

## LISA3-WWW-PIN

~60° wide beam with location pin installation

### SPECIFICATION:

Dimensions	Ø 9.9 mm
Height	7 mm
Fastening	pin
ROHS compliant	yes ⓘ

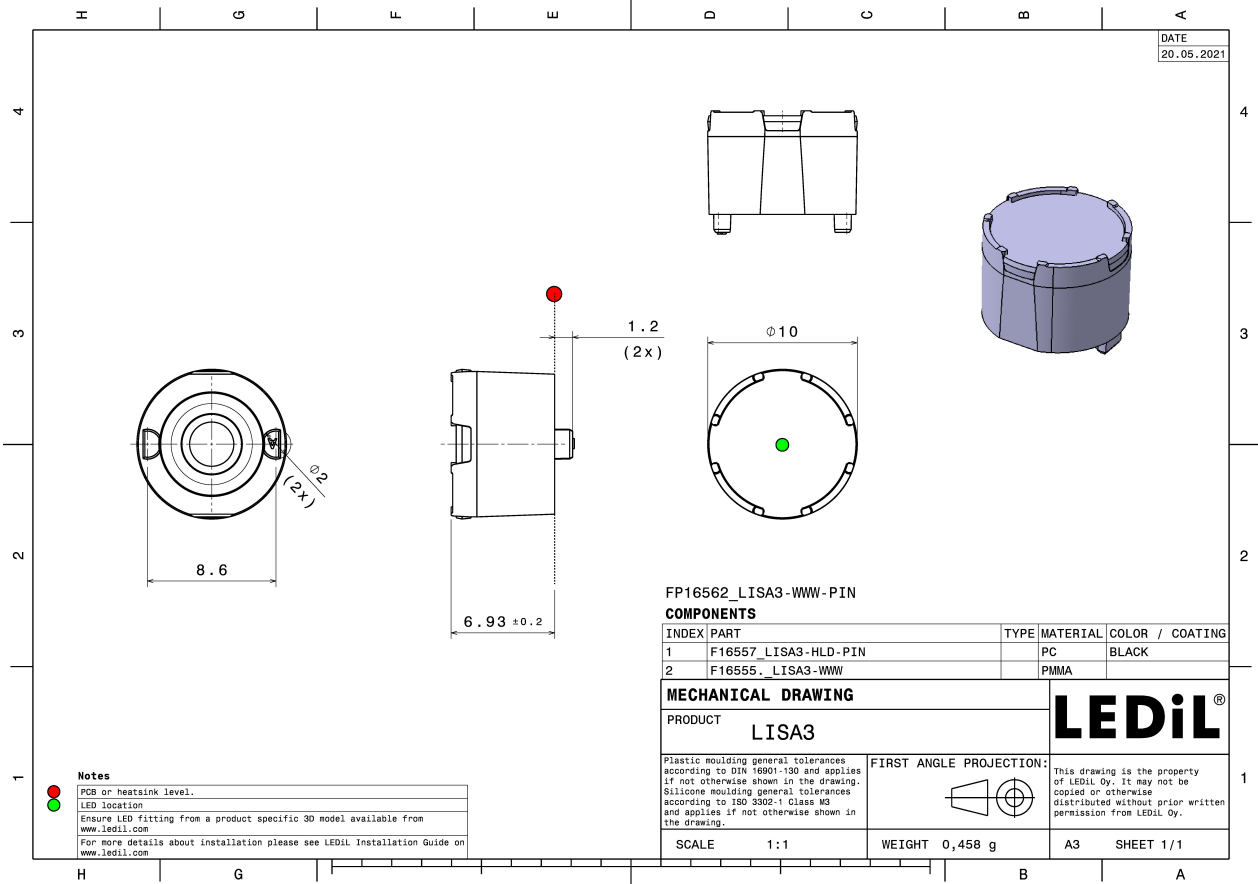
### MATERIALS:

Component	Type	Material	Colour	Finish
LISA3-WWW	Single lens	PMMA	clear	
LISA3-HLD-PIN	Holder	PC	black	

### ORDERING INFORMATION:


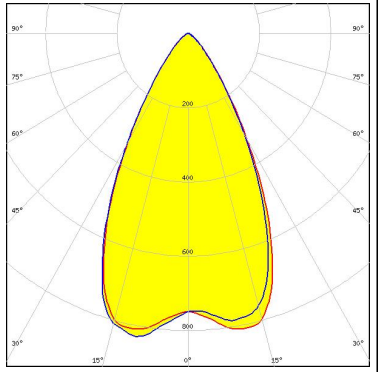
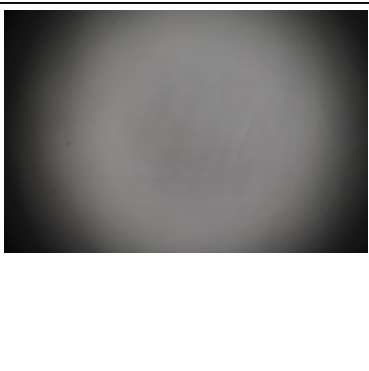
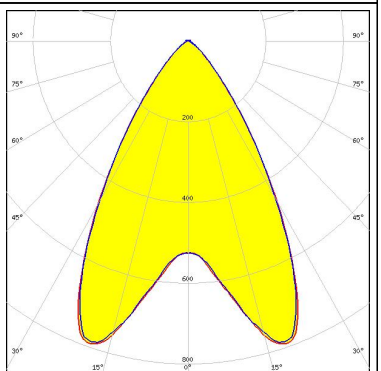

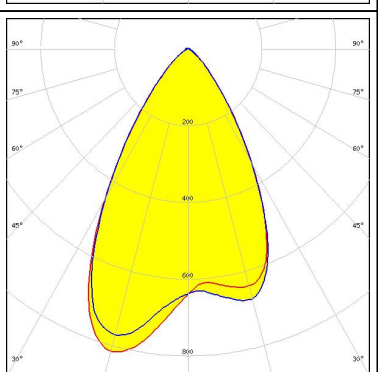
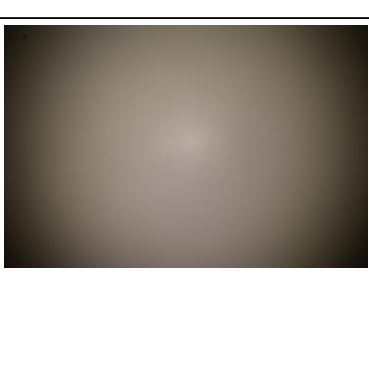
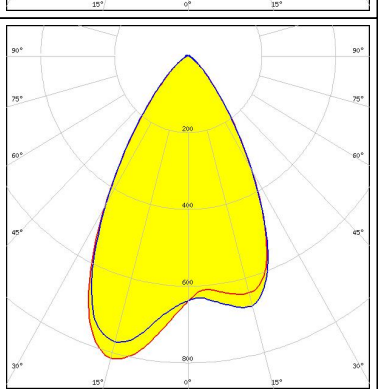
Component		Qty in box	MOQ	MPQ	Box weight (kg)
FP16562_LISA3-WWW-PIN	Single lens	2000	300	100	1.4
» Box size: 310 x 230 x 60 mm					



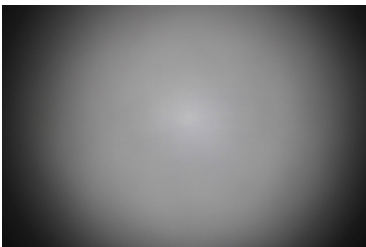
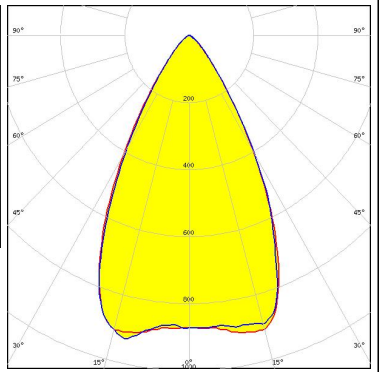
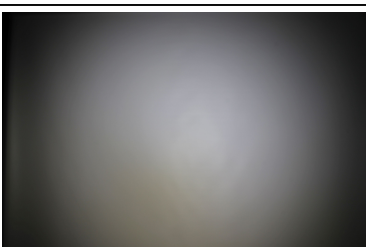
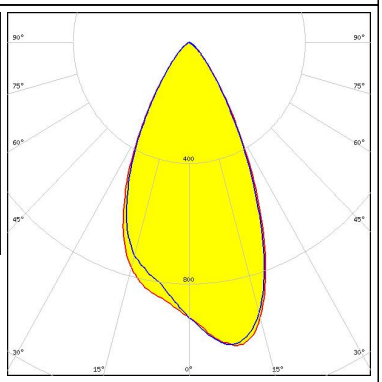
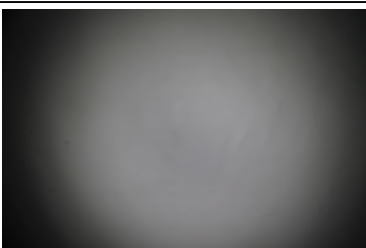
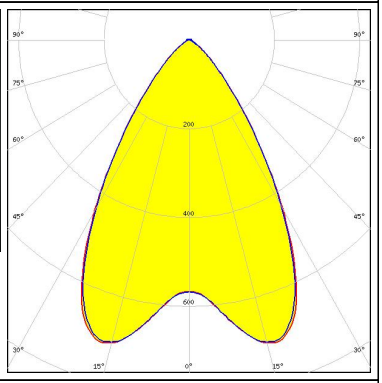
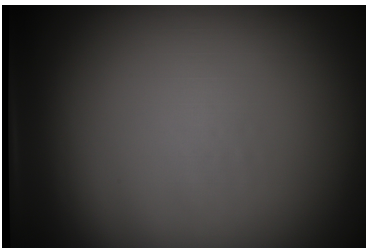
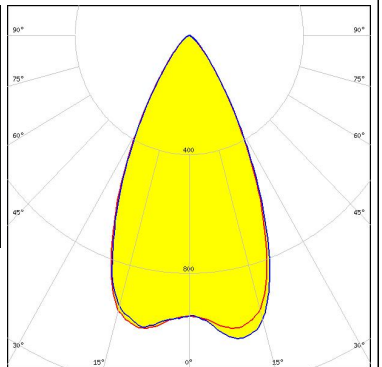


See also our general installation guide: [www.ledil.com/installation\\_guide](http://www.ledil.com/installation_guide)

#### OPTICAL RESULTS (MEASURED):

<p><b>CREE</b> LEDs</p> <p>LED                   XD16 FWHM / FWTM       55.0° / 85.0° Efficiency            74 % Peak intensity       0.9 cd/m LEDs/each optic     1 Light colour         White Required components:</p>		
<p><b>CREE</b> LEDs</p> <p>LED                   XP-E2 FWHM / FWTM       63.0° / 91.0° Efficiency            85 % Peak intensity       0.8 cd/m LEDs/each optic     1 Light colour         White Required components:</p>		
<p><b>CREE</b> LEDs</p> <p>LED                   XP-G3 FWHM / FWTM       60.0° / 92.0° Efficiency            80 % Peak intensity       0.8 cd/m LEDs/each optic     1 Light colour         White Required components:</p>		
<p><b>CREE</b> LEDs</p> <p>LED                   XP-G3 FWHM / FWTM       61.0° / 95.0° Efficiency            80 % Peak intensity       0.8 cd/m LEDs/each optic     1 Light colour         White Required components:</p>		

#### OPTICAL RESULTS (MEASURED):

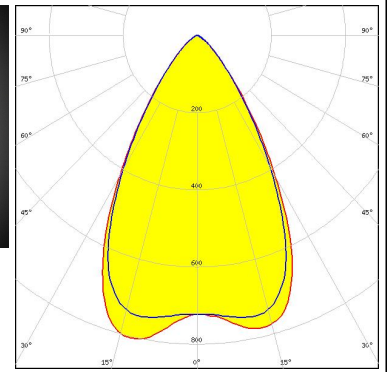
<p><b>LUMILEDS</b></p> <p>LED LUXEON CZ</p> <p>FWHM / FWTM 57.0° / 85.0°</p> <p>Efficiency 85 %</p> <p>Peak intensity 0.9 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>NICHIA</b></p> <p>LED NF2x757G</p> <p>FWHM / FWTM 50.0° / 82.0°</p> <p>Efficiency 76 %</p> <p>Peak intensity 1.1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>NICHIA</b></p> <p>LED NVSW219F</p> <p>FWHM / FWTM 64.0° / 96.0°</p> <p>Efficiency 84 %</p> <p>Peak intensity 0.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED OSCONIQ C 2424</p> <p>FWHM / FWTM 53.0° / 81.0°</p> <p>Efficiency 84 %</p> <p>Peak intensity 1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>		

#### OPTICAL RESULTS (MEASURED):

#### OSRAM

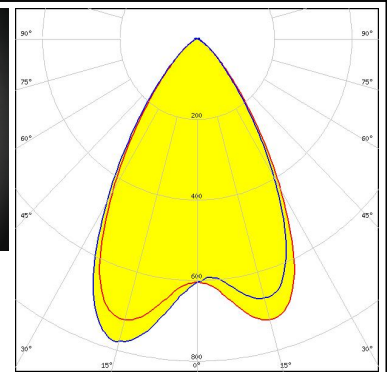
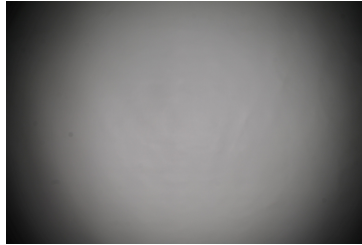
Opto Semiconductors

LED OSLON Square CSSRM2/CSSRM3  
 FWHM / FWTM 60.0° / 93.0°  
 Efficiency 83 %  
 Peak intensity 0.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



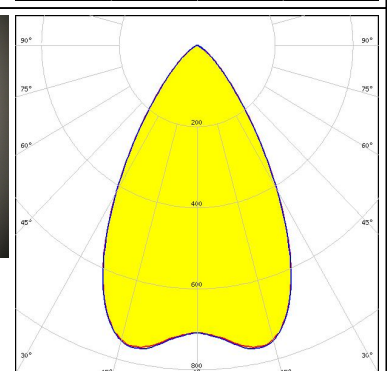
#### SAMSUNG

LED LH351C  
 FWHM / FWTM 64.0° / 96.0°  
 Efficiency 84 %  
 Peak intensity 0.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



SEOUL SEMICONDUCTOR

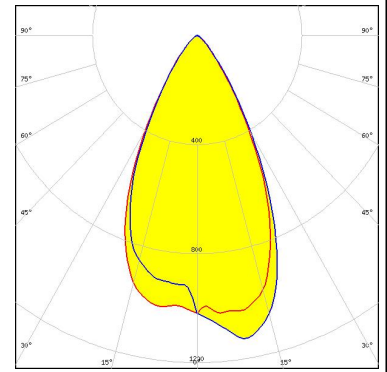
LED Z5M4  
 FWHM / FWTM 62.0° / 95.0°  
 Efficiency 84 %  
 Peak intensity 0.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



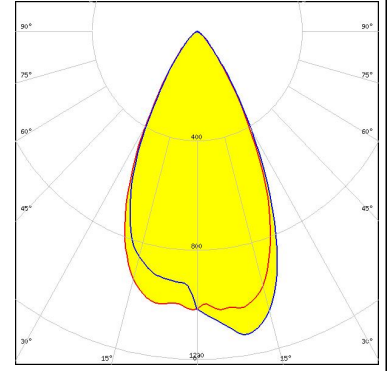
#### OPTICAL RESULTS (SIMULATED):



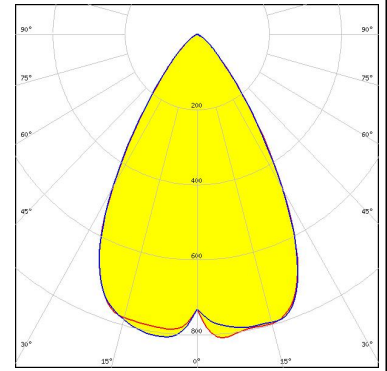
LED J Series 2835  
 FWHM / FWTM 53.0° / 82.0°  
 Efficiency 87 %  
 Peak intensity 1.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



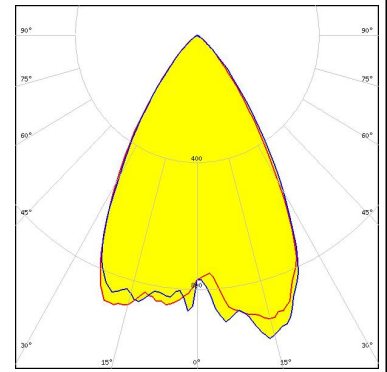
LED J Series 2835  
 FWHM / FWTM 53.0° / 82.0°  
 Efficiency 87 %  
 Peak intensity 1.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED XP-E  
 FWHM / FWTM 64.0° / 93.0°  
 Efficiency 89 %  
 Peak intensity 0.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



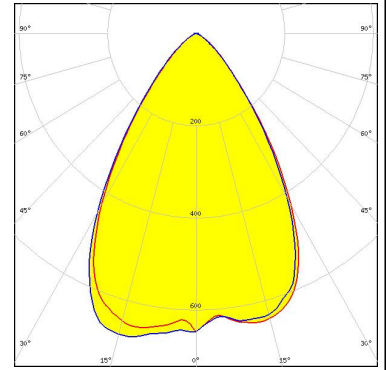
LED XP-G2  
 FWHM / FWTM 66.0° / 93.0°  
 Efficiency 87 %  
 Peak intensity 0.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



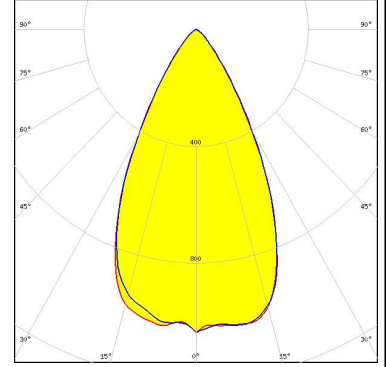
#### OPTICAL RESULTS (SIMULATED):



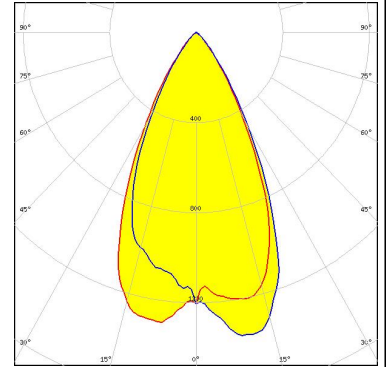
LED XP-G2 HE  
 FWHM / FWTM 68.0° / 100.0°  
 Efficiency 82 %  
 Peak intensity 0.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



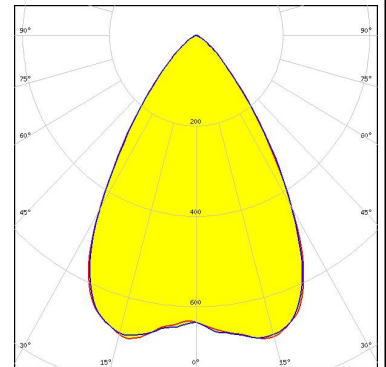
LED LUXEON 2835 Line  
 FWHM / FWTM 54.0° / 82.0°  
 Efficiency 88 %  
 Peak intensity 1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



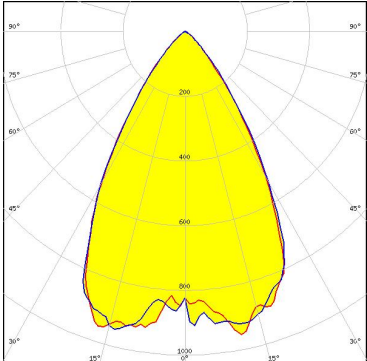
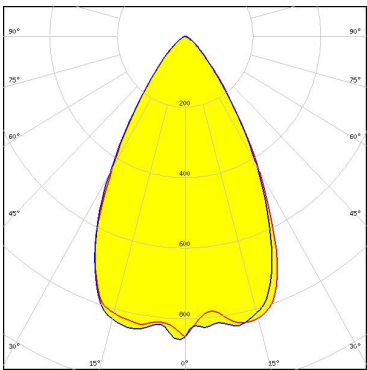
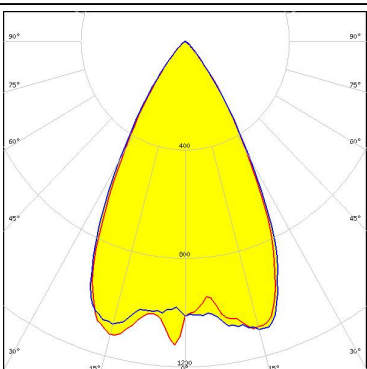
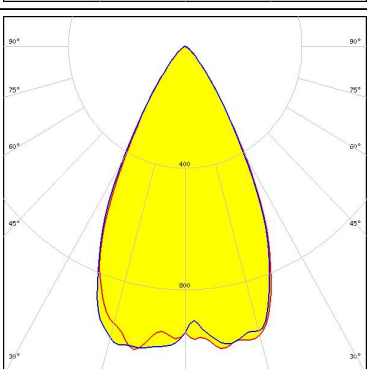
LED LUXEON 3030 2D (Round LES)  
 FWHM / FWTM 54.0° / 79.0°  
 Efficiency 85 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED LUXEON HL2X  
 FWHM / FWTM 66.0° / 98.0°  
 Efficiency 85 %  
 Peak intensity 0.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

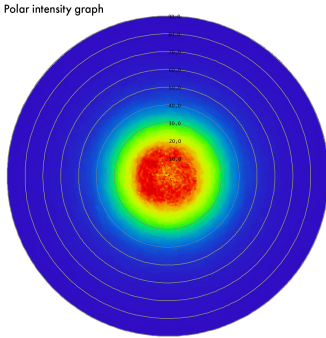
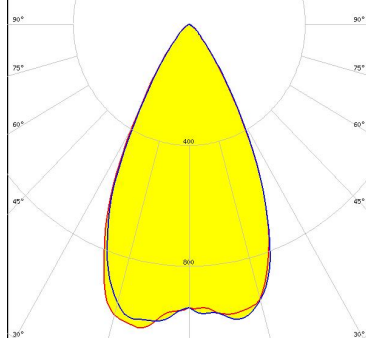
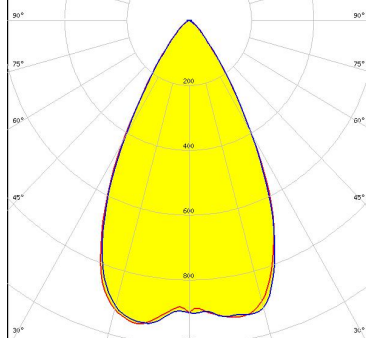
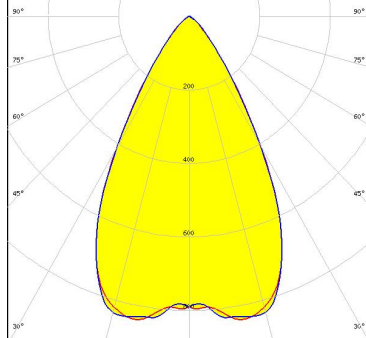
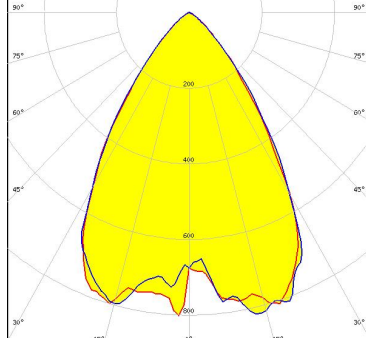


#### OPTICAL RESULTS (SIMULATED):

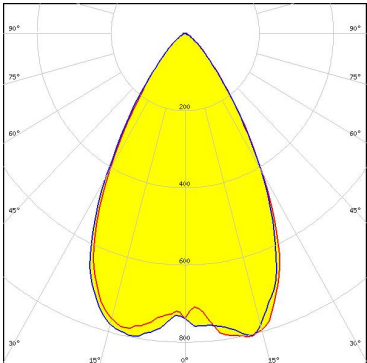
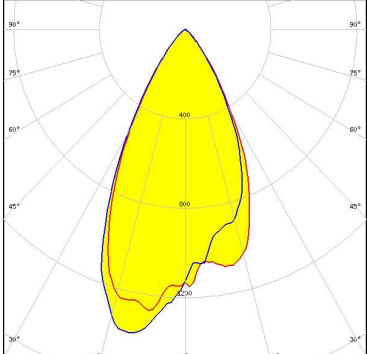
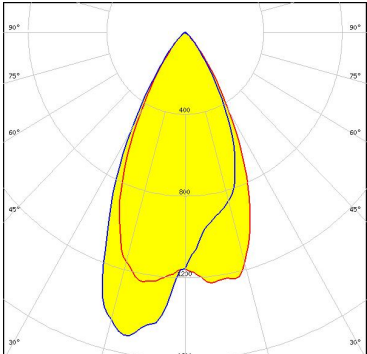
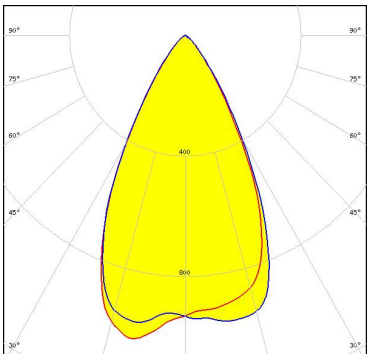
<p><b>LUMILEDS</b></p> <p>LED: LUXEON TX            FWHM / FWTM: 62.0° / 87.0°            Efficiency: 85 %            Peak intensity: 0.8 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>LUMILEDS</b></p> <p>LED: LUXEON V2            FWHM / FWTM: 60.0° / 92.0°            Efficiency: 88 %            Peak intensity: 0.9 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>LUMILEDS</b></p> <p>LED: LUXEON Z            FWHM / FWTM: 58.0° / 80.0°            Efficiency: 88 %            Peak intensity: 1 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>LUMILEDS</b></p> <p>LED: LUXEON Z ES            FWHM / FWTM: 56.0° / 82.0°            Efficiency: 88 %            Peak intensity: 1 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	



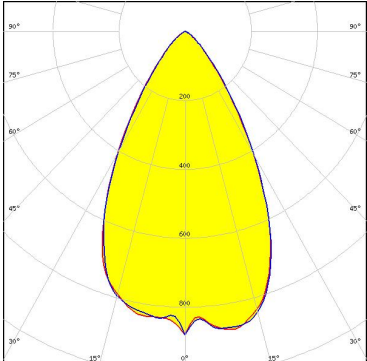
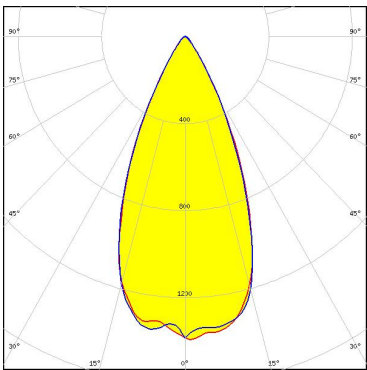
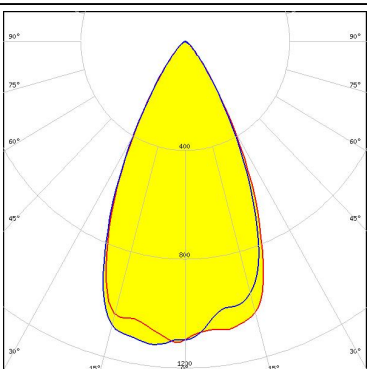
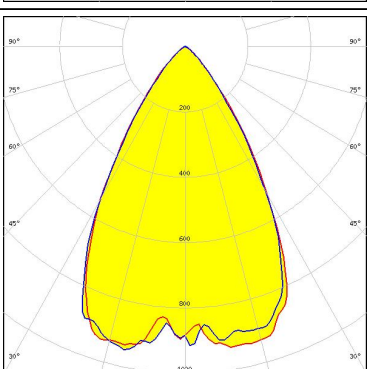
#### OPTICAL RESULTS (SIMULATED):

<p><b>LUMINUS</b></p> <p>LED SST-10-IR-B90            FWHM / FWTM 54.0° / 80.0°            Efficiency 86 %            LEDs/each optic 1            Light colour IR            Required components:</p>	<p>Polar intensity graph</p> 	
<p><b>LUMINUS</b></p> <p>LED SST-20            FWHM / FWTM 56.0° / 84.0°            Efficiency 86 %            Peak intensity 1 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>NICHIA</b></p> <p>LED NCSxx19B            FWHM / FWTM 60.0° / 88.0°            Efficiency 82 %            Peak intensity 0.8 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>NICHIA</b></p> <p>LED NVSW219D            FWHM / FWTM 67.0° / 88.0°            Efficiency 84 %            Peak intensity 0.7 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>		

#### OPTICAL RESULTS (SIMULATED):

<p><b>NICHIA</b></p> <p>LED: NVSxx19B/NVSxx19C</p> <p>FWHM / FWTM: 61.0° / 92.0°</p> <p>Efficiency: 83 %</p> <p>Peak intensity: 0.8 cd/lm</p> <p>LEDs/each optic: 1</p> <p>Light colour: White</p> <p>Required components:</p>	
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED: Duris S5 (2 chip)</p> <p>FWHM / FWTM: 49.0° / 77.0°</p> <p>Efficiency: 87 %</p> <p>Peak intensity: 1.2 cd/lm</p> <p>LEDs/each optic: 1</p> <p>Light colour: White</p> <p>Required components:</p>	
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED: Duris S5 (Single chip)</p> <p>FWHM / FWTM: 48.0° / 76.0°</p> <p>Efficiency: 86 %</p> <p>Peak intensity: 1.3 cd/lm</p> <p>LEDs/each optic: 1</p> <p>Light colour: White</p> <p>Required components:</p>	
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED: OSCONIQ P 3030</p> <p>FWHM / FWTM: 56.0° / 82.0°</p> <p>Efficiency: 85 %</p> <p>Peak intensity: 1 cd/lm</p> <p>LEDs/each optic: 1</p> <p>Light colour: White</p> <p>Required components:</p>	

#### OPTICAL RESULTS (SIMULATED):

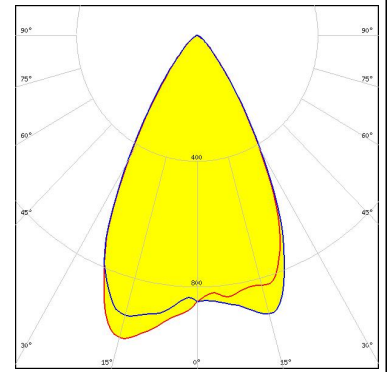
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED OSCONIQ P 3737 (3W version)</p> <p>FWHM / FWTM 58.0° / 90.0°</p> <p>Efficiency 86 %</p> <p>Peak intensity 0.9 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED OSLON Black</p> <p>FWHM / FWTM 46.0° / 71.0°</p> <p>Efficiency 88 %</p> <p>Peak intensity 1.4 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED OSLON Black Flat (LUW HWQP)</p> <p>FWHM / FWTM 54.0° / 80.0°</p> <p>Efficiency 88 %</p> <p>Peak intensity 1.1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour Red</p> <p>Required components:</p>	
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED OSLON Square EC</p> <p>FWHM / FWTM 61.0° / 86.0°</p> <p>Efficiency 86 %</p> <p>Peak intensity 0.9 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	

#### OPTICAL RESULTS (SIMULATED):

##### OSRAM

Opto Semiconductors

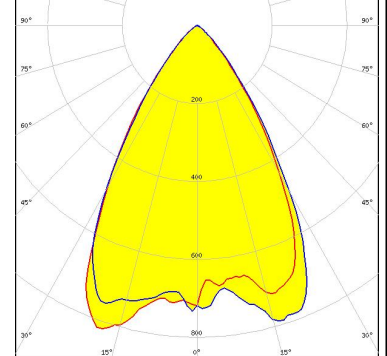
LED OSLOM SSL 120  
 FWHM / FWTM 58.0° / 85.0°  
 Efficiency 89 %  
 Peak intensity 1 cd/lm  
 LEDs/each optic 1  
 Light colour Amber  
 Required components:



##### OSRAM

Opto Semiconductors

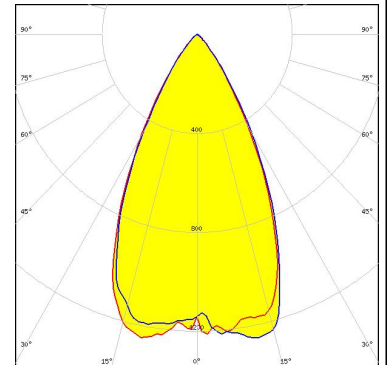
LED OSLOM SSL 150  
 FWHM / FWTM 63.0° / 84.0°  
 Efficiency 87 %  
 Peak intensity 0.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



##### OSRAM

Opto Semiconductors

LED OSLOM SSL 80  
 FWHM / FWTM 53.0° / 79.0°  
 Efficiency 87 %  
 Peak intensity 1.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

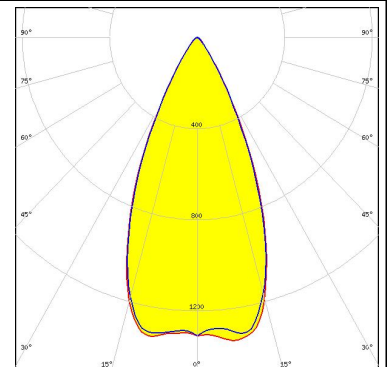
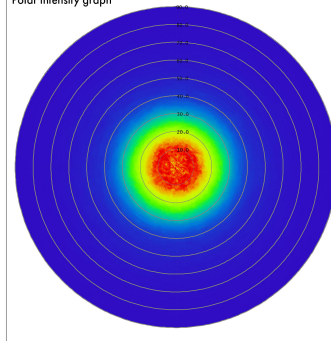


##### OSRAM

Opto Semiconductors

LED SFH 4715S  
 FWHM / FWTM 47.0° / 70.0°  
 Efficiency 88 %  
 LEDs/each optic 1  
 Light colour IR  
 Required components:

Polar intensity graph

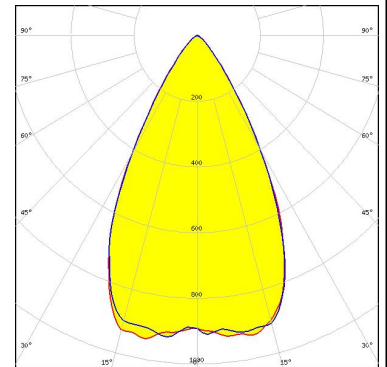
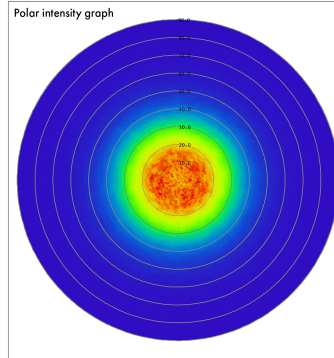


#### OPTICAL RESULTS (SIMULATED):

#### OSRAM

Opto Semiconductors

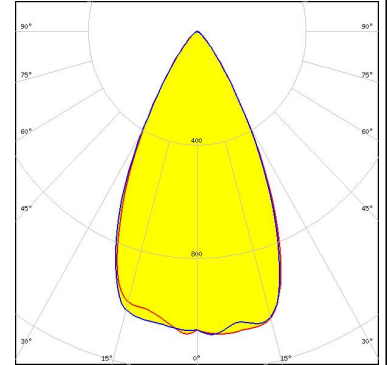
LED SFH 4716S  
 FWHM / FWTM 57.0° / 83.0°  
 Efficiency 85 %  
 LEDs/each optic 1  
 Light colour IR  
 Required components:



#### OSRAM

Opto Semiconductors

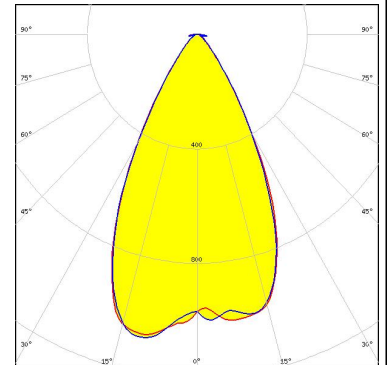
LED Synios P2720 1 mm  
 FWHM / FWTM 54.0° / 80.0°  
 Efficiency 88 %  
 Peak intensity 1.1 cd/lm  
 LEDs/each optic 1  
 Light colour Red  
 Required components:



#### OSRAM

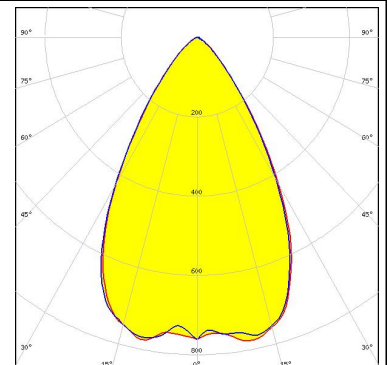
Opto Semiconductors

LED SYNIOS S2222  
 FWHM / FWTM 55.0° / 82.0°  
 Efficiency 96 %  
 Peak intensity 1.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### SAMSUNG

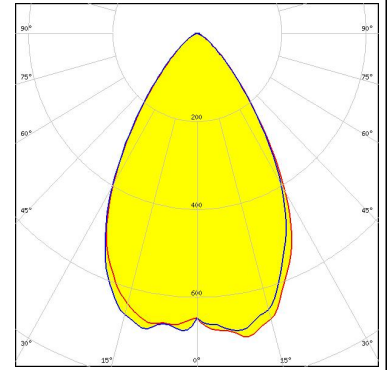
LED LH351B  
 FWHM / FWTM 62.0° / 95.0°  
 Efficiency 85 %  
 Peak intensity 0.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



### OPTICAL RESULTS (SIMULATED):

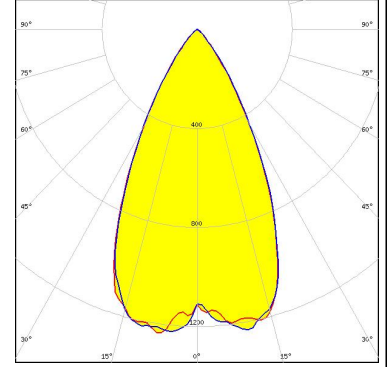
#### SAMSUNG

LED LH351D  
FWHM / FWTM 65.0° / 100.0°  
Efficiency 81 %  
Peak intensity 0.7 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



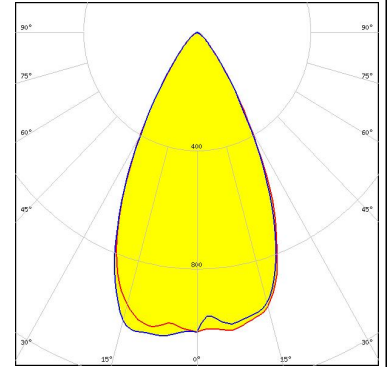
#### SAMSUNG

LED LM301A  
FWHM / FWTM 53.0° / 75.0°  
Efficiency 87 %  
Peak intensity 1.2 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



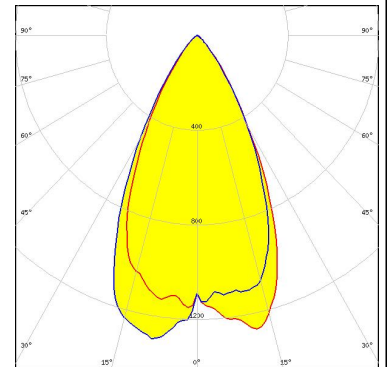
#### SAMSUNG

LED LM301B  
FWHM / FWTM 55.0° / 82.0°  
Efficiency 87 %  
Peak intensity 1.1 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:


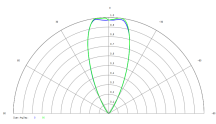
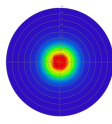
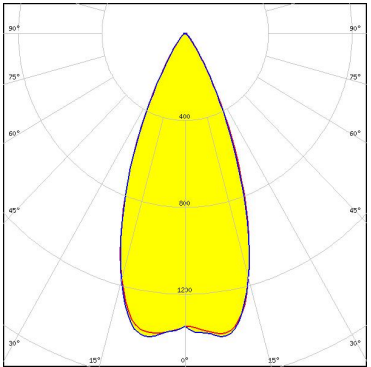

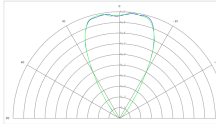
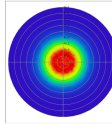
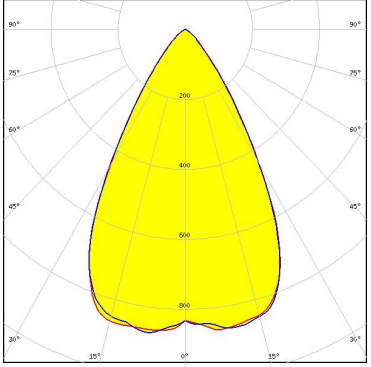



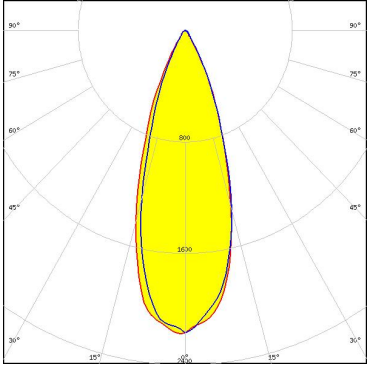



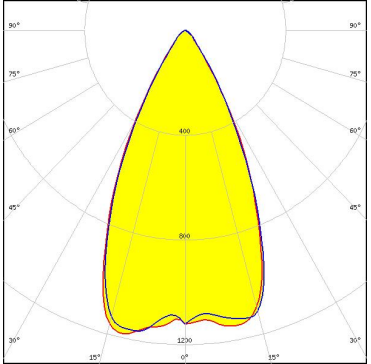


#### SAMSUNG

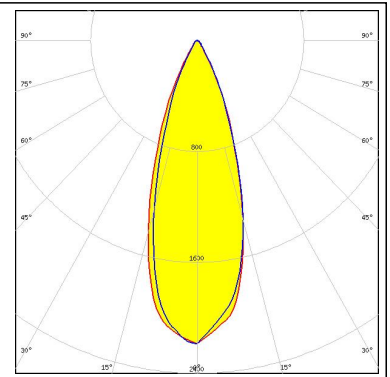
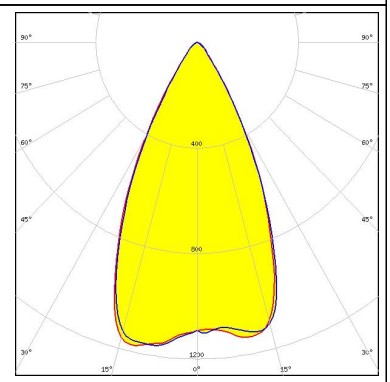
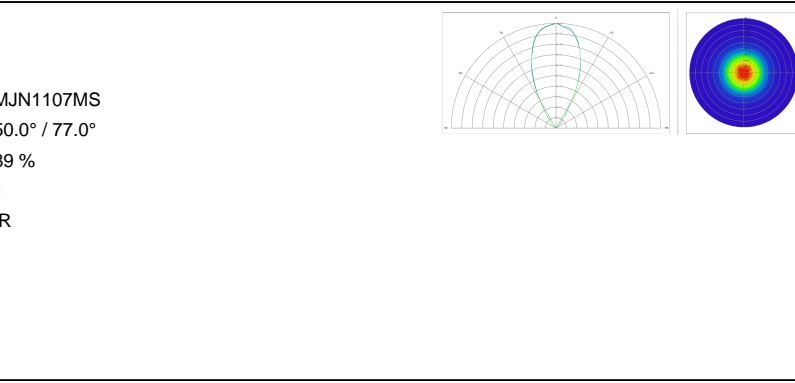
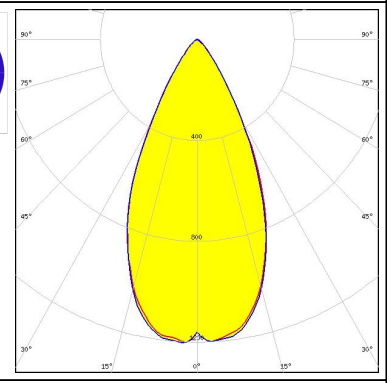
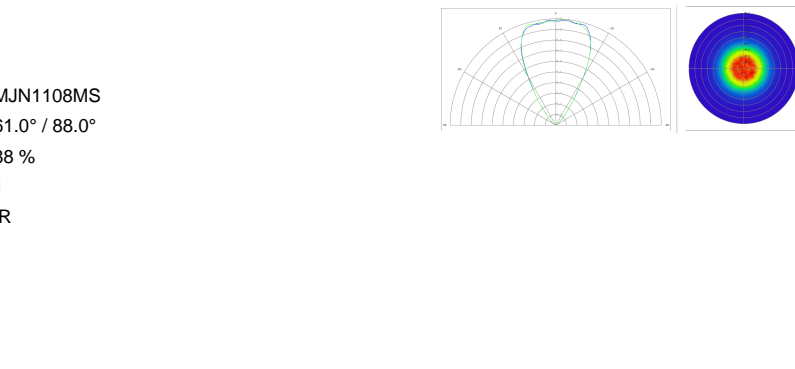
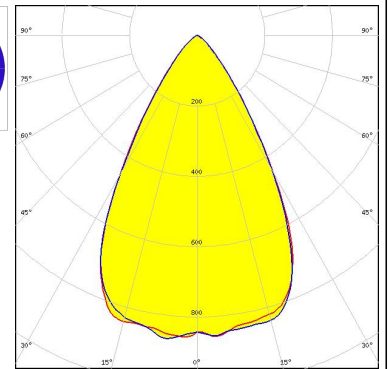
LED LM302A  
FWHM / FWTM 53.0° / 80.0°  
Efficiency 87 %  
Peak intensity 1.2 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:



#### OPTICAL RESULTS (SIMULATED):

	<p>LED FWR1107MS            FWHM / FWTM 44.0° / 68.0°            Efficiency 85 %            LEDs/each optic 1            Light colour IR            Required components:</p>			
	<p>LED FWR1108MS            FWHM / FWTM 60.0° / 87.0°            Efficiency 88 %            LEDs/each optic 1            Light colour IR            Required components:</p>			
	<p>LED MFN1107MS            FWHM / FWTM 35.0° / 60.0°            Efficiency 91 %            Peak intensity 2.2 cd/lm            LEDs/each optic 1            Light colour IR            Required components:</p>			
	<p>LED MFN1108MS            FWHM / FWTM 52.0° / 76.0°            Efficiency 90 %            Peak intensity 1.2 cd/lm            LEDs/each optic 1            Light colour IR            Required components:</p>			

#### OPTICAL RESULTS (SIMULATED):

<p><b>STANLEY</b></p> <p>LED MGN1107MS</p> <p>FWHM / FWTM 35.0° / 60.0°</p> <p>Efficiency 91 %</p> <p>Peak intensity 2.2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour IR</p> <p>Required components:</p>		
<p><b>STANLEY</b></p> <p>LED MGN1108MS</p> <p>FWHM / FWTM 52.0° / 76.0°</p> <p>Efficiency 90 %</p> <p>Peak intensity 1.2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour IR</p> <p>Required components:</p>		
<p><b>STANLEY</b></p> <p>LED MJN1107MS</p> <p>FWHM / FWTM 50.0° / 77.0°</p> <p>Efficiency 89 %</p> <p>LEDs/each optic 1</p> <p>Light colour IR</p> <p>Required components:</p>		
<p><b>STANLEY</b></p> <p>LED MJN1108MS</p> <p>FWHM / FWTM 61.0° / 88.0°</p> <p>Efficiency 88 %</p> <p>LEDs/each optic 1</p> <p>Light colour IR</p> <p>Required components:</p>		



### 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:

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