

## LISA3-M-PIN

~25° medium beam with location pin installation

### SPECIFICATION:

Dimensions	Ø 10.0 mm
Height	7.9 mm
Fastening	glue
ROHS compliant	yes ⓘ

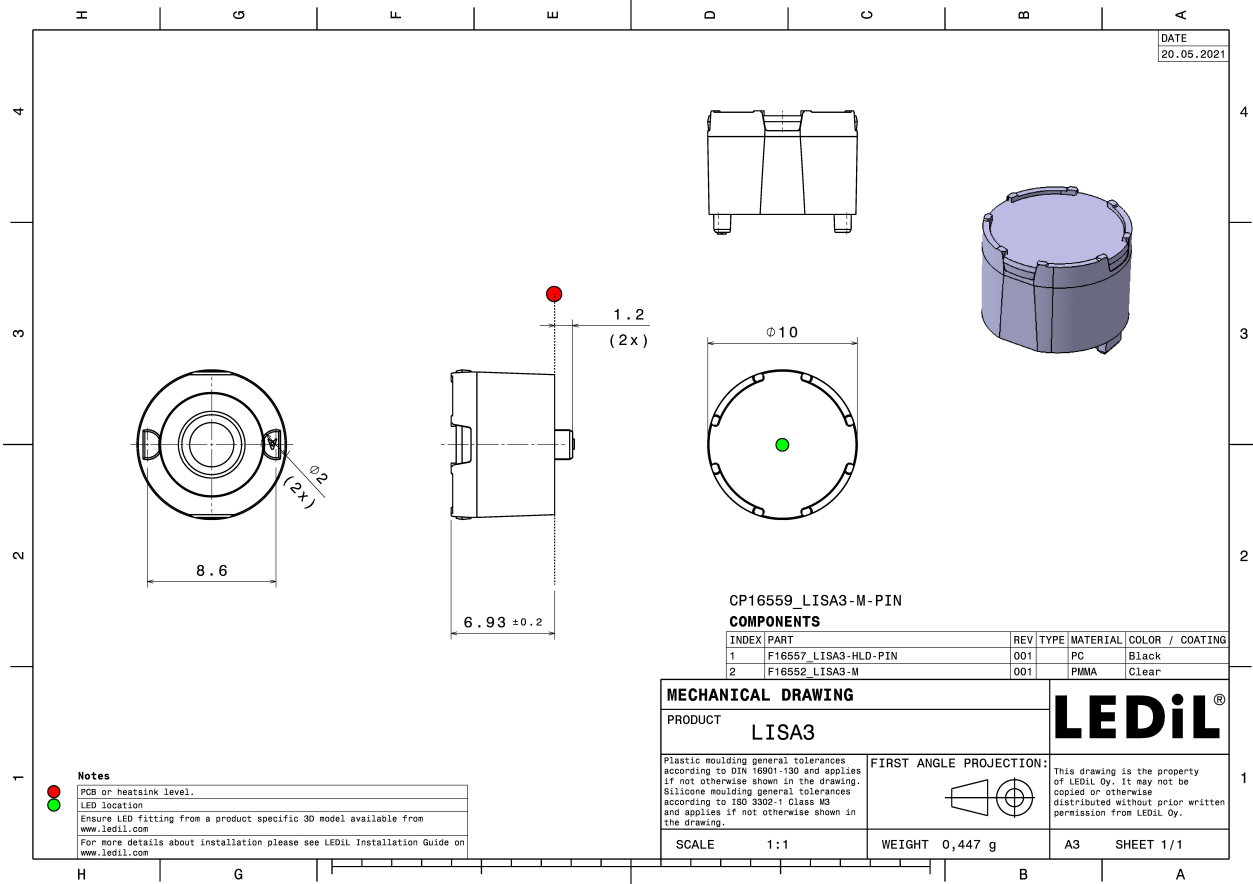
### MATERIALS:

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

### ORDERING INFORMATION:

Component		Qty in box	MOQ	MPQ	Box weight (kg)
FP16559_LISA3-M-PIN	Single lens	2000	300	100	1.3
» Box size: 310 x 230 x 60 mm					



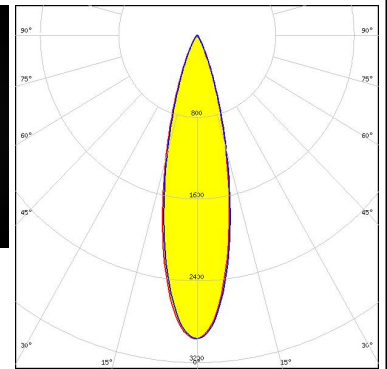
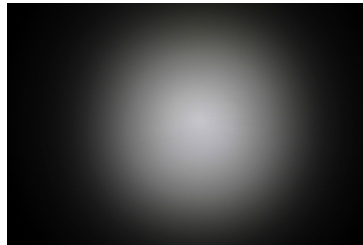


See also our general installation guide: [www.ledil.com/installation\\_guide](http://www.ledil.com/installation_guide)

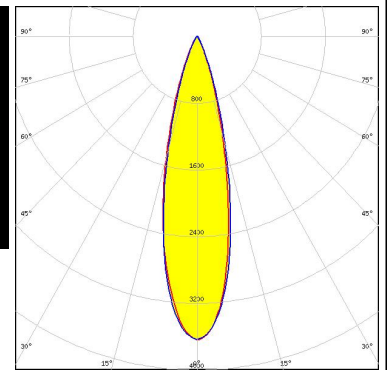
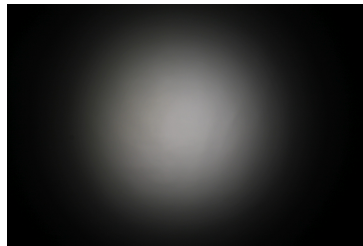
#### OPTICAL RESULTS (MEASURED):



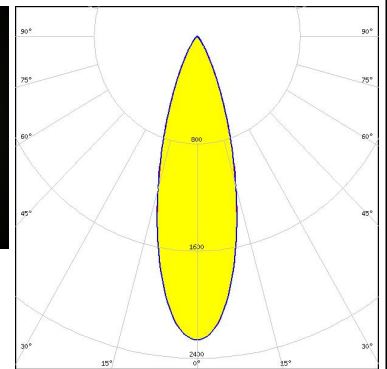
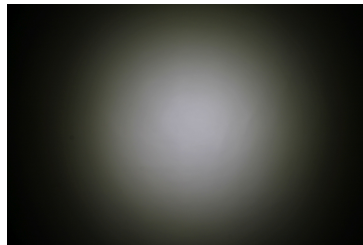
LED XD16  
 FWHM / FWTM 26.0° / 49.0°  
 Efficiency 76 %  
 Peak intensity 3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



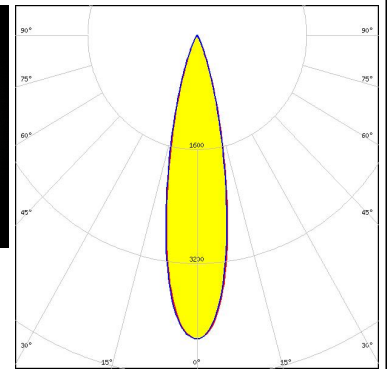
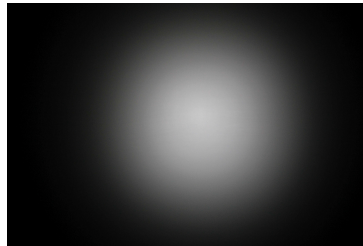
LED XP-E2  
 FWHM / FWTM 25.0° / 47.0°  
 Efficiency 88 %  
 Peak intensity 3.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:




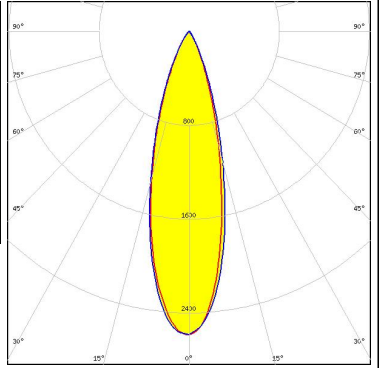

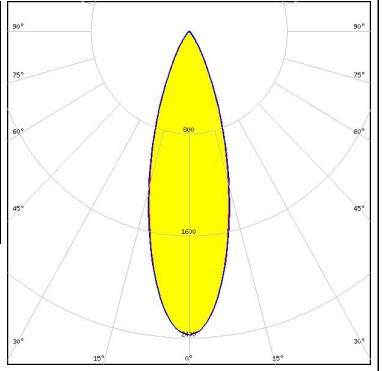
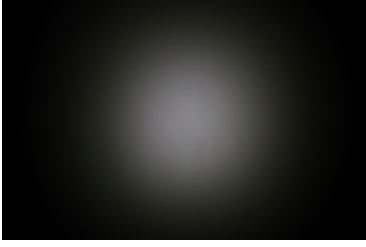
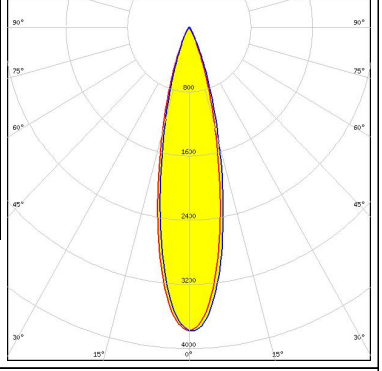
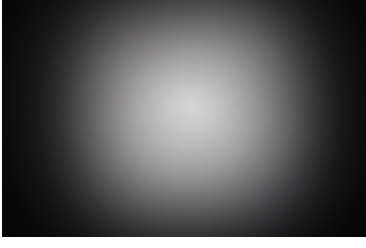
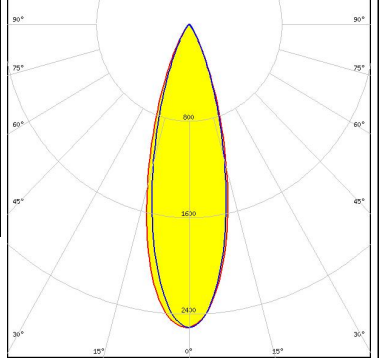
LED XP-G3  
 FWHM / FWTM 31.0° / 58.0°  
 Efficiency 81 %  
 Peak intensity 2.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED LUXEON CZ  
 FWHM / FWTM 23.0° / 43.0°  
 Efficiency 87 %  
 Peak intensity 4.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OPTICAL RESULTS (MEASURED):

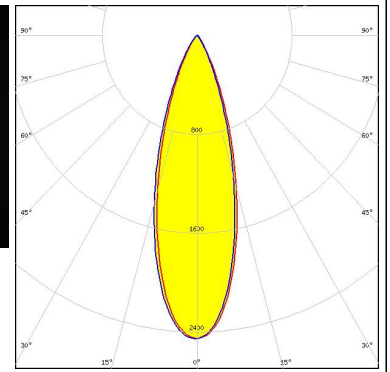
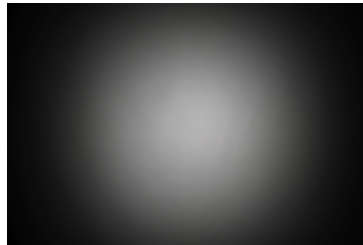
<p><b>NICHIA</b></p> <p>LED NF2x757G            FWHM / FWTM 28.0° / 54.0°            Efficiency 79 %            Peak intensity 2.6 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>NICHIA</b></p> <p>LED NVSW219F            FWHM / FWTM 32.0° / 59.0°            Efficiency 88 %            Peak intensity 2.4 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>OSRAM</b>  <small>Opto Semiconductors</small></p> <p>LED OSCONIQ C 2424            FWHM / FWTM 24.0° / 46.0°            Efficiency 87 %            Peak intensity 3.8 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>OSRAM</b>  <small>Opto Semiconductors</small></p> <p>LED OSLON Square CSSRM2/CSSRM3            FWHM / FWTM 30.0° / 55.0°            Efficiency 87 %            Peak intensity 2.5 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		



### OPTICAL RESULTS (MEASURED):

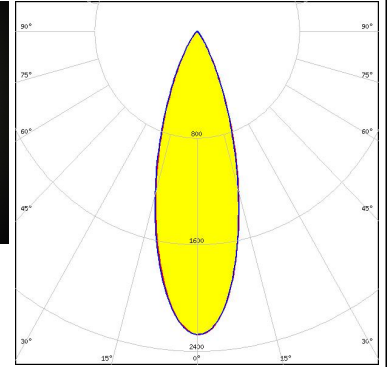
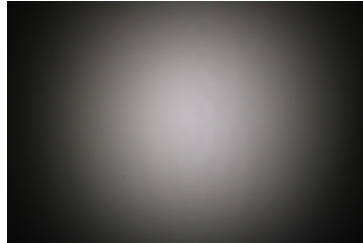
#### SAMSUNG

LED LH351C  
 FWHM / FWTM 31.0° / 58.0°  
 Efficiency 89 %  
 Peak intensity 2.5 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



SEOUL SEMICONDUCTOR

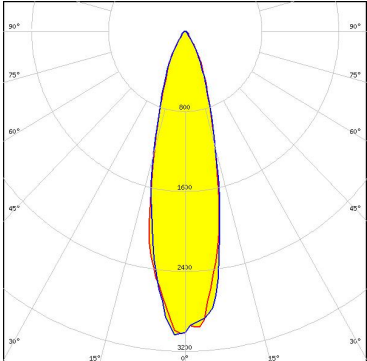
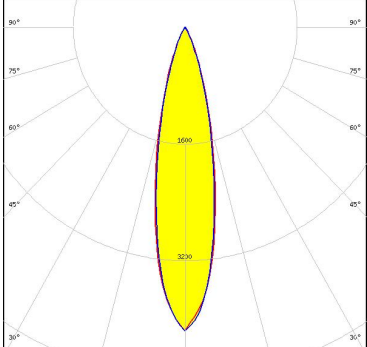
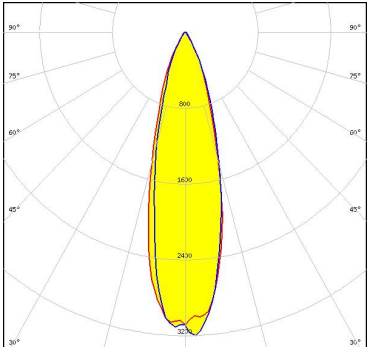
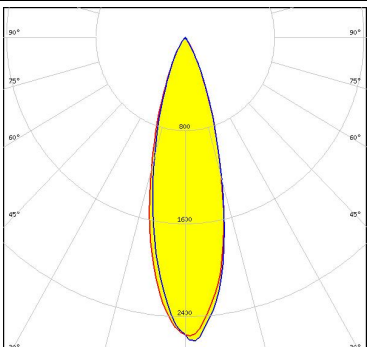
LED Z5M4  
 FWHM / FWTM 33.0° / 61.0°  
 Efficiency 88 %  
 Peak intensity 2.3 cd/m  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OPTICAL RESULTS (SIMULATED):

<p><b>CREE</b> LEDs</p> <p>LED J Series 2835            FWHM / FWTM 25.0° / 50.0°            Efficiency 88 %            Peak intensity 3.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	
<p><b>CREE</b> LEDs</p> <p>LED XP-E            FWHM / FWTM 28.0° / 45.0°            Efficiency 90 %            Peak intensity 3.5 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	
<p><b>CREE</b> LEDs</p> <p>LED XP-G            FWHM / FWTM 30.0° / 50.0°            Efficiency 88 %            Peak intensity 2.7 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	
<p><b>CREE</b> LEDs</p> <p>LED XP-G2 HE            FWHM / FWTM 34.0° / 66.0°            Efficiency 86 %            Peak intensity 2 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	

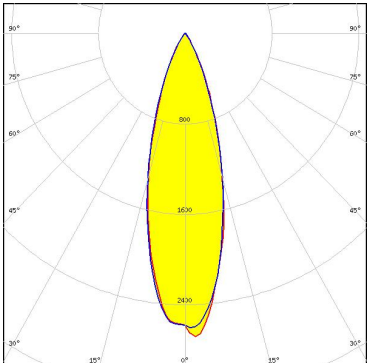
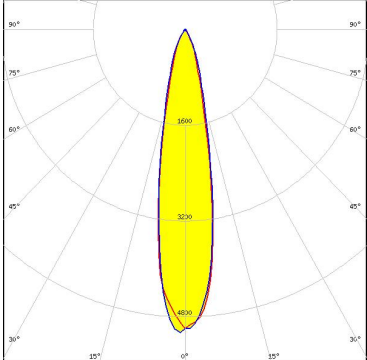
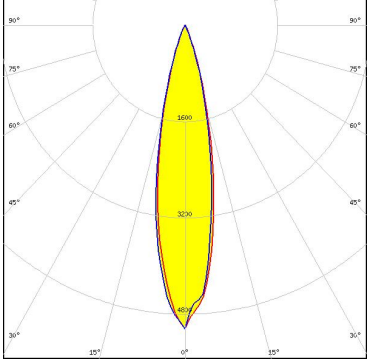
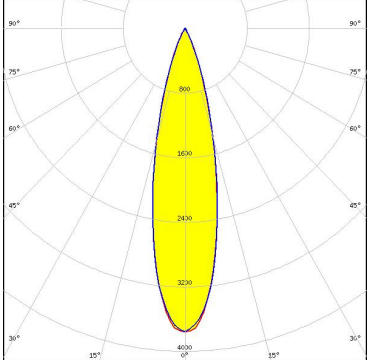
#### OPTICAL RESULTS (SIMULATED):

<p><b>CREE</b> LEDs</p> <p>LED XT-E            FWHM / FWTM 24.0° / 46.0°            Efficiency 82 %            Peak intensity 3.6 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	
<p><b>LUMILEDS</b></p> <p>LED LUXEON 2835 Line            FWHM / FWTM 23.0° / 46.0°            Efficiency 89 %            Peak intensity 4.2 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	
<p><b>LUMILEDS</b></p> <p>LED LUXEON 3030 2D (Round LES)            FWHM / FWTM 25.0° / 45.0°            Efficiency 85 %            Peak intensity 4.1 cd/lm            LEDs/each optic 1            Light colour White            Required components:</p>	
<p><b>LUMILEDS</b></p> <p>LED LUXEON C            FWHM / FWTM 28.0° / 54.0°            Efficiency 75 %            Peak intensity 2.6 cd/lm            LEDs/each optic 1            Light colour Deep Red            Required components:</p>	

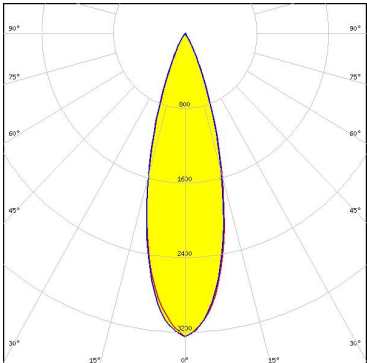
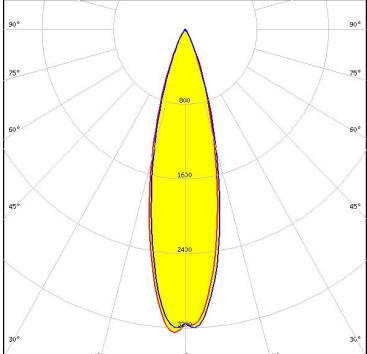
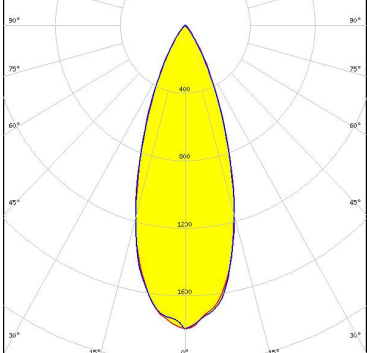
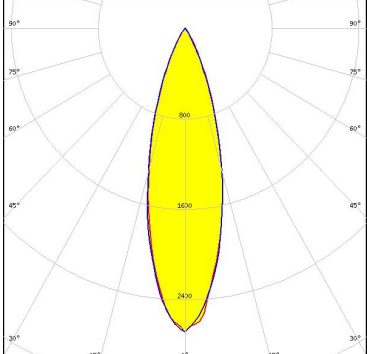
#### OPTICAL RESULTS (SIMULATED):

<p><b>LUMILEDS</b></p> <p>LED: LUXEON C            FWHM / FWTM: 26.0° / 52.0°            Efficiency: 76 %            Peak intensity: 2.8 cd/lm            LEDs/each optic: 1            Light colour: Green            Required components:</p>	
<p><b>LUMILEDS</b></p> <p>LED: LUXEON C            FWHM / FWTM: 27.0° / 51.0°            Efficiency: 76 %            Peak intensity: 2.9 cd/lm            LEDs/each optic: 1            Light colour: Royal Blue            Required components:</p>	
<p><b>LUMILEDS</b></p> <p>LED: LUXEON C            FWHM / FWTM: 28.0° / 52.0°            Efficiency: 80 %            Peak intensity: 2.9 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>LUMILEDS</b></p> <p>LED: LUXEON TX            FWHM / FWTM: 28.0° / 50.0°            Efficiency: 87 %            Peak intensity: 3.1 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	

#### OPTICAL RESULTS (SIMULATED):

<p><b>LUMILEDS</b></p> <p>LED: LUXEON V2            FWHM / FWTM: 30.0° / 56.0°            Efficiency: 90 %            Peak intensity: 2.7 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>LUMILEDS</b></p> <p>LED: LUXEON Z            FWHM / FWTM: 20.0° / 38.0°            Efficiency: 88 %            Peak intensity: 6.1 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>LUMILEDS</b></p> <p>LED: LUXEON Z ES            FWHM / FWTM: 22.0° / 41.0°            Efficiency: 89 %            Peak intensity: 5 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>LUMINUS</b></p> <p>LED: SST-20            FWHM / FWTM: 26.0° / 46.0°            Efficiency: 87 %            Peak intensity: 3.8 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	

#### OPTICAL RESULTS (SIMULATED):

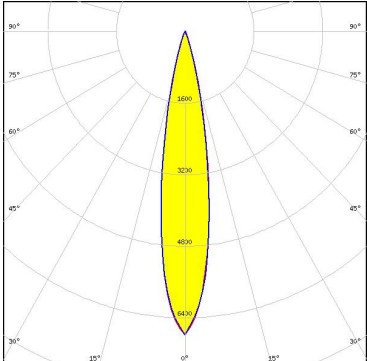
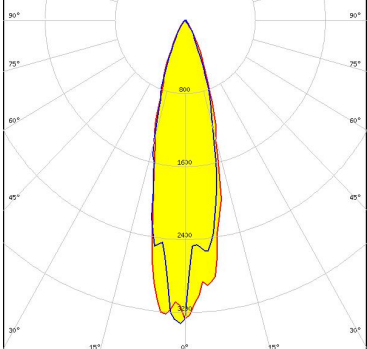
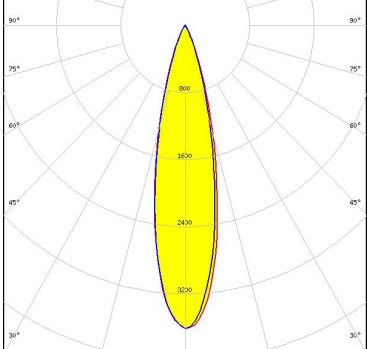
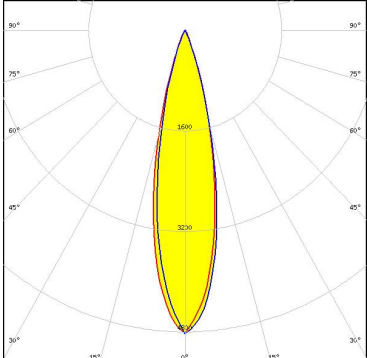
<p><b>NICHIA</b></p> <p>LED: NCSU276C            FWHM / FWTM: 30.0° / 52.0°            Efficiency: 89 %            LEDs/each optic: 1            Light colour: UV-A            Required components:</p>	
<p><b>NICHIA</b></p> <p>LED: NCSxx19B            FWHM / FWTM: 26.0° / 49.0°            Efficiency: 83 %            Peak intensity: 3.3 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>NICHIA</b></p> <p>LED: NV4WB35AM            FWHM / FWTM: 38.0° / 66.0°            Efficiency: 85 %            Peak intensity: 1.8 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	
<p><b>NICHIA</b></p> <p>LED: NVSxx19B/NVSxx19C            FWHM / FWTM: 29.0° / 56.0°            Efficiency: 86 %            Peak intensity: 2.7 cd/lm            LEDs/each optic: 1            Light colour: White            Required components:</p>	



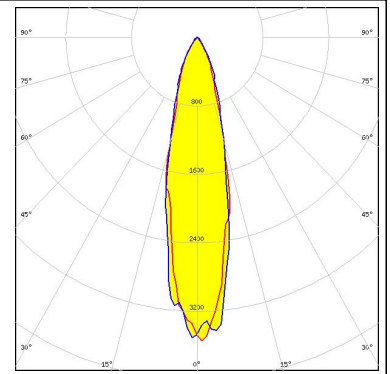
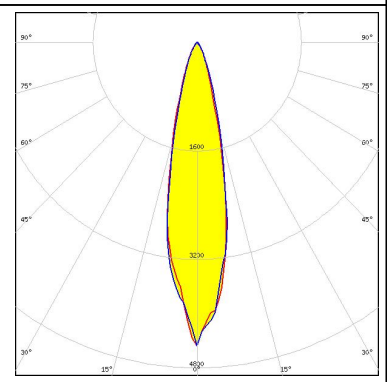
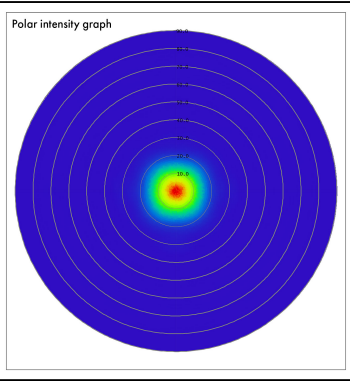
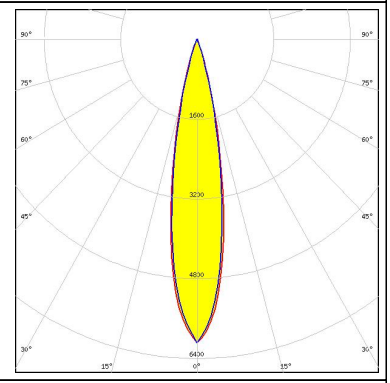
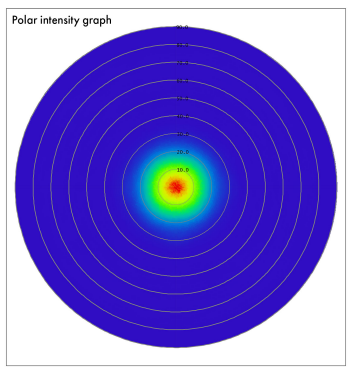
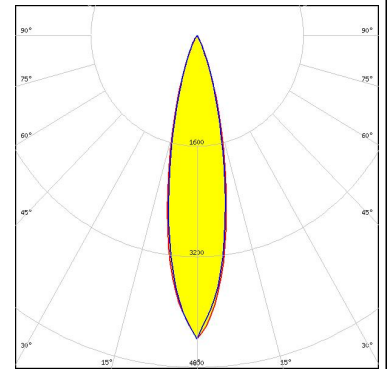
#### OPTICAL RESULTS (SIMULATED):

<b>OSRAM</b> <small>Opto Semiconductors</small>	<p>LED Duris E 2835</p> <p>FWHM / FWTM 23.0° / 46.0°</p> <p>Efficiency 87 %</p> <p>Peak intensity 4.1 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
<b>OSRAM</b> <small>Opto Semiconductors</small>	<p>LED Duris S5 (2 chip)</p> <p>FWHM / FWTM 25.0° / 45.0°</p> <p>Efficiency 89 %</p> <p>Peak intensity 3.2 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
<b>OSRAM</b> <small>Opto Semiconductors</small>	<p>LED Duris S5 (Single chip)</p> <p>FWHM / FWTM 25.0° / 45.0°</p> <p>Efficiency 86 %</p> <p>Peak intensity 3.7 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components:</p>	
<b>OSRAM</b> <small>Opto Semiconductors</small>	<p>LED OSCONIQ P 3030</p> <p>FWHM / FWTM 22.0° / 42.0°</p> <p>Efficiency 85 %</p> <p>Peak intensity 4.7 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: OSLOM Black</p> <p>FWHM / FWTM: 18.0° / 34.0°</p> <p>Efficiency: 88 %</p> <p>Peak intensity: 6.8 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: OSLOM Square EC</p> <p>FWHM / FWTM: 26.0° / 49.0°</p> <p>Efficiency: 88 %</p> <p>Peak intensity: 3.4 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: OSLOM Square Flat</p> <p>FWHM / FWTM: 24.0° / 45.0°</p> <p>Efficiency: 78 %</p> <p>Peak intensity: 3.6 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: OSLOM SSL 120</p> <p>FWHM / FWTM: 23.0° / 41.0°</p> <p>Efficiency: 91 %</p> <p>Peak intensity: 4.8 cd/lm</p> <p>LEDs/each optic: 1</p> <p>Light colour: Hyper Red</p> <p>Required components:</p>	

#### OPTICAL RESULTS (SIMULATED):

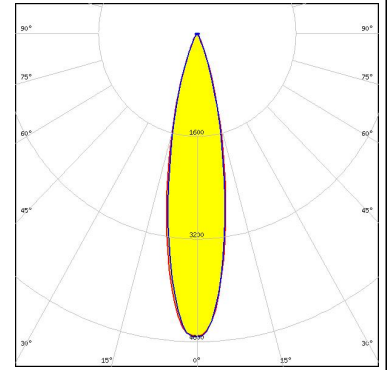
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED: OSLOL SSL 150</p> <p>FWHM / FWTM: 25.0° / 45.0°</p> <p>Efficiency: 89 %</p> <p>Peak intensity: 4 cd/lm</p> <p>LEDs/each optic: 1</p> <p>Light colour: White</p> <p>Required components:</p>		
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED: OSLOL SSL 80</p> <p>FWHM / FWTM: 21.0° / 40.0°</p> <p>Efficiency: 87 %</p> <p>Peak intensity: 5 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: SFH 4715S</p> <p>FWHM / FWTM: 20.0° / 35.0°</p> <p>Efficiency: 87 %</p> <p>LEDs/each optic: 1</p> <p>Light colour: IR</p> <p>Required components:</p>	<p>Polar intensity graph</p> 	
<p><b>OSRAM</b> Opto Semiconductors</p> <p>LED: SFH 4716S</p> <p>FWHM / FWTM: 22.0° / 44.0°</p> <p>Efficiency: 86 %</p> <p>LEDs/each optic: 1</p> <p>Light colour: IR</p> <p>Required components:</p>	<p>Polar intensity graph</p> 	

#### OPTICAL RESULTS (SIMULATED):

#### OSRAM

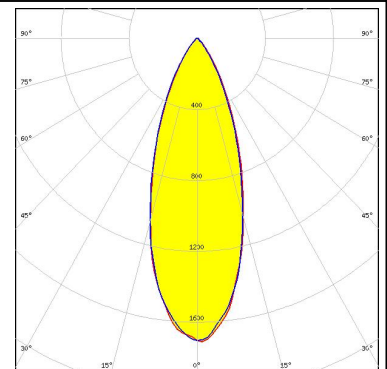
Opto Semiconductors

LED SYNIOS S2222  
 FWHM / FWTM 23.0° / 44.0°  
 Efficiency 97 %  
 Peak intensity 4.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



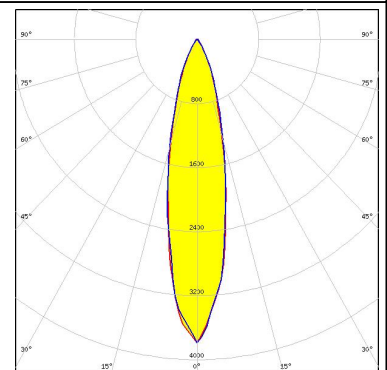
#### SAMSUNG

LED LH351D  
 FWHM / FWTM 36.0° / 70.0°  
 Efficiency 85 %  
 Peak intensity 1.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



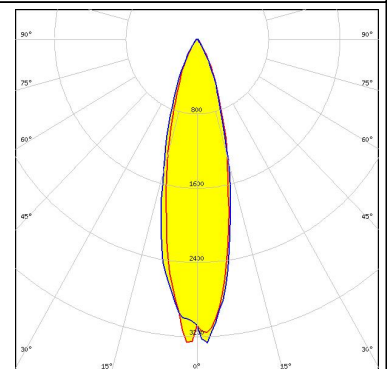
#### SAMSUNG

LED LM301A  
 FWHM / FWTM 22.0° / 41.0°  
 Efficiency 87 %  
 Peak intensity 3.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:


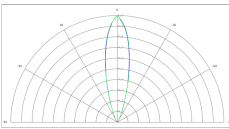
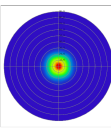
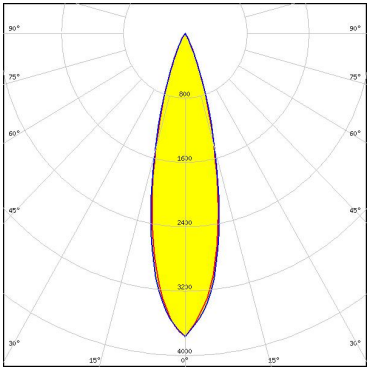

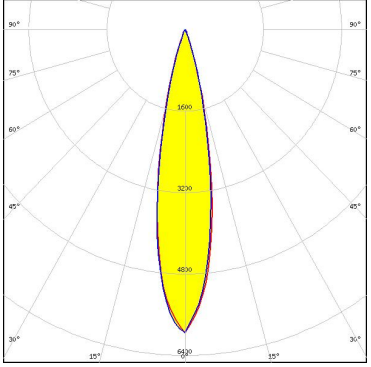

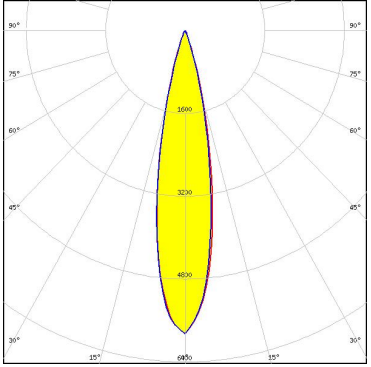

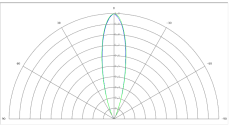
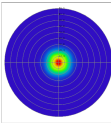
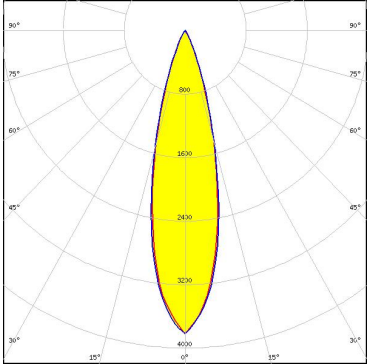


#### SAMSUNG

LED LM302A  
 FWHM / FWTM 25.0° / 47.0°  
 Efficiency 87 %  
 Peak intensity 3.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OPTICAL RESULTS (SIMULATED):

	<p>LED: FWR1108MS            FWHM / FWTM: 25.0° / 46.0°            Efficiency: 89 %            LEDs/each optic: 1            Light colour: IR            Required components:</p>			
	<p>LED: MFN1108MS            FWHM / FWTM: 21.0° / 37.0°            Efficiency: 91 %            Peak intensity: 6 cd/lm            LEDs/each optic: 1            Light colour: IR            Required components:</p>			
	<p>LED: MGN1108MS            FWHM / FWTM: 22.0° / 37.0°            Efficiency: 91 %            Peak intensity: 5.9 cd/lm            LEDs/each optic: 1            Light colour: IR            Required components:</p>			
	<p>LED: MJN1108MS            FWHM / FWTM: 25.0° / 46.0°            Efficiency: 90 %            LEDs/each optic: 1            Light colour: IR            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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