

## STRADELLA-IP-28-HB-S

~30° spot beam. Variant made from PMMA.

### SPECIFICATION:

Dimensions	100.0 x 100.0 mm
Height	9.5 mm
Fastening	pin, screw
Ingress protection classes	IP66, IP67
ROHS compliant	yes ⓘ

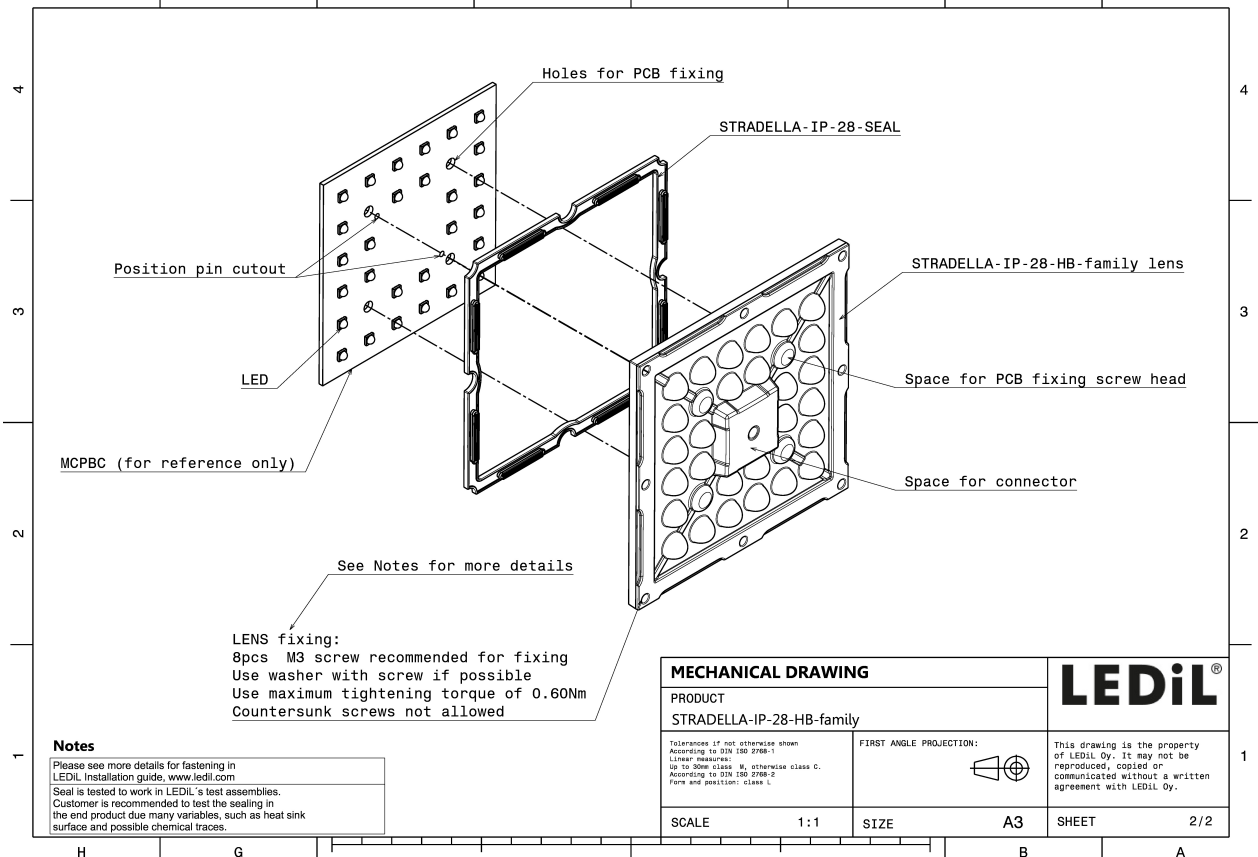
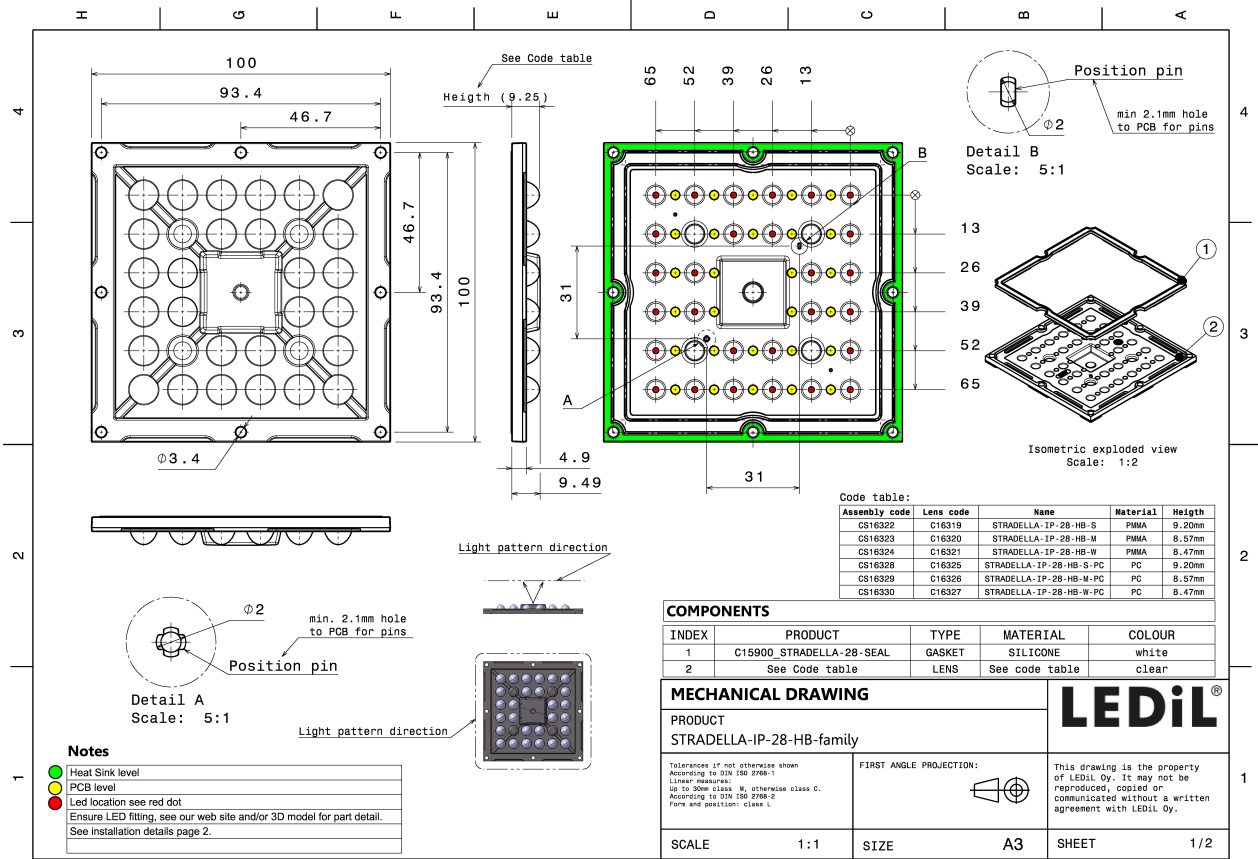
### MATERIALS:

Component	Type	Material	Colour	Finish
STRADELLA-IP-28-HB-S	Multi-lens	PMMA	clear	
STRADELLA-28-SEAL	Seal	Silicone	white	





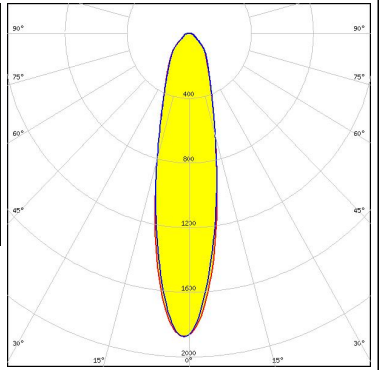


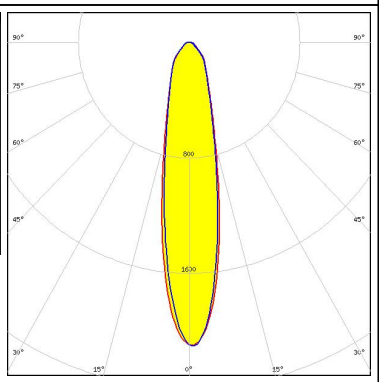


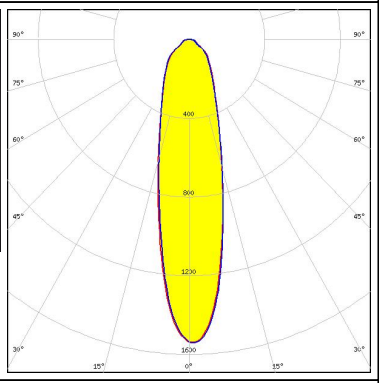


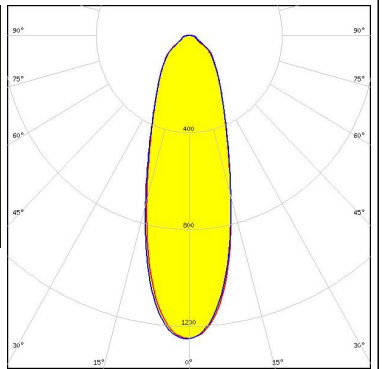
### ORDERING INFORMATION:

Component	Type	Qty in box	MOQ	MPQ	Box weight (kg)
CS16322_STRADELLA-IP-28-HB-S » Box size: 476 x 273 x 247 mm	Multi-lens	156	78	78	5.9



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

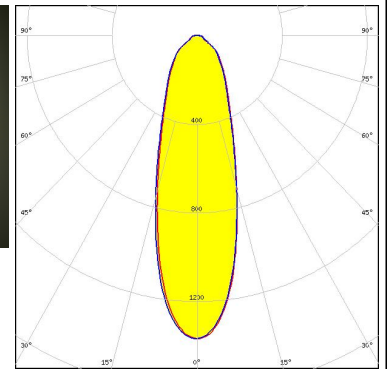
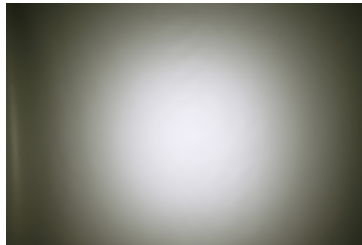
#### OPTICAL RESULTS (MEASURED):

<p></p> <p>LED                    HiQLED STR28 CR JE2835 4x7 xxx</p> <p>FWHM / FWTM        24.0° / 75.0°</p> <p>Efficiency            91 %</p> <p>Peak intensity        1.9 cd/m</p> <p>LEDs/each optic     1</p> <p>Light colour         White</p> <p>Required components:</p>		
<p></p> <p>LED                    HiQLED STR28 CR JK3030 4x7 xxx</p> <p>FWHM / FWTM        22.0° / 69.0°</p> <p>Efficiency            90 %</p> <p>Peak intensity        2.1 cd/m</p> <p>LEDs/each optic     1</p> <p>Light colour         White</p> <p>Required components:</p>		
<p></p> <p>LED                    QUICK FLUX STR28 XD2x14 xxx G8</p> <p>FWHM / FWTM        26.0° / 88.0°</p> <p>Efficiency            91 %</p> <p>Peak intensity        1.6 cd/m</p> <p>LEDs/each optic     1</p> <p>Light colour         White</p> <p>Required components:</p>		
<p></p> <p>LED                    QUICK FLUX STR28 XP2x14 xxx G7</p> <p>FWHM / FWTM        33.0° / 99.0°</p> <p>Efficiency            92 %</p> <p>Peak intensity        1.3 cd/m</p> <p>LEDs/each optic     1</p> <p>Light colour         White</p> <p>Required components:</p>		

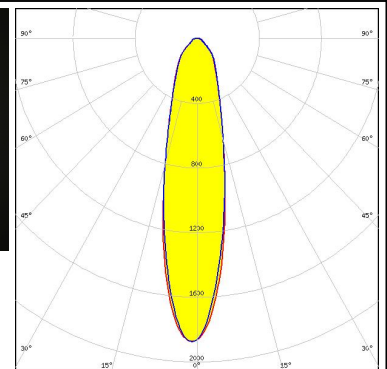
#### OPTICAL RESULTS (MEASURED):



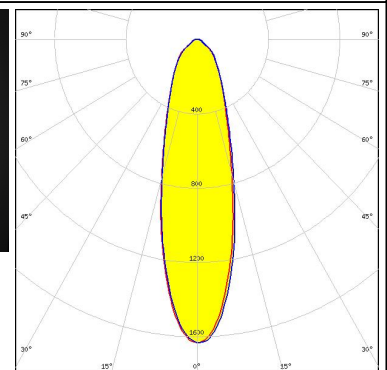
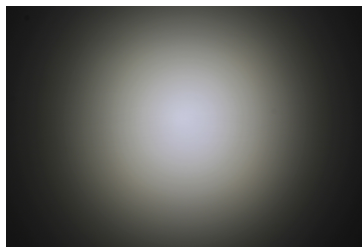
**LED** QUICK FLUX STR28 XT2x14 xxx G5  
**FWHM / FWTM** 32.0° / 95.0°  
**Efficiency** 93 %  
**Peak intensity** 1.4 cd/lm  
**LEDs/each optic** 1  
**Light colour** White  
**Required components:**



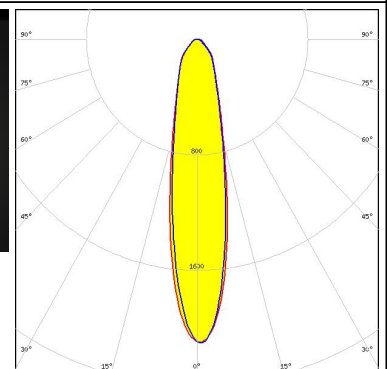
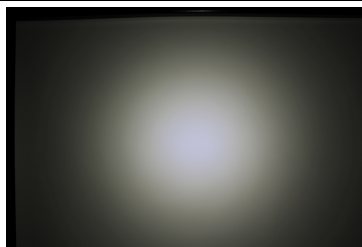
**LED** J Series 2835  
**FWHM / FWTM** 24.0° / 75.0°  
**Efficiency** 91 %  
**Peak intensity** 1.9 cd/lm  
**LEDs/each optic** 1  
**Light colour** White  
**Required components:**



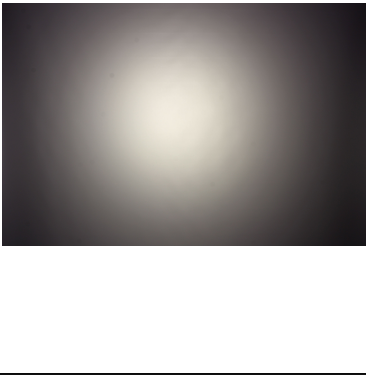
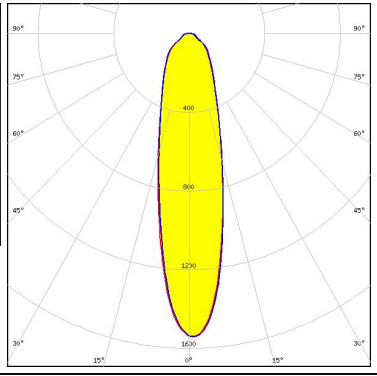

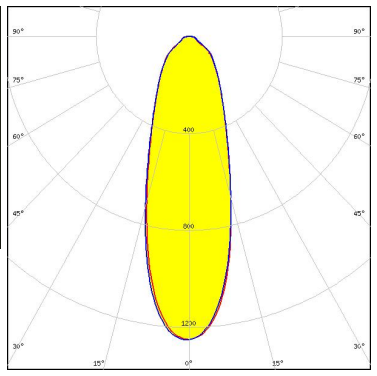

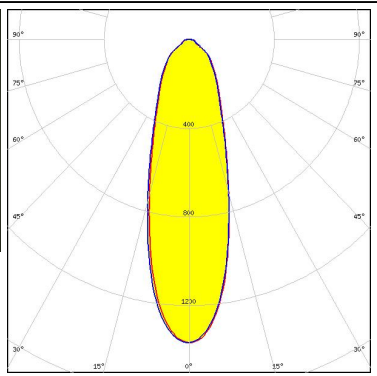

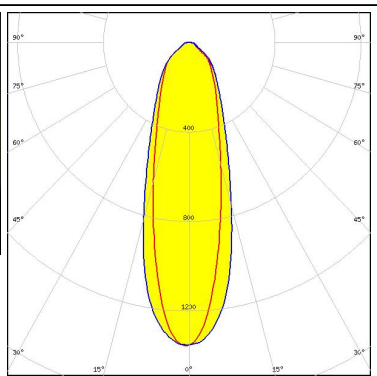
**LED** J Series 3030  
**FWHM / FWTM** 28.0° / 83.0°  
**Efficiency** 93 %  
**Peak intensity** 1.6 cd/lm  
**LEDs/each optic** 1  
**Light colour** White  
**Required components:**



**LED** J Series 3030  
**FWHM / FWTM** 22.0° / 69.0°  
**Efficiency** 90 %  
**Peak intensity** 2.1 cd/lm  
**LEDs/each optic** 1  
**Light colour** White  
**Required components:**



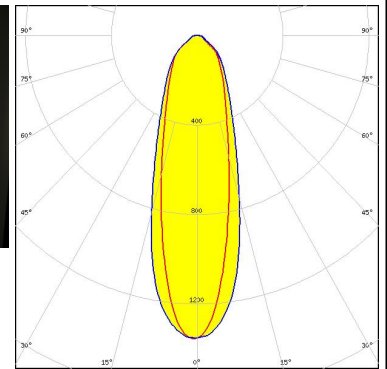
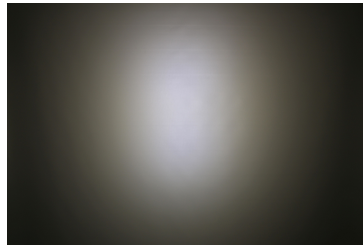
#### OPTICAL RESULTS (MEASURED):

<p><b>CREE</b> LEDs</p> <p>LED XD16            FWHM / FWTM 26.0° / 88.0°            Efficiency 91 %            Peak intensity 1.6 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>CREE</b> LEDs</p> <p>LED XP-G3            FWHM / FWTM 33.0° / 99.0°            Efficiency 92 %            Peak intensity 1.3 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>CREE</b> LEDs</p> <p>LED XT-E            FWHM / FWTM 32.0° / 95.0°            Efficiency 93 %            Peak intensity 1.4 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		
<p><b>NICHIA</b></p> <p>LED NF2W585AR            FWHM / FWTM 31.0° / 96.0°            Efficiency 91 %            Peak intensity 1.4 cd/m            LEDs/each optic 1            Light colour White            Required components:</p>		

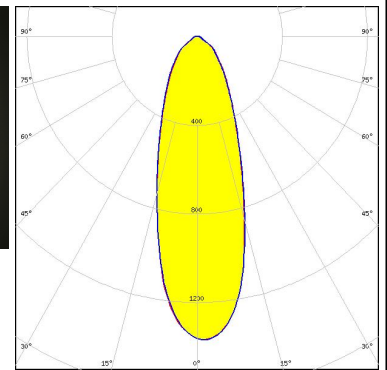
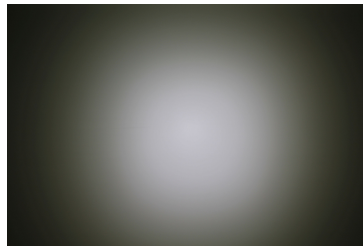
#### OPTICAL RESULTS (MEASURED):



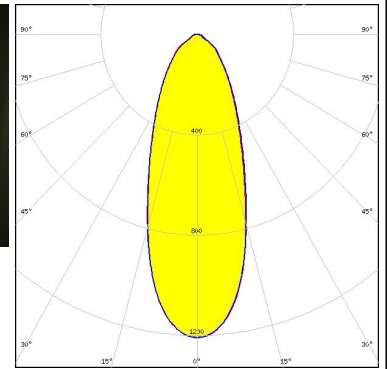
LED NF2W585AR  
 FWHM / FWTM 31.0° / 97.0°  
 Efficiency 91 %  
 Peak intensity 1.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



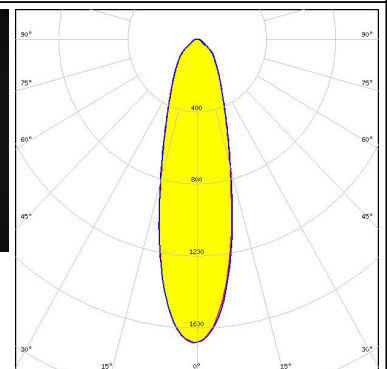
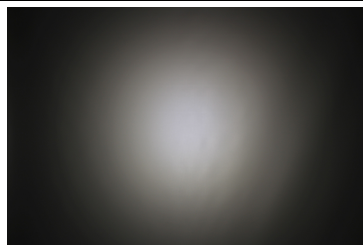
LED NVSW219F  
 FWHM / FWTM 34.0° / 90.0°  
 Efficiency 94 %  
 Peak intensity 1.4 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED NVSW319B  
 FWHM / FWTM 39.0° / 97.0°  
 Efficiency 94 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED OSCONIQ S 3030 (QSLR31)  
 FWHM / FWTM 28.0° / 81.0°  
 Efficiency 93 %  
 Peak intensity 1.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

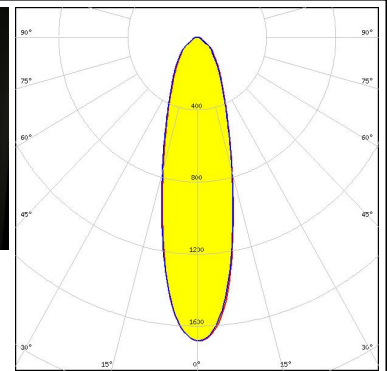
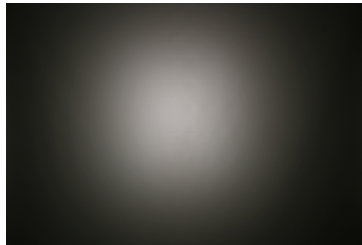


#### OPTICAL RESULTS (MEASURED):

#### OSRAM

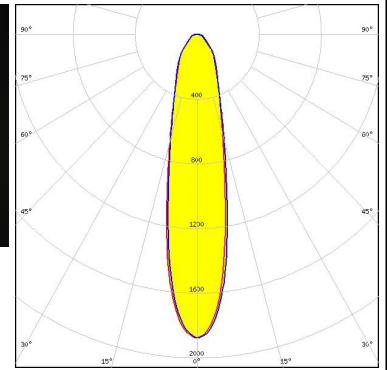
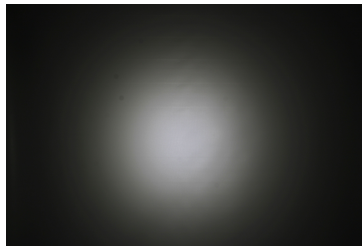
Opto Semiconductors

LED OSLON Square CSSRM2/CSSRM3  
 FWHM / FWTM 28.0° / 80.0°  
 Efficiency 93 %  
 Peak intensity 1.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



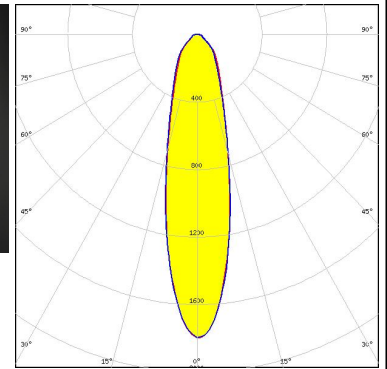
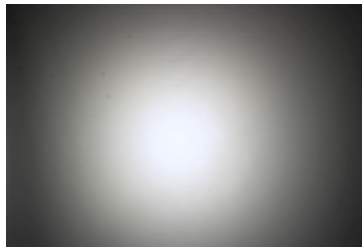
#### SAMSUNG

LED HiLOM SC28 (LH181B)  
 FWHM / FWTM 23.0° / 74.0°  
 Efficiency 89 %  
 Peak intensity 1.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



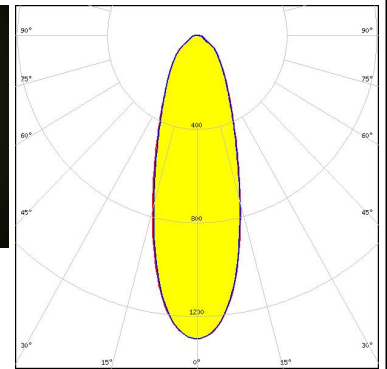
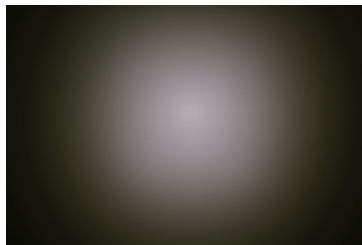
#### SAMSUNG

LED HiLOM SM28 (LM301B)  
 FWHM / FWTM 25.0° / 78.0°  
 Efficiency 91 %  
 Peak intensity 1.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



SEOUL SEMICONDUCTOR

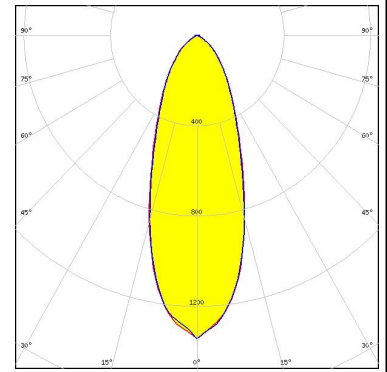
LED Z5M3  
 FWHM / FWTM 34.0° / 94.0°  
 Efficiency 93 %  
 Peak intensity 1.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



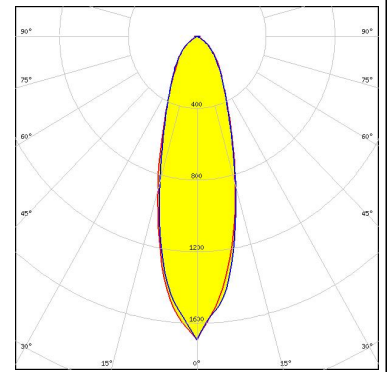
#### OPTICAL RESULTS (SIMULATED):



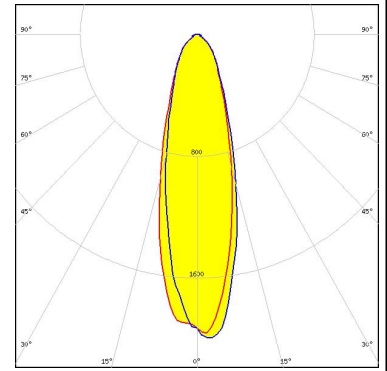
LED XP-G2 HE  
 FWHM / FWTM 37.0° / 90.0°  
 Efficiency 92 %  
 Peak intensity 1.3 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



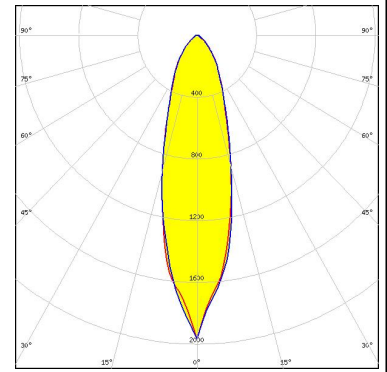
LED XP-L HI  
 FWHM / FWTM 30.0° / 82.0°  
 Efficiency 90 %  
 Peak intensity 1.7 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED LUXEON 3030 2D (Round LES)  
 FWHM / FWTM 27.0° / 74.0°  
 Efficiency 92 %  
 Peak intensity 2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED NF2x757G  
 FWHM / FWTM 28.0° / 76.0°  
 Efficiency 93 %  
 Peak intensity 2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

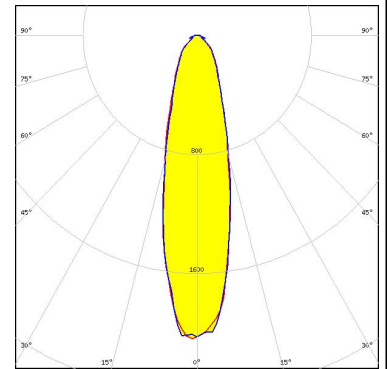




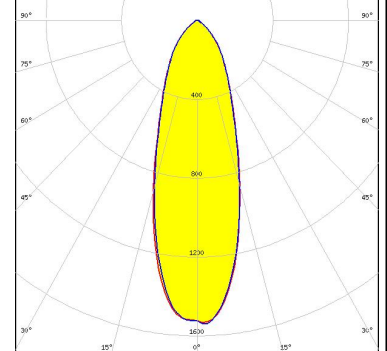
#### OPTICAL RESULTS (SIMULATED):



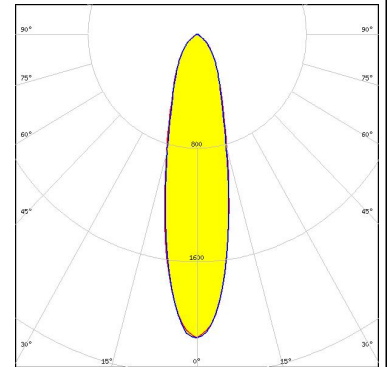
LED NVSxE21A  
 FWHM / FWTM 25.0° / 73.0°  
 Efficiency 92 %  
 Peak intensity 2.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



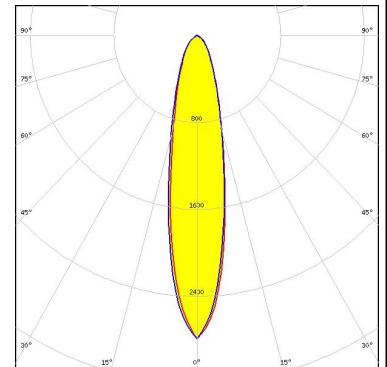
LED NVSxx19B/NVSxx19C  
 FWHM / FWTM 34.0° / 86.0°  
 Efficiency 93 %  
 Peak intensity 1.5 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED OSCONIQ C 2424  
 FWHM / FWTM 25.0° / 73.0°  
 Efficiency 93 %  
 Peak intensity 2.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



LED OSCONIQ P 3030  
 FWHM / FWTM 22.0° / 60.0°  
 Efficiency 94 %  
 Peak intensity 2.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

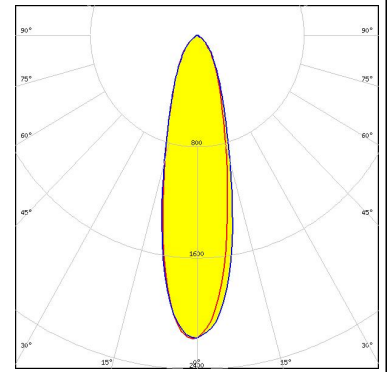


#### OPTICAL RESULTS (SIMULATED):

##### OSRAM

Opto Semiconductors

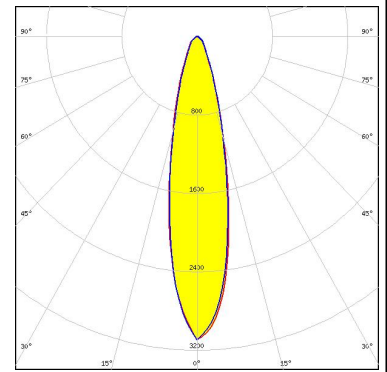
LED OSCONIQ P 3737 (2W version)  
 FWHM / FWTM 27.0° / 69.0°  
 Efficiency 93 %  
 Peak intensity 2.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



##### OSRAM

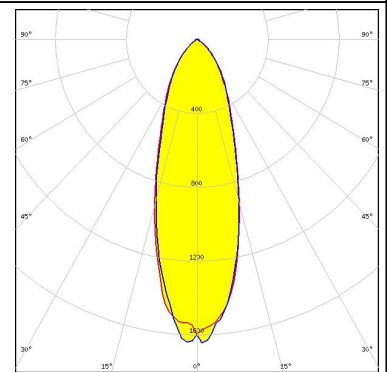
Opto Semiconductors

LED OSLON SSL 80  
 FWHM / FWTM 23.0° / 51.0°  
 Efficiency 93 %  
 Peak intensity 3.1 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



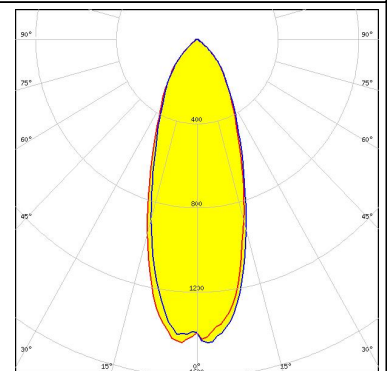
##### SAMSUNG

LED LH351B  
 FWHM / FWTM 33.0° / 82.0°  
 Efficiency 94 %  
 Peak intensity 1.8 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



##### SAMSUNG

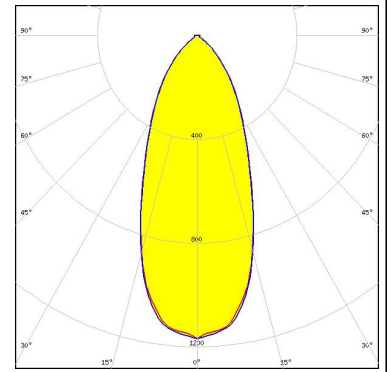
LED LH351C  
 FWHM / FWTM 37.0° / 87.0°  
 Efficiency 94 %  
 Peak intensity 1.6 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OPTICAL RESULTS (SIMULATED):

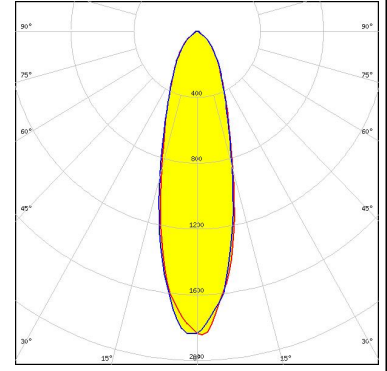
#### SAMSUNG


LED LH351D  
 FWHM / FWTM 44.0° / 92.0°  
 Efficiency 91 %  
 Peak intensity 1.2 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:

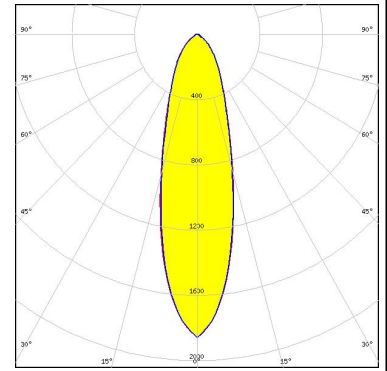



#### SAMSUNG

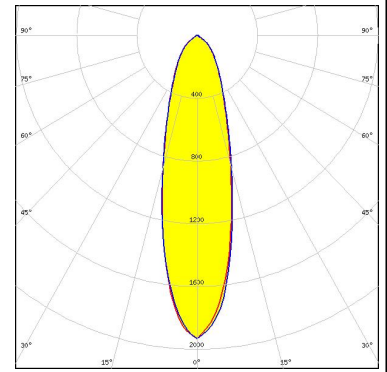
LED LM301B  
 FWHM / FWTM 29.0° / 78.0°  
 Efficiency 93 %  
 Peak intensity 1.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



 SEOU SEMICONDUCTOR  
 LED SEOUL 3030  
 FWHM / FWTM 28.0° / 78.0°  
 Efficiency 93 %  
 Peak intensity 1.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



 SEOU SEMICONDUCTOR  
 LED SEOUL DC 3030C  
 FWHM / FWTM 28.0° / 77.0°  
 Efficiency 93 %  
 Peak intensity 1.9 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:



#### OPTICAL RESULTS (SIMULATED):

<p><b>SEOUL SEMICONDUCTOR</b></p> <p>LED: SEOUL DC 5050 6V</p> <p>FWHM / FWTM: 46.0° / 98.0°</p> <p>Efficiency: 89 %</p> <p>Peak intensity: 1 cd/lm</p> <p>LEDs/each optic: 1</p> <p>Light colour: White</p> <p>Required components:</p>	
<p><b>SEOUL SEMICONDUCTOR</b></p> <p>LED: Z5M1/Z5M2</p> <p>FWHM / FWTM: 30.0° / 79.0°</p> <p>Efficiency: 94 %</p> <p>Peak intensity: 1.8 cd/lm</p> <p>LEDs/each optic: 1</p> <p>Light colour: White</p> <p>Required components:</p>	
<p><b>SEOUL SEMICONDUCTOR</b></p> <p>LED: Z8Y19</p> <p>FWHM / FWTM: 24.0° / 84.0°</p> <p>Efficiency: 89 %</p> <p>Peak intensity: 1.7 cd/lm</p> <p>LEDs/each optic: 1</p> <p>Light colour: White</p> <p>Required components:</p>	
<p><b>SEOUL SEMICONDUCTOR</b></p> <p>LED: Z8Y22</p> <p>FWHM / FWTM: 29.0° / 88.0°</p> <p>Efficiency: 92 %</p> <p>Peak intensity: 1.5 cd/lm</p> <p>LEDs/each optic: 1</p> <p>Light colour: White</p> <p>Required components:</p>	

#### OPTICAL RESULTS (SIMULATED):



#### GENERAL INFORMATION:

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

#### MATERIALS:

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

#### PRODUCT DATA USER AGREEMENT AND DISCLAIMER:

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

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

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

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

#### LEDiL Oy

Joensuunkatu 13  
FI-24240 SALO  
Finland

#### LEDiL Inc.

228 West Page Street  
Suite D  
Sycamore IL 60178  
USA

#### Ledil Optics Technology (Shenzhen) Co., Ltd.

# 405 , Block B  
Casic Motor Building  
Shenzhen 518057  
P.R.CHINA

#### Local sales and technical support

[www.ledil.com/  
where\\_to\\_buy](http://www.ledil.com/where_to_buy)

#### Shipping locations

Salo, Finland  
Hong Kong, China

#### Distribution Partners

[www.ledil.com/  
where\\_to\\_buy](http://www.ledil.com/where_to_buy)