

### STRADA-IP-2X6-DWC

Universal road lighting (IESNA Type II medium) beam with excellent mixed illuminance and luminance uniformity.

### TECHNICAL SPECIFICATIONS:

Dimensions	173.0 x 71.4 mm
Height	9 mm
Fastening	pin, screw
Ingress protection classes	IP67
ROHS compliant	yes 🛈

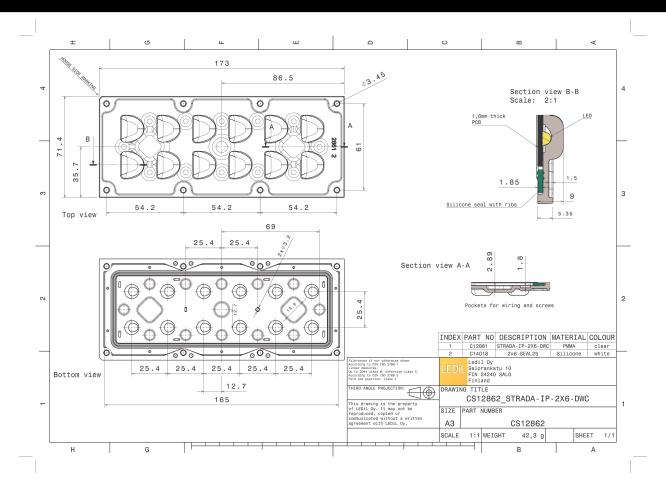


### MATERIAL SPECIFICATIONS:

Component	Туре	Material	Colour	Finish
STRADA-IP-2X6-DWC	Multi-lens	PMMA	clear	
2X6-SEAL25	Seal	Silicone	white	

#### **ORDERING INFORMATION:**

Component		Qty in box	MOQ	MPQ	Box weight (kg)
CS12862_STRADA-IP-2X6-DWC	Multi-lens	120	40	40	6.8
» Box size: 476 x 273 x 247 mm					



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



		90* 99*
	QUICK FLUX 2x6 LED XG xxx G7+	*
FWHM / FWTM	Asymmetric	73'
Efficiency	94 %	200
Peak intensity	0.5 cd/lm	50° 60°
LEDs/each optic	1	
Light colour	White	45* 55*
Required compone		000
		30° 15° 30°
		0.1
	QUICK FLUX 2x6 LED XT xxx G5	90° 90°
FWHM / FWTM	Asymmetric	2K 2K
Efficiency	94 %	
Peak intensity	0.6 cd/lm	.60* 60*.
LEDs/each optic	1	40
Light colour	White	5°
Required compone		
		$\times$
		000
		30° 30° 30°
		90° 90°
		27.
LED	XP-G	<u>82</u> <u>75</u> <u>700</u> <u>700</u> <u>701</u>
LED FWHM / FWTM		50° 200 200 200 200
LED	XP-G Asymmetric	
LED FWHM / FWTM Efficiency	XP-G Asymmetric 96 %	90° 90° 75° 00° 75° 00° 00°
LED FWHM / FWTM Efficiency Peak intensity	XP-G Asymmetric 96 % 0.5 cd/lm	97 75 67 67
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	XP-G Asymmetric 96 % 0.5 cd/lm 1 White	97 20 20 00 00 00 00 00 00 00 00 00 00 00
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XP-G Asymmetric 96 % 0.5 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XP-G Asymmetric 96 % 0.5 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XP-G Asymmetric 96 % 0.5 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XP-G Asymmetric 96 % 0.5 cd/lm 1 White nts:	23 20 20 20 20 20 20 20 20 20 20 20 20 20
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	XP-G Asymmetric 96 % 0.5 cd/lm 1 White nts:	23 20 20 20 20 20 20 20 20 20 20 20 20 20
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XP-G Asymmetric 96 % 0.5 cd/lm 1 White nts: XP-G2	23 20 20 20 20 20 20 20 20 20 20 20 20 20
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XP-G Asymmetric 96 % 0.5 cd/lm 1 White nts: XP-G2 Asymmetric	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XP-G Asymmetric 96 % 0.5 cd/lm 1 White nts: XP-G2 Asymmetric 94 %	23 20 20 20 20 20 20 20 20 20 20 20 20 20
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XP-G Asymmetric 96 % 0.5 cd/lm 1 White nts: XP-G2 Asymmetric	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XP-G Asymmetric 96 % 0.5 cd/lm 1 White nts: XP-G2 Asymmetric 94 % 0.6 cd/lm 1	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XP-G Asymmetric 96 % 0.5 cd/lm 1 White nts: XP-G2 Asymmetric 94 % 0.6 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XP-G Asymmetric 96 % 0.5 cd/lm 1 White nts: XP-G2 Asymmetric 94 % 0.6 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XP-G Asymmetric 96 % 0.5 cd/lm 1 White nts: XP-G2 Asymmetric 94 % 0.6 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XP-G Asymmetric 96 % 0.5 cd/lm 1 White nts: XP-G2 Asymmetric 94 % 0.6 cd/lm 1 White	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	XP-G Asymmetric 96 % 0.5 cd/lm 1 White nts: XP-G2 Asymmetric 94 % 0.6 cd/lm 1 White	



		90* 900
LED	XP-G3	
FWHM / FWTM	Asymmetric	73°
Efficiency	94 %	200
Peak intensity	0.5 cd/lm	. 50 <sup>4</sup> 300 60 <sup>4</sup>
LEDs/each optic	1	400
Light colour	White	45* 900 45'
Required componer	nts:	500
		30° 15° 0° 15° 30°
		90°
LED	XP-L2	
FWHM / FWTM	Asymmetric	75*
Efficiency	94 %	200
Peak intensity	0.4 cd/lm	60° 60'
LEDs/each optic	1	
Light colour	White	.61 400 63
Required componer	nts:	
		30. 12. 90 13. 30.
		99 <sup>4</sup>
LED	EHP-2x6-IP-3535	
FWHM / FWTM	Asymmetric	73%
Efficiency	94 %	
Peak intensity	0.5 cd/lm	60° 60°
LEDs/each optic	1	
Light colour	White	45* 010 45*
Required componer	nts:	
		800
		$\times$ / $\setminus$ $\times$
		30* <u>15</u> <sup>3</sup> 10 <sup>5</sup> 0 19* 30*
		90°
LED	EHP-2x6-IP-5050	9
FWHM / FWTM	Asymmetric	75°
Efficiency	96 %	200
Peak intensity	0.5 cd/lm	
LEDs/each optic	1	20
Light colour	White	457 400 45
Required componer	nts:	
		50

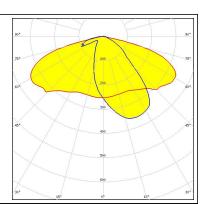


#### **PHOTOMETRIC DATA (MEASURED):**

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LED	LU
FWHM / FWTM	As
Efficiency	94
Peak intensity	0.5
LEDs/each optic	1
Light colour	Wł
Required compone	nts:

JXEON 5050 Round LES symmetric % 5 cd/lm hite



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LED	LUXEON R
FWHM / FWTM	Asymmetric
Efficiency	96 %
Peak intensity	0.6 cd/lm
LEDs/each optic	1
Light colour	White
Required componen	ts:

#### UMILEDS

LED	LUXEON Rebel ES
FWHM / FWTM	Asymmetric
Efficiency	96 %
Peak intensity	0.6 cd/lm
LEDs/each optic	1
Light colour	White
Required componen	ts:

UMIL	.EDS	20*2
LED	LUXEON T	
FWHM / FWTM	Asymmetric	75 200
Efficiency	95 %	
Peak intensity	0.6 cd/lm	
LEDs/each optic	1	$   X / T \setminus X $
Light colour	White	e <sup>r</sup> (6)
Required compone	nts:	
		304 30
		13 <sup>3</sup> 1000 10°



	90* 90*
LED LUXEON V	
FWHM / FWTM Asymmetric	73*
Efficiency 92 %	
Peak intensity 0.5 cd/lm	- 60 <sup>4</sup>
LEDs/each optic 1	
Light colour White	400
Required components:	200
	000
	760
	20° 12° 660 12° 0°
M LUMILEDS	90*
LED LUXEON V2	
FWHM / FWTM Asymmetric	75°
Efficiency 94 %	
Peak intensity 0.5 cd/lm	60 <sup>1</sup>
LEDs/each optic 1	
Light colour White	45*
Required components:	ole
	$\times$ / $\times$
	800
	30"
	13 <sup>5</sup> 0 <sup>6</sup> 15 <sup>5</sup>
<b>Μ</b> ΝΙCΗΙΛ	90* 90*
LED NVSW219D	
	75°
FWHM / FWTM Asymmetric	200
Efficiency 94 %	
Efficiency 94 % Peak intensity 0.5 cd/lm	63* 68*
Efficiency94 %Peak intensity0.5 cd/lmLEDs/each optic1	60 <sup>4</sup> 60
Efficiency94 %Peak intensity0.5 cd/lmLEDs/each optic1Light colourWhite	60° 60°
Efficiency94 %Peak intensity0.5 cd/lmLEDs/each optic1	61 <sup>3</sup> 60
Efficiency94 %Peak intensity0.5 cd/lmLEDs/each optic1Light colourWhite	63 <sup>4</sup> 60 <sup>4</sup>
Efficiency94 %Peak intensity0.5 cd/lmLEDs/each optic1Light colourWhite	
Efficiency94 %Peak intensity0.5 cd/lmLEDs/each optic1Light colourWhite	
Efficiency     94 %       Peak intensity     0.5 cd/lm       LEDs/each optic     1       Light colour     White       Required components:	20
Efficiency     94 %       Peak intensity     0.5 cd/lm       LEDs/each optic     1       Light colour     White       Required components:	
Efficiency     94 %       Peak intensity     0.5 cd/lm       LEDs/each optic     1       Light colour     White       Required components     Image: Chick of the second secon	
Efficiency       94 %         Peak intensity       0.5 cd/lm         LEDs/each optic       1         Light colour       White         Required components	
Efficiency       94 %         Peak intensity       0.5 cd/lm         LEDs/each optic       1         Light colour       White         Required components       Vision         VICCHIN       NVSW219F         FWHM / FWTM       Asymmetric         Efficiency       94 %	
Efficiency       94 %         Peak intensity       0.5 cd/lm         LEDs/each optic       1         Light colour       White         Required components       Vision         VICCHIN       NVSW219F         FWHM / FWTM       Asymmetric         Efficiency       94 %         Peak intensity       0.5 cd/lm	
Efficiency       94 %         Peak intensity       0.5 cd/lm         LEDs/each optic       1         Light colour       White         Required components       Vice         VICCHIN       NVSW219F         FWHM / FWTM       Asymmetric         Efficiency       94 %         Peak intensity       0.5 cd/lm         LEDs/each optic       1	
Efficiency       94 %         Peak intensity       0.5 cd/lm         LEDs/each optic       1         Light colour       White         Required components:       Image: Component State St	
Efficiency       94 %         Peak intensity       0.5 cd/lm         LEDs/each optic       1         Light colour       White         Required components       Vice         VICCHIN       NVSW219F         FWHM / FWTM       Asymmetric         Efficiency       94 %         Peak intensity       0.5 cd/lm         LEDs/each optic       1	
Efficiency       94 %         Peak intensity       0.5 cd/lm         LEDs/each optic       1         Light colour       White         Required components:       Vision         VICCHIN       VSW219F         FWHM / FWTM       Asymmetric         Efficiency       94 %         Peak intensity       0.5 cd/lm         LEDs/each optic       1         Light colour       White	
Efficiency       94 %         Peak intensity       0.5 cd/lm         LEDs/each optic       1         Light colour       White         Required components:       Vision         VICCHIN       VSW219F         FWHM / FWTM       Asymmetric         Efficiency       94 %         Peak intensity       0.5 cd/lm         LEDs/each optic       1         Light colour       White	



				VZCET
<b>Ø</b> NICHI∧			90*	90*
LED	NVSW319B			100
FWHM / FWTM	Asymmetric		75°	700
Efficiency	94 %		50*	604
Peak intensity	0.5 cd/lm		$\square$	300
LEDs/each optic	1		$\times$ $\cdot$ $\cdot$ $\cdot$	400
Light colour	White		45*	500 45+
Required compone	Ints:		X +-	600
			$\sqrt{-}$	760
			$\downarrow$ $\downarrow$ $\downarrow$	200
			30* 15	0° 15° 30°
<b>ØNICHI</b>	L .		90*	90*
LED	NVSW3x9A		1	100
FWHM / FWTM	Asymmetric		75*	78
Efficiency	94 %		XXX	
Peak intensity	0.5 cd/lm			300
LEDs/each optic	1		X +	400
Light colour	White		45*	500 45*
Required compone	ints:		X	600
			$\searrow \longrightarrow$	700
			$\times$ $\rightarrow$	***
			30°	0° 15* 30°
<b>ØNICHI</b>	L .		90*	90*
	NVSW519A		99.	
			301	100 92
LED	NVSW519A		80 100	
LED FWHM / FWTM Efficiency Peak intensity	NVSW519A Asymmetric		80 <sup>4</sup>	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	NVSW519A Asymmetric 95 % 0.4 cd/lm 1		80°	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	NVSW519A Asymmetric 95 % 0.4 cd/lm 1 White		60 60 60 60	
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	NVSW519A Asymmetric 95 % 0.4 cd/lm 1 White			
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	NVSW519A Asymmetric 95 % 0.4 cd/lm 1 White			
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	NVSW519A Asymmetric 95 % 0.4 cd/lm 1 White			
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	NVSW519A Asymmetric 95 % 0.4 cd/lm 1 White ints:			99 99 90 90 90 90 90 90 90 90 90 90 90 9
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	NVSW519A Asymmetric 95 % 0.4 cd/lm 1 White ints:			
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	NVSW519A Asymmetric 95 % 0.4 cd/lm 1 White ints:			
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	NVSW519A Asymmetric 95 % 0.4 cd/lm 1 White ints:			
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	NVSW519A Asymmetric 95 % 0.4 cd/lm 1 White ints:			
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	NVSW519A Asymmetric 95 % 0.4 cd/lm 1 White Ints: NVSxx19B/NVSxx19C Asymmetric			
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	NVSW519A Asymmetric 95 % 0.4 cd/lm 1 White Ints: NVSxx19B/NVSxx19C Asymmetric 94 % 0.6 cd/lm 1			200 300 600 200 200 200 200 200
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	NVSW519A Asymmetric 95 % 0.4 cd/lm 1 White Ints: NVSxx19B/NVSxx19C Asymmetric 94 % 0.6 cd/lm 1 White			200 300 600 200 200 200 200 200
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	NVSW519A Asymmetric 95 % 0.4 cd/lm 1 White Ints: NVSxx19B/NVSxx19C Asymmetric 94 % 0.6 cd/lm 1 White			
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	NVSW519A Asymmetric 95 % 0.4 cd/lm 1 White Ints: NVSxx19B/NVSxx19C Asymmetric 94 % 0.6 cd/lm 1 White			
LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone	NVSW519A Asymmetric 95 % 0.4 cd/lm 1 White Ints: NVSxx19B/NVSxx19C Asymmetric 94 % 0.6 cd/lm 1 White			



OCDAM			
OSRAM Opto Semiconductors		90*	90*
LED	Duris S8	7	
FWHM / FWTM	Asymmetric	75* 100	75°
Efficiency	94 %		
Peak intensity	0.5 cd/lm	504 200	60*
LEDs/each optic	1		/
Light colour	White		
Required compone		400	
Required compone	113.	$\times$	
		500	
		30° 15° 0° 15°	30*
OSRAM Opto Semiconductors			
		90°	90*
LED	OSLON Square PC	734	75°
FWHM / FWTM	Asymmetric		
Efficiency	96 %		60*
Peak intensity	0.6 cd/lm	400	
LEDs/each optic	1		$\langle \rangle$
Light colour	White	45° 600	45*
Required compone	nts:		/
			$\mathbf{V}$
		30*	30*
<b>S</b> ΛΜSΙ			
		90*	90*
LED	LH351Z	740	
FWHM / FWTM	Asymmetric		
Efficiency	94 %		64*
Peak intensity	0.6 cd/lm	. Eq	64
Peak intensity LEDs/each optic	0.6 cd/lm 1	60	60*
Peak intensity LEDs/each optic Light colour	0.6 cd/lm 1 White	40 40 40	60* 45*
Peak intensity LEDs/each optic	0.6 cd/lm 1 White	6°	53.4
Peak intensity LEDs/each optic Light colour	0.6 cd/lm 1 White	6° 00	804 45
Peak intensity LEDs/each optic Light colour	0.6 cd/lm 1 White	64 67 60 90	604
Peak intensity LEDs/each optic Light colour	0.6 cd/lm 1 White		60 45 30°
Peak intensity LEDs/each optic Light colour Required compone	0.6 cd/lm 1 White nts:		$\left  \right\rangle$
Peak intensity LEDs/each optic Light colour Required compone	0.6 cd/lm 1 White nts: LUX		$\left  \right\rangle$
Peak intensity LEDs/each optic Light colour Required compone	0.6 cd/lm 1 White nts: LUX ROY-S26XPL2 (XP-L2)		$\left  \right\rangle$
Peak intensity LEDs/each optic Light colour Required compone	0.6 cd/lm 1 White nts: <b>LUX</b> ROY-S26XPL2 (XP-L2) Asymmetric		$\left  \right\rangle$
Peak intensity LEDs/each optic Light colour Required compone	0.6 cd/lm 1 White nts: <b>LUX</b> ROY-S26XPL2 (XP-L2) Asymmetric 94 %		$\left  \right\rangle$
Peak intensity LEDs/each optic Light colour Required compone	0.6 cd/lm 1 White nts: <b>LUX</b> ROY-S26XPL2 (XP-L2) Asymmetric		$\left  \right\rangle$
Peak intensity LEDs/each optic Light colour Required compone	0.6 cd/lm 1 White nts: <b>LUX</b> ROY-S26XPL2 (XP-L2) Asymmetric 94 % 0.4 cd/lm 1		$\left  \right\rangle$
Peak intensity LEDs/each optic Light colour Required compone SCCC LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	0.6 cd/lm 1 White nts: ROY-S26XPL2 (XP-L2) Asymmetric 94 % 0.4 cd/lm 1 White		$\left  \right\rangle$
Peak intensity LEDs/each optic Light colour Required compone SCIO LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	0.6 cd/lm 1 White nts: ROY-S26XPL2 (XP-L2) Asymmetric 94 % 0.4 cd/lm 1 White		30°
Peak intensity LEDs/each optic Light colour Required compone SCCC LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	0.6 cd/lm 1 White nts: ROY-S26XPL2 (XP-L2) Asymmetric 94 % 0.4 cd/lm 1 White		30°
Peak intensity LEDs/each optic Light colour Required compone SCCC LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	0.6 cd/lm 1 White nts: ROY-S26XPL2 (XP-L2) Asymmetric 94 % 0.4 cd/lm 1 White		30°
Peak intensity LEDs/each optic Light colour Required compone SCCC LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	0.6 cd/lm 1 White nts: ROY-S26XPL2 (XP-L2) Asymmetric 94 % 0.4 cd/lm 1 White		30°



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SEOUL		
SEOUL SEMICONDUCTOR		90* 90*
	SMJQ-D36W12Mx	751 751
FWHM / FWTM	Asymmetric	
Efficiency	94 %	504 604
Peak intensity	0.6 cd/lm	40
LEDs/each optic	1	
Light colour	White	45* 660 65*
Required compone	nts:	
		810
		$\times$ / $\setminus$ $\times$
		30° 13 <sup>5</sup> 1000 15° 30°
SEOUL		
SEOUL SEMICONDUCTOR		90* 90*
LED	SMJQ-D36W12Px	250 200
FWHM / FWTM	Asymmetric	
Efficiency	94 %	60*
Peak intensity	0.5 cd/lm	
LEDs/each optic	1	60
Light colour	White	45* 500 45*
Required compone	nts:	20
		710
		30* 30*
SEOUL		
SEOUL SEMICONDUCTOR		90* 90*
LED	Z5M3	500
FWHM / FWTM	Asymmetric	725
Efficiency	94 %	
Peak intensity	0.5 cd/lm	
LEDs/each optic	1	400
Light colour	White	45* 3/0 45*
Required compone	nts:	
		30° 00 00 00° 00° 00° 00°
SEOUL		
SEOUL SEMICONDUCTOR		90° 90°
LED	Z8Y22	
FWHM / FWTM	Asymmetric	200
Efficiency	94 %	
Peak intensity	0.6 cd/lm	
LEDs/each optic	1	
Light colour	White	40 <sup>+</sup> 0/0
Required compone	nts:	
		30.



SEOUL		90*
SEOUL SEMICONDUCTOR	Z8Y22P	80
FWHM / FWTM	Asymmetric	25*
Efficiency	94 %	200
Peak intensity	0.5 cd/lm	50° 30
LEDs/each optic	1	
Light colour	White	
Required compone		42, 200
Required compone	115.	60
		740
		80
		30° 15° 2° 15°
TOSHIBA		
Leading Innovation >>>		90*
LED	TL1L4	710
FWHM / FWTM	Asymmetric	200
Efficiency	94 %	
Peak intensity	0.6 cd/lm	40
LEDs/each optic	1	
Light colour	White	45* 640
Required compone	nts:	
		800
		$\times$ / $\mid$ $\rangle$
		30* 15* 1000 15*
TRIDON		90*
LED	RLE 2x6 3000lm HP EXC2 OTD	
FWHM / FWTM	Asymmetric	75%
Efficiency	94 %	
Peak intensity	0.6 cd/lm	
LEDs/each optic	1	$X/T \setminus X$
Light colour	White	45*
Required compone	nts:	
		860
		30*
		15 10 10 10



		90* 90*
LED	J Series 5050 Round LES	
FWHM / FWTM	Asymmetric	75%
Efficiency	94 %	
Peak intensity	94 /o 0.4 cd/lm	eit*
LEDs/each optic	1	
Light colour	White	45* 400 45*
Required components:		
		500
		600
		30* 15 <sup>5</sup> 0° 15* 30 <sup>4</sup>
		90* 90*
LED	J Series 5050 Square LES	
FWHM / FWTM	Asymmetric	75° 100 75°
Efficiency	98 %	
Peak intensity	0.4 cd/lm	50° 50°
LEDs/each optic	1	
Light colour	u White	
	White	400 43*
Required components:		$\times$
		500
		30 <sup>4</sup> (10 <sup>2</sup> ) 0 <sup>0</sup> (10 <sup>4</sup> ) 30 <sup>4</sup> 30 <sup>4</sup>
		90* 90*
LED	XB-D White	100
FWHM / FWTM	Asymmetric	
Efficiency	%	50* 00000000000000000000000000000000000
Peak intensity	0.5 cd/lm	
LEDs/each optic	1	
Light colour	White	45° 50 45°
Required components:		600
		30* 112 0* 114 30*
LED	XP-G2 HE	
EED FWHM / FWTM	Asymmetric	
Efficiency	92 %	
	92 % 0.4 cd/lm	
Peak intensity		
LEDs/each optic	1 White	
Light colour	White	
Required components:		



UMILEC	IS In the second se	90°
LED	LUXEON 5050 Square LES	7
FWHM / FWTM	Asymmetric	100
Efficiency	94 %	
Peak intensity	0.4 cd/lm	6°*
LEDs/each optic	1	
Light colour	White	43"
Required components:		400
		XIIX
		30° 000
		115° 0° 115°
		90*
LED	LUXEON H50-2	736
FWHM / FWTM	Asymmetric	
Efficiency	90 %	E34
Peak intensity	0.5 cd/lm	
LEDs/each optic	1	400
Light colour	White	45°
Required components:		600
		30* 15* 0° 15* 3
		90* 9
LED FWHM / FWTM	LUXEON TX	
		750
	Asymmetric	.75*
Efficiency	89 %	27
Efficiency Peak intensity	89 % 0.5 cd/lm	
Efficiency Peak intensity LEDs/each optic	89 % 0.5 cd/lm 1	
Efficiency Peak intensity LEDs/each optic Light colour	89 % 0.5 cd/lm	
Efficiency Peak intensity LEDs/each optic	89 % 0.5 cd/lm 1	
Efficiency Peak intensity LEDs/each optic Light colour	89 % 0.5 cd/lm 1	
Efficiency Peak intensity LEDs/each optic Light colour	89 % 0.5 cd/lm 1	
Efficiency Peak intensity LEDs/each optic Light colour	89 % 0.5 cd/lm 1	
Efficiency Peak intensity LEDs/each optic Light colour Required components:	89 % 0.5 cd/lm 1	
Efficiency Peak intensity LEDs/each optic Light colour Required components:	89 % 0.5 cd/lm 1 White	
Efficiency Peak intensity LEDs/each optic Light colour Required components:	89 % 0.5 cd/m 1 White NV4WB35AM	
Efficiency Peak intensity LEDs/each optic Light colour Required components:	89 % 0.5 cd/m 1 White NV4WB35AM Asymmetric	60 00 00 00 00 00 00 00 00 00
Efficiency Peak intensity LEDs/each optic Light colour Required components:	89 % 0.5 cd/m 1 White NV4WB35AM Asymmetric 94 %	60 00 00 00 00 00 00 00 00 00
Efficiency Peak intensity LEDs/each optic Light colour Required components:	89 % 0.5 cd/m 1 White NV4WB35AM Asymmetric	500 500 500 500 500 500 500 500 500 500
Efficiency Peak intensity LEDs/each optic Light colour Required components:	89 % 0.5 cd/m 1 White NV4WB35AM Asymmetric 94 % 0.4 cd/m 1	
Efficiency Peak intensity LEDs/each optic Light colour Required components:	89 % 0.5 cd/m 1 White NV4WB35AM Asymmetric 94 % 0.4 cd/m	60 00 00 00 00 00 00 00 00 00
Efficiency Peak intensity LEDs/each optic Light colour Required components:	89 % 0.5 cd/m 1 White NV4WB35AM Asymmetric 94 % 0.4 cd/m 1	
Efficiency Peak intensity LEDs/each optic Light colour Required components:	89 % 0.5 cd/m 1 White NV4WB35AM Asymmetric 94 % 0.4 cd/m 1	
Efficiency Peak intensity LEDs/each optic Light colour Required components:	89 % 0.5 cd/m 1 White NV4WB35AM Asymmetric 94 % 0.4 cd/m 1	



<b>ΜΝΙCΗΙΛ</b>		
LED	NVSxE21A	90* 90*
EED FWHM / FWTM	Asymmetric	754 755
	91 %	
Efficiency		604 604
Peak intensity	0.6 cd/lm	
LEDs/each optic	1	
Light colour	White	45* 600 45*
Required components:		
		800
		$\times$ / $\times$ ×
		30* <u>15</u> <sup>5</sup> <u>1590</u> 15* 30*
OSRAM		
		90* 90*
LED	PrevaLED Brick HP IP 2x6	730 780
FWHM / FWTM	Asymmetric	
Efficiency	93 %	504 604
Peak intensity	0.5 cd/lm	
LEDs/each optic	1	
Light colour	White	45*
Required components:		500
		30* 30*
000444		15' 0' 15'
USDAM		
OSRAM Opto Semiconductors		90* 90*
OSRAM Opto Semiconductors	OSCONIQ P 3737 (2W version)	99*
Opto Semiconductors	OSCONIQ P 3737 (2W version) Asymmetric	99* 73* 200
Opto Semiconductors		95°
opto Semiconductors LED FWHM / FWTM	Asymmetric	90°
opto Semiconductors LED FWHM / FWTM Efficiency	Asymmetric 90 %	90° 73° 60° 00 00 00
<sup>opto Semiconductors</sup> LED FWHM / FWTM Efficiency Peak intensity	Asymmetric 90 % 0.5 cd/lm	99* 99* 120 120 120 120 100 100 100 100 100 100
<sup>opto Semiconductors</sup> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 90 % 0.5 cd/lm 1	90° 90° 90° 90° 90° 90° 90° 90°
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 90 % 0.5 cd/lm 1	99* 73 60* 60* 60* 60* 60* 60* 60* 60* 60* 60*
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 90 % 0.5 cd/lm 1	99* 73 65* 69 69 69 69 69 69 69 69 69 69
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 90 % 0.5 cd/lm 1	50° 50° 50° 50° 50° 50° 50° 50°
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 90 % 0.5 cd/lm 1	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 90 % 0.5 cd/lm 1	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 90 % 0.5 cd/lm 1 White	90 90 10 <sup>3</sup> 0 <sup>3</sup> 10 <sup>3</sup> 0 <sup>4</sup>
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 90 % 0.5 cd/lm 1 White OSCONIQ P 3737 (3W version)	
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM	Asymmetric 90 % 0.5 cd/lm 1 White OSCONIQ P 3737 (3W version) Asymmetric	900 900 900 900 900 900 900 900 900 900
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency	Asymmetric 90 % 0.5 cd/lm 1 White OSCONIQ P 3737 (3W version) Asymmetric 94 %	90 90 15 <sup>1</sup> 10 10 10 10 10 10 10 10 10
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 % 0.5 cd/lm 1 White OSCONIQ P 3737 (3W version) Asymmetric 94 % 0.4 cd/lm	90 90 90 90 90 90 90 90 90 90
opte 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	Asymmetric 90 % 0.5 cd/lm 1 White OSCONIQ P 3737 (3W version) Asymmetric 94 % 0.4 cd/lm 1	
opte Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:  COSRAM Opte Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 90 % 0.5 cd/lm 1 White OSCONIQ P 3737 (3W version) Asymmetric 94 % 0.4 cd/lm	90 90 90 90 90 90 90 90 90 90
opte 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	Asymmetric 90 % 0.5 cd/lm 1 White OSCONIQ P 3737 (3W version) Asymmetric 94 % 0.4 cd/lm 1	
opte Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:  COSRAM Opte Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 90 % 0.5 cd/lm 1 White OSCONIQ P 3737 (3W version) Asymmetric 94 % 0.4 cd/lm 1	
opte Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:  COSRAM Opte Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 90 % 0.5 cd/lm 1 White OSCONIQ P 3737 (3W version) Asymmetric 94 % 0.4 cd/lm 1	



OSRAM		
Opto Semiconductors		90* 90*
LED	OSCONIQ P 3737 (3W version)	730 781
FWHM / FWTM	Asymmetric	
Efficiency	93 %	504 604
Peak intensity	0.5 cd/lm	
LEDs/each optic	1	400
Light colour	White	45*
Required components:		800
		30* 300
OSRAM		15 <sup>5</sup> of 15*
Opto Semiconductors		90* 90*
LED	OSLON Square CSSRM2/CSSRM3	
FWHM / FWTM	Asymmetric	75°
Efficiency	93 %	
Peak intensity	0.5 cd/lm	60° 60°.
LEDs/each optic	1	400
Light colour	White	45*
Required components:		
		600
		X    X
		810
		30* 30*
		15° 0° 15°
OSRAM		
Opto Semiconductors	OSI ON Square CSSRM2/CSSRM3	99° 0° 13°
Opto Semiconductors	OSLON Square CSSRM2/CSSRM3	22 <sup>3</sup> 0 <sup>4</sup> 23 <sup>4</sup>
Opto Semiconductors LED FWHM / FWTM	Asymmetric	22 <sup>3</sup> 0 <sup>4</sup> 27 <sup>4</sup>
opto Semiconductors LED FWHM / FWTM Efficiency	Asymmetric 93 %	200
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity	Asymmetric 93 % 0.5 cd/lm	20 00 00 00 00 00 00 00 00 00
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 93 % 0.5 cd/lm 1	22 <sup>3</sup> 0 <sup>4</sup> 27 <sup>3</sup>
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 93 % 0.5 cd/lm	123 <sup>1</sup> 0 <sup>2</sup> 123 <sup>1</sup>
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 93 % 0.5 cd/lm 1	60° 60° 60° 60° 60° 60° 60° 60°
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 93 % 0.5 cd/lm 1	60 60 60 60 60 60 60 60 60 60
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 93 % 0.5 cd/lm 1	1         22 <sup>3</sup> 6 <sup>3</sup> 32 <sup>3</sup> 6 <sup>3</sup> 9 <sup>3</sup> 6 <sup>3</sup> 6 <sup>3</sup> 6 <sup>3</sup> 9 <sup>3</sup> 6 <sup>3</sup> 6 <sup>3</sup> 6 <sup>3</sup>
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 93 % 0.5 cd/lm 1	200 00 00 00 00 00 00 00 00 00 00 00 00
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 93 % 0.5 cd/lm 1 White	00
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 93 % 0.5 cd/lm 1 White	00
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components:	Asymmetric 93 % 0.5 cd/lm 1 White I LH181B	00
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>SAMSUN</b> LED FWHM / FWTM	Asymmetric 93 % 0.5 cd/lm 1 White G LH181B Asymmetric	00
opte Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>SAMNSUN</b> LED FWHM / FWTM Efficiency	Asymmetric 93 % 0.5 cd/lm 1 White I LH181B Asymmetric 93 %	00
opte Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>SANNSUN</b> LED FWHM / FWTM Efficiency Peak intensity	Asymmetric 93 % 0.5 cd/lm 1 White I LH181B Asymmetric 93 % 0.6 cd/lm	00
opte Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>SANNSUN</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 93 % 0.5 cd/lm 1 White LH181B Asymmetric 93 % 0.6 cd/lm 1	00
opte Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>SANNSUN</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 93 % 0.5 cd/lm 1 White I LH181B Asymmetric 93 % 0.6 cd/lm	00
opte Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>SANNSUN</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 93 % 0.5 cd/lm 1 White LH181B Asymmetric 93 % 0.6 cd/lm 1	00
opte Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>SANNSUN</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 93 % 0.5 cd/lm 1 White LH181B Asymmetric 93 % 0.6 cd/lm 1	00
opte Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>SANNSUN</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 93 % 0.5 cd/lm 1 White LH181B Asymmetric 93 % 0.6 cd/lm 1	00
opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>SAMSUN</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 93 % 0.5 cd/lm 1 White LH181B Asymmetric 93 % 0.6 cd/lm 1	00



SAMSUN	16	90* 90*
LED	LH351B	
FWHM / FWTM	Asymmetric	75° 75°
Efficiency	93 %	1 Ann
Peak intensity	0.5 cd/lm	bo-
LEDs/each optic	1	400
Light colour	White	45° 45°
Required components:		850
		90°
		<u>15<sup>2</sup> 0<sup>6</sup> 15<sup>4</sup></u>
SAMSUN	10	90* 90*
LED	LH351C	
FWHM / FWTM	Asymmetric	200 78*
Efficiency	93 %	50 <sup>4</sup> 50 <sup>4</sup>
Peak intensity	0.5 cd/lm	
LEDs/each optic	1	400
Light colour	White	45° 65°
Required components:		600
		$\times$ / $\times$ $\times$
		30* 30*
SAMSUN		75, 6, 75,
<u>21111201</u>		90* 90*
LED	LH351D	
		100
FWHM / FWTM	Asymmetric	73*
Efficiency	92 %	250 250 250 250 250 250 250 250 250 250
Efficiency Peak intensity	92 % 0.4 cd/lm	0 <sup>-1</sup>
Efficiency Peak intensity LEDs/each optic	92 % 0.4 cd/lm 1	0, <u> </u>
Efficiency Peak intensity LEDs/each optic Light colour	92 % 0.4 cd/lm	
Efficiency Peak intensity LEDs/each optic	92 % 0.4 cd/lm 1	42 42 96 96 96 96 96 96 96 96 96 96
Efficiency Peak intensity LEDs/each optic Light colour	92 % 0.4 cd/lm 1	200 000 000 000 00000 0000 000 000 000 000 0000 000 000 000 000 000 000
Efficiency Peak intensity LEDs/each optic Light colour	92 % 0.4 cd/lm 1	6° (0) (0) (0) (0) (0) (0) (0) (0) (0) (0)
Efficiency Peak intensity LEDs/each optic Light colour	92 % 0.4 cd/lm 1	20° 10° 10° 10° 20° 0° 10° 20° 0° 20
Efficiency Peak intensity LEDs/each optic Light colour Required components:	92 % 0.4 cd/lm 1 White	20
Efficiency Peak intensity LEDs/each optic Light colour Required components:	92 % 0.4 cd/lm 1 White	20
Efficiency Peak intensity LEDs/each optic Light colour Required components:	92 % 0.4 cd/lm 1 White	500 000 10 <sup>3</sup> 10 <sup>3</sup>
Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>SAMSUN</b> LED FWHM / FWTM	92 % 0.4 cd/m 1 White G LH502C Asymmetric	50° 50° 50° 50° 50° 50° 50° 50° 50° 50°
Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>SAMSUN</b> LED FWHM / FWTM Efficiency	92 % 0.4 cd/m 1 White G LH502C Asymmetric 94 %	500 000 10 <sup>3</sup> 10 <sup>3</sup> 00 10 <sup>3</sup> 10
Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>SAMSUN</b> LED FWHM / FWTM Efficiency Peak intensity	92 % 0.4 cd/m 1 White G LH502C Asymmetric 94 % 0.4 cd/m	500 000 000 000 000 000 000 000
Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>SAMSUN</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	92 % 0.4 cd/m 1 White G LH502C Asymmetric 94 % 0.4 cd/m 1	50 
Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>SAMSUN</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	92 % 0.4 cd/m 1 White G LH502C Asymmetric 94 % 0.4 cd/m	500 000 000 000 000 000 000 000
Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>SAMSUN</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	92 % 0.4 cd/m 1 White G LH502C Asymmetric 94 % 0.4 cd/m 1	500 000 000 10 <sup>3</sup> 10 <sup>3</sup> 10 <sup>3</sup> 100 100 100 100 100 100 100 10
Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>SAMSUN</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	92 % 0.4 cd/m 1 White G LH502C Asymmetric 94 % 0.4 cd/m 1	500 000 000 10 <sup>3</sup> 10 <sup>3</sup> 10 <sup>3</sup> 100 100 100 100 100 100 100 10
Efficiency Peak intensity LEDs/each optic Light colour Required components: <b>SAMSUN</b> LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	92 % 0.4 cd/m 1 White G LH502C Asymmetric 94 % 0.4 cd/m 1	500 000 000 10 <sup>3</sup> 10 <sup>3</sup> 10 <sup>3</sup> 100 100 100 100 100 100 100 10



SAMSUN	IG	90*
LED	LH508B	9
FWHM / FWTM	Asymmetric	75° 100 78
Efficiency	94 %	
Peak intensity	0.4 cd/lm	60* <u>200</u>
LEDs/each optic	1	
Light colour	White	45"
Required components:		400
		XIIX
		600
		30* <u>13</u> <sup>5</sup> 0 <sup>6</sup> 15* 3
SEOUL		
seoul semiconductor	2x6 5050 module - SMJD-3625012F-XX	
FWHM / FWTM	Asymmetric	756 100 77
Efficiency	94 %	
Peak intensity	0.4 cd/lm	50%
LEDs/each optic	1	
Light colour	White	457 65
Required components:	WING	49. 40
Required components.		400
		200
		30° 15° 0° 19° 30'
SEQUE		MAY EFT
		90* 90'
	SEOUL DC 5050 6V	750 100 75
FWHM / FWTM	Asymmetric 94 %	
Efficiency		504 50
Peak intensity	0.4 cd/lm 1	
LEDs/each optic Light colour	White	$\times \times / ( \mathbb{Y} \times )$
Required components:	White	45* 400 45
Required components:		700
		$\times$
		000
		30* 15 <sup>3</sup> 9 <sup>6</sup> 0 19* 30
		20° 10 <sup>1</sup> 10° 20
SEOUL SEMICONDUCTOR		54° 55 55° X
seoul semiconductor LED	Z5M	13 <sup>5</sup> <u>9</u> % 15 <sup>4</sup>
seoul semiconductor LED FWHM / FWTM	Asymmetric	13 <sup>5</sup> <u>9</u> % 15 <sup>4</sup>
seoul semiconductor LED FWHM / FWTM Efficiency	Asymmetric 89 %	13 <sup>5</sup> <u>3</u> % 13 <sup>5</sup>
seoul semiconductor LED FWHM / FWTM Efficiency Peak intensity	Asymmetric 89 % 0.5 cd/lm	13 <sup>5</sup> <u>36</u> 13 <sup>5</sup>
seoul semiconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 89 % 0.5 cd/lm 1	13 <sup>9</sup> <u>960</u> 15 <sup>9</sup>
seoul semiconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 89 % 0.5 cd/lm	20 <sup>-</sup> 20
seoul semiconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic	Asymmetric 89 % 0.5 cd/lm 1	20 <sup>2</sup> 60 2 <sup>2</sup>
seoul semiconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 89 % 0.5 cd/lm 1	20 <sup>2</sup> 60 20 <sup>2</sup>
seoul semiconbuctor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour	Asymmetric 89 % 0.5 cd/lm 1	20 <sup>3</sup> 60 0 <sup>3</sup>



SEOUL		TY FTI
		90* 90*
LED	Z5M1/Z5M2	739
FWHM / FWTM	Asymmetric	
Efficiency	90 %	50* 80*
Peak intensity	0.6 cd/lm	400
LEDs/each optic	1	
Light colour	White	45* 600 45*
Required components:		X   X
		800
		X
		1000
		30° 15° 30°
SEOUL		
SEOUL SEMICONDUCTOR		90* 90*
LED	Z5M4	71
FWHM / FWTM	Asymmetric	
Efficiency	98 %	80* 80*
Peak intensity	0.6 cd/lm	
LEDs/each optic	1	$ X  /  T  \setminus X $
Light colour	White	45* 45*
Required components:		010
		$\times$ / $\times$
		$\times$ / $\setminus$ $\times$
		30* 15 <sup>5</sup> 0 <sup>6</sup> 15* 30*
TOSHIBA		THAT AFTI
Leading Innovation >>>		90* 90*
LED	TL1L2	730 100 75°
FWHM / FWTM	Asymmetric	the solution
Efficiency	88 %	60* 60* 60*
Peak intensity	0.5 cd/lm	$X \times / T \times X$
LEDs/each optic	1	400
Light colour	White	45* 200 45*
Required components:		000
		700
		30* 800 30*
TOOLUDA		13 <sup>3</sup> 0 <sup>0</sup> 15 <sup>4</sup>
TOSHIBA Leading Innovation >>>		90* 90*
LED	TL1L3	
FWHM / FWTM	Asymmetric	720 780
Efficiency	86 %	
Peak intensity	0.3 cd/lm	60* 60* 60*.
LEDs/each optic	1	
Light colour	' White	
Required components:	WING .	6°.
Required components:		
		400
		40
		40 90 30



#### **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.

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