     1.2 cd/lm       Ds/each optic     1       iht colour     White       ioguired components:     Protective plate, glass       Protective plate, glass     Image: space s	LED	OSCONIQ P 3737 (3W version)	
ak in ensity 1.2 cd/lm Ds/each optic 1 ht colour White quired components: Protective plate, glass D OSCONIQ P 3737 Flat VHM / FWTM Asymmetric iciency 93 %	FWHM / FWTM	Asymmetric	73° 400 75°
ak intensity 1.2 cd/lm   Ds/each optic 1   iht colour White   iquired components: Protective plate, glass     Protective plate, glass     SRAM   Semiconductors   D OSCONIQ P 3737 Flat   VHIM / FWTM   Asymmetric   iciency 93 %	Efficiency	75 %	
ht colour White quired components: Protective plate, glass SRAM Semiconductors D OSCONIQ P 3737 Flat VHM / FWTM Asymmetric iciency 93 %	Peak intensity	1.2 cd/lm	60* 60*
tht colour White equired components:  Protective plate, glass  Protective plate, glass  Semiconductors D OSCONIQ P 3737 Flat VHM / FWTM Asymmetric iciency 93 %	LEDs/each optic	1	
Protective plate, glass	Light colour	White	45°
SRAM Semiconductors D OSCONIQ P 3737 Flat VHM / FWTM Asymmetric iciency 93 %	Required components:		1000
SRAM Semiconductors D OSCONIQ P 3737 Flat VHM / FWTM Asymmetric iciency 93 %			$\times$ $/$ $\times$ $/$ $\times$
SRAM Semiconductors D OSCONIQ P 3737 Flat VHM / FWTM Asymmetric iciency 93 %	Protective plate	, glass	2000
SRAM Semiconductors D OSCONIQ P 3737 Flat VHM / FWTM Asymmetric iciency 93 %			
Isemiconductors       D     OSCONIQ P 3737 Flat       VHM / FWTM     Asymmetric       iciency     93 %			30° 30° 30° 30°
D OSCONIQ P 3737 Flat VHM / FWTM Asymmetric iciency 93 %	OSRAM Opto Semiconductors		90* 90*
VHM / FWTM Asymmetric iciency 93 %	LED	OSCONIQ P 3737 Flat	A A A A A A A A A A A A A A A A A A A
iciency 93 %	FWHM / FWTM		73° 400 73°
A1 <sup>6</sup> X / / X / A0	Efficiency		
ak intensity 1.5 cd/lm	Peak intensity	1.5 cd/lm	10 <sup>4</sup>
	LEDs/each optic	1	1230
	Light colour	White	45* 1000 45*
	Required components:		
			2000
22 <sup>3</sup> 2000 12 <sup>4</sup>			30* 15 <sup>5</sup> 2890 15* 30*
	OSRAM		
Samiconductore	LED	OSCONIO S 5050	
Semiconductors			736 778
D OSCONIQ S 5050			400
VHM / FWTM Asymmetric			80° X / 60°
VHM / FWTM Asymmetric iciency 93 %			
VHM / FWTM Asymmetric iciency 93 % ak intensity 1 cd/lm			
VHM / FWTM Asymmetric iciency 93 % ak intensity 1 cd/lm Ds/each optic 1		WING .	45* 45*
VHM / FWTM Asymmetric iciency 93 % ak intensity 1 cd/lm Ds/each optic 1 th colour White			
VHM / FWTM Asymmetric iciency 93 % ak intensity 1 cd/lm Ds/each optic 1 th colour White	Required components:		
VHM / FWTM Asymmetric iciency 93 % ak intensity 1 cd/lm Ds/each optic 1 th colour White			
VHM / FWTM Asymmetric iciency 93 % ak intensity 1 cd/lm Ds/each optic 1 th colour White			109



OSRAM Opto Semiconductors		
LED	OSCONIQ S 5050	
FWHM / FWTM	Asymmetric	75% 200 75%
Efficiency	78 %	400
Peak intensity	0.9 cd/lm	60* 60*
-		
LEDs/each optic	1	
Light colour	White	45°
Required components:		
Protective plate	e, glass	1220
		3430
		30 <sup>+</sup> 13 <sup>5</sup> 18 <sup>5</sup> 0 15 <sup>+</sup> 30 <sup>+</sup>
OSRAM Opto Semiconductors		80°
LED	OSLON Square CSSRM2/CSSRM3	
FWHM / FWTM	Asymmetric	75° 400 75°
Efficiency	51 %	
Peak intensity	1.3 cd/lm	60° 60°
LEDs/each optic	1	1200
Light colour	White	45*
Required components:		1600
C17929_SPORT-2X2	2-FT-SHD-BLK	
_		200
Protective plate	e, glass	3p* 300 3p* 3p*
		10, 0, 10,
OSRAM		THA VAL
OSRAM Opto Semiconductors		8° 80°
Opto Semiconductors	OSLON Square CSSRM2/CSSRM3	50° 50°
opto Semiconductors LED FWHM / FWTM	Asymmetric	50° 50° 50° 50° 50° 50° 50° 50° 50° 50°
Opto Semiconductors		90°
opto Semiconductors LED FWHM / FWTM	Asymmetric	.60 <sup>4</sup> 60 <sup>4</sup>
<sup>opto Semiconductors</sup> LED FWHM / FWTM Efficiency	Asymmetric 76 %	
<sup>opto Semiconductors</sup> LED FWHM / FWTM Efficiency Peak intensity	Asymmetric 76 % 1.5 cd/lm	.60 <sup>4</sup> 60 <sup>4</sup>
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 76 % 1.5 cd/lm 1	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 76 % 1.5 cd/lm 1 White	- <u>10</u>
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 76 % 1.5 cd/lm 1 White	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 76 % 1.5 cd/lm 1 White	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate	Asymmetric 76 % 1.5 cd/lm 1 White	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate OSSRAM Opto Semiconductors	Asymmetric 76 % 1.5 cd/lm 1 White e, glass	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate OSSRAM Opto Semiconductors LED	Asymmetric 76 % 1.5 cd/lm 1 White e, glass OSLON Square CSSRM2/CSSRM3	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate OSRAM Opto Semiconductors LED FWHM / FWTM	Asymmetric 76 % 1.5 cd/lm 1 White e, glass OSLON Square CSSRM2/CSSRM3 Asymmetric	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency	Asymmetric 76 % 1.5 cd/lm 1 White e, glass OSLON Square CSSRM2/CSSRM3 Asymmetric 73 %	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	Asymmetric 76 % 1.5 cd/lm 1 White e, glass OSLON Square CSSRM2/CSSRM3 Asymmetric 73 % 1.5 cd/lm	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate OSSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 76 % 1.5 cd/lm 1 White e, glass OSLON Square CSSRM2/CSSRM3 Asymmetric 73 % 1.5 cd/lm 1	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate OSSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 76 % 1.5 cd/lm 1 White e, glass OSLON Square CSSRM2/CSSRM3 Asymmetric 73 % 1.5 cd/lm	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 76 % 1.5 cd/lm 1 White e, glass OSLON Square CSSRM2/CSSRM3 Asymmetric 73 % 1.5 cd/lm 1 White	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate OSSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 76 % 1.5 cd/lm 1 White e, glass OSLON Square CSSRM2/CSSRM3 Asymmetric 73 % 1.5 cd/lm 1 White	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 76 % 1.5 cd/lm 1 White e, glass OSLON Square CSSRM2/CSSRM3 Asymmetric 73 % 1.5 cd/lm 1 White	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 76 % 1.5 cd/lm 1 White e, glass OSLON Square CSSRM2/CSSRM3 Asymmetric 73 % 1.5 cd/lm 1 White	



OSRAM Opto Semiconductors		90* 90*
LED	OSLON Square CSSRM2/CSSRM3	
FWHM / FWTM	Asymmetric	75° 400 77°
Efficiency	63 %	
Peak intensity	1.3 cd/lm	.50* <u>800</u> 50*
LEDs/each optic	1	1200
Light colour	White	5° 5°
Required components:	THE STREET	1000
C18069_SPORT-2X	2.FT.SHD.WHT	
		2000
Protective plat	e, glass	2000 2000 25 <sup>5</sup> 0 <sup>4</sup> 15 <sup>4</sup> 20 <sup>5</sup>
OSRAM Opto Semiconductors		80° 90
LED	OSLON Square CSSRM2/CSSRM3	
FWHM / FWTM	Asymmetric	750 400 70*
Efficiency	62 %	800
Peak intensity	1.5 cd/lm	60 <sup>4</sup> 60 <sup>4</sup> .
LEDs/each optic	1	1200
Light colour	White	45* 1600 5*
Required components:		
C17929_SPORT-2X2	2-FT-SHD-BLK	
		2400
		200
		30° 15° 0° 15° 30°
OSRAM Opto Semiconductors		90° 90°
Opto Semiconductors	OSLON Square CSSRM2/CSSRM3	90°
Opto Semiconductors	OSLON Square CSSRM2/CSSRM3 Asymmetric	9/* 13* 900 72*
Opto Semiconductors LED FWHM / FWTM	Asymmetric	400
opto Semiconductors LED FWHM / FWTM Efficiency	Asymmetric 90 %	
opto semiconductors LED FWHM / FWTM Efficiency Peak intensity	Asymmetric 90 % 1.7 cd/lm	173 409 77. 600 607 607 607 607 607 607 607 607 607
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 90 % 1.7 cd/lm 1	77 40 77 72 80 60 100 100
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 90 % 1.7 cd/lm	173 409 77. 600 607 607 607 607 607 607 607 607 607
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 90 % 1.7 cd/lm 1	25° 409 72° 000 60° 000 60° 1009 60°
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 90 % 1.7 cd/lm 1	77 40 77 77 77 77 77 77 77 77 77 77 77 77 77
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 90 % 1.7 cd/lm 1	77 40 77 77 77 77 77 77 77 77 77 77 77 77 77
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 90 % 1.7 cd/lm 1	77 40 77 77 77 77 77 77 77 77 77 77 77 77 77
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 90 % 1.7 cd/lm 1	175 40 75 75 75 75 75 75 75 75 75 75 75 75 75
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDS/each optic Light colour Required components:	Asymmetric 90 % 1.7 cd/lm 1 White	175 40 75 75 75 75 75 75 75 75 75 75 75 75 75
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED	Asymmetric 90 % 1.7 cd/lm 1 White OSLON Square Flat	10         73           10         10           10         <
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM	Asymmetric 90 % 1.7 cd/lm 1 White OSLON Square Flat Asymmetric	400 600 600 1000 400 1000 400 1000 400 400
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency	Asymmetric 90 % 1.7 cd/lm 1 White OSLON Square Flat Asymmetric 92 %	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	Asymmetric 90 % 1.7 cd/lm 1 White OSLON Square Flat Asymmetric 92 % 1.8 cd/lm	200 200 200 200 200 200 200 200
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 90 % 1.7 cd/lm 1 White OSLON Square Flat Asymmetric 92 % 1.8 cd/lm 1	40 40 40 40 50 50 50 50 50 50 50 50 50 5
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 90 % 1.7 cd/lm 1 White OSLON Square Flat Asymmetric 92 % 1.8 cd/lm	200 200 200 200 200 200 200 200
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 90 % 1.7 cd/lm 1 White OSLON Square Flat Asymmetric 92 % 1.8 cd/lm 1	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 90 % 1.7 cd/lm 1 White OSLON Square Flat Asymmetric 92 % 1.8 cd/lm 1	173 40 100 120 100 100 100 100 100 10
opto Semiconductors 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	Asymmetric 90 % 1.7 cd/lm 1 White OSLON Square Flat Asymmetric 92 % 1.8 cd/lm 1	
opto Semiconductors 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	Asymmetric 90 % 1.7 cd/lm 1 White OSLON Square Flat Asymmetric 92 % 1.8 cd/lm 1	



OSRAM		
Opto Semiconductors	OSTAR Projection Compact (KW.CSLNM1.TG)	90* 90*
FWHM / FWTM	Asymmetric	73%
Efficiency	92 %	900
-	1.8 cd/lm	.60* <u>1220</u> 60*
Peak intensity		
LEDs/each optic	1	1620
Light colour	White	6°
Required components:		2430
		200
		3200
		30* 15 <sup>1</sup> 30*
SAMSUN		
		90° 90°
LED	LH351B	
FWHM / FWTM	Asymmetric	
Efficiency	75 %	50* 000 66*
Peak intensity	1.4 cd/lm	
LEDs/each optic	1	1220
Light colour	White	45* 1600 45*
Required components:		
Droto etivo inloto		200
Protective plate	, glass	24,00
		30* 30* 30*
SAMSUN	IC	THY EFT
		90° 90°
LED	LH351C	750 400 750
FWHM / FWTM	Asymmetric	
Efficiency	77 %	50 <sup>+</sup> 8% 69*
Peak intensity	1.4 cd/lm	
LEDs/each optic	1	1220
Light colour	White	45* 45*
Required components:		$\times$
Protective plate	glass	
		30° 13 <sup>5</sup> 0° 15* 30°
SAMSUN	IG	I TA KHI
		90°
		73% 400 73°
		504 504
-		120
Light colour	White	1600
Required components:	AALUG	6°, 6°,
required components:		2000
		2430
		200
		20.4
ED WHM / FWTM fficiency Peak intensity EDs/each optic	LH351C Asymmetric 88 % 1.6 cd/lm 1	1730 600 72 1. 604 604



SAMSUN	IG	
LED	LH351D	A A
FWHM / FWTM	Asymmetric	750 400
Efficiency	74%	
Peak intensity	1.1 cd/im	.50 <sup>4</sup> 90
LEDs/each optic	1	X/ T X
Light colour	White	45* 1200 45
Required components:		
Protective plate	dass	1630
i iotootiro piato		
		30* 2000 13 <sup>5</sup> 0 <sup>6</sup> 13 <sup>4</sup> 30
SAMSUN	IG	90*
LED	LH351D	
FWHM / FWTM	Asymmetric	75* 400 75
Efficiency	88 %	
Peak intensity	1.3 cd/lm	-60°
LEDs/each optic	1	1270
Light colour	White	45' 45
Required components:		001
		2000
		30* <u>2400</u> 30 0 <sup>*</sup> 15 <sup>5</sup> 0 <sup>*</sup> 15 <sup>*</sup> 30
		15° 0° 15°
SVWSUV	10	90° 90
LED	LH502C	
FWHM / FWTM	Asymmetric	400
Efficiency	89 %	
Peak intensity	1 cd/lm	00
LEDs/each optic	1	
Light colour	White	45° 45
Required components:		
		1600
		100
		30 <sup>30</sup> 432 0 <sup>4</sup> 159 30
SAMSUN	IG	15 <sup>2</sup> 0 <sup>4</sup> 15 <sup>3</sup>
	LH502C	13 <sup>2</sup> 0 <sup>4</sup> 13 <sup>3</sup>
		30°
LED FWHM / FWTM	LH502C	80° 0° 10° 80°
LED FWHM / FWTM Efficiency	LH502C Asymmetric	30°
LED FWHM / FWTM Efficiency Peak intensity	LH502C Asymmetric 75 %	20 <sup>2</sup> 0 <sup>2</sup> 20 <sup>2</sup> 2
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	LH502C Asymmetric 75 % 0.9 cd/lm	20 <sup>2</sup> 0 <sup>2</sup> 10 <sup>2</sup> 20 20 20 20 20 20 20 20 20 20
LED	LH502C Asymmetric 75 % 0.9 cd/lm 1	20 <sup>-</sup> 20
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	LH502C Asymmetric 75 % 0.9 cd/lm 1 White	20 <sup>2</sup> 0 <sup>2</sup> 10 <sup>2</sup>
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	LH502C Asymmetric 75 % 0.9 cd/lm 1 White	20 <sup>-</sup> 20



SEOUL		
SEOUL SEMICONDUCTOR		
LED	MJT 5050	
FWHM / FWTM	Asymmetric	
Efficiency	76 %	
Peak intensity	0.9 cd/lm	
LEDs/each optic	1	
Light colour	White	
Required components:		
Protective plate	, glass	
SEOUL		90°
LED	SEOUL DC 5050 6V	and the second
FWHM / FWTM	Asymmetric	75* 400 75*
Efficiency	89 %	
Peak intensity	1 cd/lm	40° 60°.
LEDs/each optic	1	$\times$ / $\longrightarrow$ $\times$ /
Light colour	White	45* 45*
Required components:		1220
		$\times$ / $\times$
		1500
		115 <sup>3</sup> 0 <sup>6</sup> 115 <sup>4</sup>
SEOUL		90* 92*
SEOUL SEMICONDUCTOR	SEOUL DC 5050 6V	30°
FWHM / FWTM	Asymmetric	73° 200 75°
Efficiency	76 %	400
Peak intensity	0.9 cd/lm	80 <sup>4</sup> 660
LEDs/each optic	1	
Light colour	White	85°
Required components:	wille	40. 1000 40.
Required components.		1200
Protective plate	, glass	
		3430
		30* 15 <sup>5</sup> 1690 15* 30*
SEOUL		90°
SEOUL SEMICONDUCTOR	Z5M3	N <sup>2</sup>
seoul semiconductor LED	Z5M3 Asymmetric	30- 50- 50- 50- 50- 50- 50- 50- 50- 50- 5
seoul semiconductor LED FWHM / FWTM	Asymmetric	<u>30</u> 39+ 69 75
seoul semiconductor LED FWHM / FWTM Efficiency	Asymmetric 76 %	91° 97° 33° 60° 970 60°
seoul semiconductor LED FWHM / FWTM Efficiency Peak intensity	Asymmetric 76 % 1.2 cd/lm	7 <sup>1</sup> 40 77.
seoul semiconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 76 % 1.2 cd/lm 1	7 <sup>1</sup> <u>60</u> 77.
SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 76 % 1.2 cd/lm	32         40         75           61 <sup>x</sup> 90         60 <sup>x</sup> 62 <sup>x</sup> 120         67
seoul semiconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 76 % 1.2 cd/lm 1	294 400 795 60 <sup>5</sup> 900 60 <sup>5</sup>
SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 76 % 1.2 cd/lm 1 White	6 <sup>1</sup> 6 <sup>2</sup> 6 <sup>2</sup>
SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 76 % 1.2 cd/lm 1 White	32         40         75           61 <sup>x</sup> 90         60 <sup>x</sup> 62 <sup>x</sup> 120         67



<b>r</b>		
SEOUL		THAT AT I
	7511	90* 90*
LED	Z5M4	73° 400 73°
FWHM / FWTM	Asymmetric	
Efficiency	77 %	60 <sup>4</sup> 800 604
Peak intensity	1.4 cd/lm	
LEDs/each optic	1	1220
Light colour	White	45* 45*
Required components:		
Protective plate		2000
	, 9000	
		30* 15 <sup>3</sup> 0 <sup>6</sup> 15 <sup>4</sup> 30 <sup>4</sup>
SEOUL		
SEOUL SEMICONDUCTOR		90* 90*
LED	Z5M5	
FWHM / FWTM	Asymmetric	400 - 78°
Efficiency	88 %	50 <sup>4</sup> pin set
Peak intensity	1.3 cd/lm	$K \times / T \times Z$
LEDs/each optic	1	1220
Light colour	White	45*
Required components:		1650
		$\times$
		2000
		15° 2420 15° 30°
		20 Y 29
		91 <sup>4</sup> 91 <sup>4</sup>
SEOUL SEMICONDUCTOR	75M5	20° 20°
seoul semiconductor LED	Z5M5 Asymmetric	91 <sup>4</sup> 91 <sup>4</sup>
seoul semiconductor LED FWHM / FWTM	Asymmetric	91 <sup>4</sup> 91 <sup>4</sup>
seoul semiconductor LED FWHM / FWTM Efficiency	Asymmetric 76 %	91 <sup>4</sup> 91 <sup>4</sup>
seoul semiconductor LED FWHM / FWTM Efficiency Peak intensity	Asymmetric 76 % 1.1 cd/lm	91 <sup>4</sup> 91 <sup>4</sup>
seoul semiconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 76 % 1.1 cd/lm 1	20° 20° 20° 20° 20° 20° 20° 20° 20° 20°
seoul semiconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 76 % 1.1 cd/lm	91 <sup>4</sup> 91 <sup>4</sup>
seoul semiconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 76 % 1.1 cd/lm 1	20° 20° 20° 20° 20° 20° 20° 20° 20° 20°
seoul semiconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 76 % 1.1 cd/lm 1 White	20° 20° 20° 20° 20° 20° 20° 20° 20° 20°
seoul semiconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 76 % 1.1 cd/lm 1 White	90 <sup>2</sup> 17 <sup>2</sup> 60 <sup>4</sup> 60 <sup>4</sup> 60 <sup>4</sup> 60 <sup>4</sup> 60 <sup>4</sup> 60 <sup>4</sup> 60 <sup>4</sup>
seoul semiconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 76 % 1.1 cd/lm 1 White	50° 50° 50° 50° 50° 50° 50° 50° 50° 50°
SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate	Asymmetric 76 % 1.1 cd/lm 1 White	90° 90° 90° 90° 90° 90° 90° 90° 90° 90° 90° 90° 90° 90° 90° 90° 90° 90°
SECOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate SECOUL SEMICONDUCTOR	Asymmetric 76 % 1.1 cd/lm 1 White	
SECOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate SECOUL SEMICONDUCTOR LED	Asymmetric 76 % 1.1 cd/lm 1 White 28Y22	
SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate SEOUL SEMICONDUCTOR LED FWHM / FWTM	Asymmetric 76 % 1.1 cd/lm 1 White 28Y22 Asymmetric	
SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency	Asymmetric 76 % 1.1 cd/lm 1 White 2, glass Z8Y22 Asymmetric 90 %	
SECOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate SECOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity	Asymmetric 76 % 1.1 cd/lm 1 White 2, glass Z8Y22 Asymmetric 90 % 1.2 cd/lm	
SECOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate SECOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 76 % 1.1 cd/lm 1 White p, glass Z8Y22 Asymmetric 90 % 1.2 cd/lm 1	
SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 76 % 1.1 cd/lm 1 White 2, glass Z8Y22 Asymmetric 90 % 1.2 cd/lm	
SECOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate SECOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 76 % 1.1 cd/lm 1 White p, glass Z8Y22 Asymmetric 90 % 1.2 cd/lm 1	
SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 76 % 1.1 cd/lm 1 White p, glass Z8Y22 Asymmetric 90 % 1.2 cd/lm 1	
SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate SEOUL SEMICONDUCTOR LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 76 % 1.1 cd/lm 1 White p, glass Z8Y22 Asymmetric 90 % 1.2 cd/lm 1	
stoul semconoucror LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate stoul semconoucror LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 76 % 1.1 cd/lm 1 White p, glass Z8Y22 Asymmetric 90 % 1.2 cd/lm 1	



SEOUL SEOUL SEMICONDUCTOR	
LED	Z8Y50P
FWHM / FWTM	Asymmetric
Efficiency	76 %
Peak intensity	0.7 cd/lm
LEDs/each optic	1
Light colour	White
Required component	ts:
Protective p	olate, glass



# PRODUCT DATASHEET C17360\_SPORT-2X2-FT60

#### **GENERAL INFORMATION:**

NOTE: The typical beam angle will be changed by different color, chip size and chip position tolerance. The typical total beam angle is the full angle measured where the luminous intensity is half of the peak value.

#### MATERIALS:

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

#### PRODUCT DATA USER AGREEMENT AND DISCLAIMER:

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

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

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

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

#### LEDiL Oy

Joensuunkatu 13 FI-24240 SALO Finland

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

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

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

Shipping locations Salo, Finland Hong Kong, China

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