

## CARMEN-90-RS

~10° beam

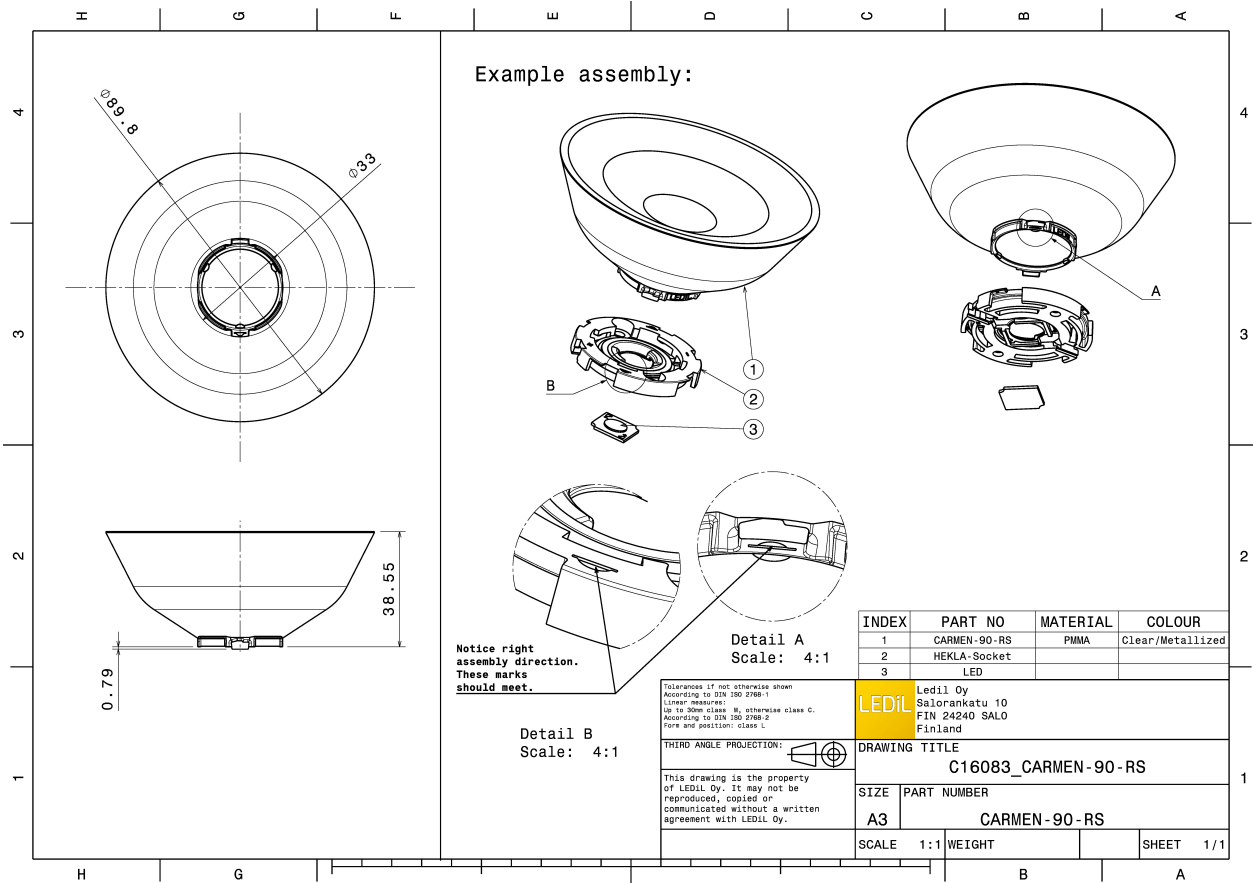
### TECHNICAL SPECIFICATIONS:

Dimensions	Ø 89.8 mm
Height	39.3 mm
Fastening	socket
Colour	clear
Box size	480 x 280 x 300 mm
Box weight	7 kg
Quantity in Box	70 pcs
ROHS compliant	yes ⓘ


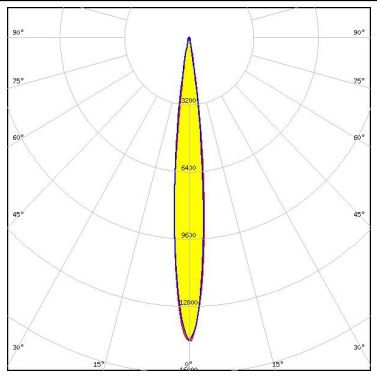

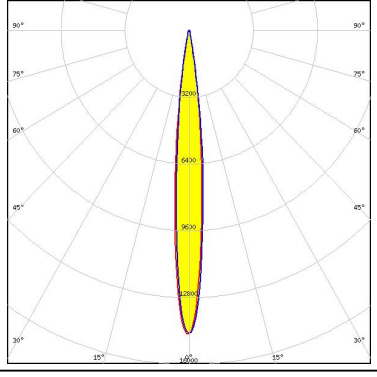

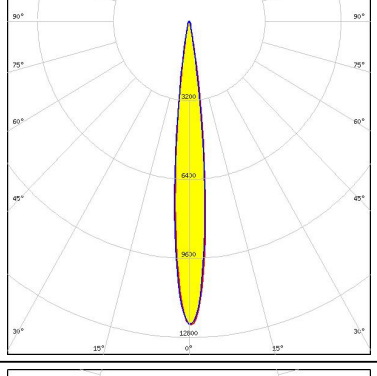

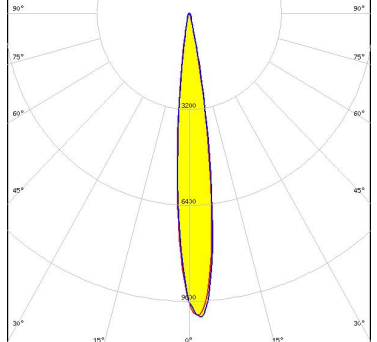


### MATERIAL SPECIFICATIONS:

Component	Type	Material	Colour
CARMEN-90-RS	Single lens	PMMA	clear



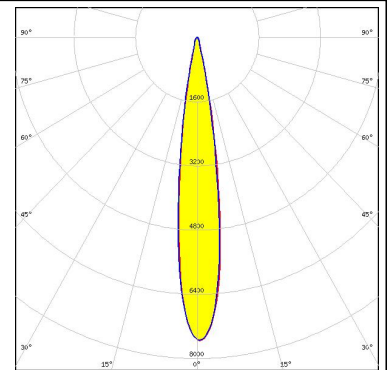
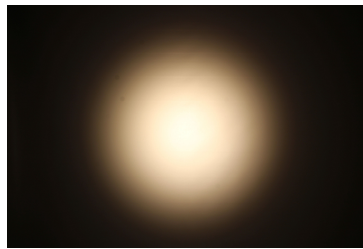
#### PHOTOMETRIC DATA (MEASURED):

<p>bridgelux.</p> <p>LED V6 HD</p> <p>FWHM 11.0°</p> <p>Efficiency 83 %</p> <p>Peak intensity 14.500 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F15255_HEKLA-SOCKET-C</p>		
<p>bridgelux.</p> <p>LED V9 HD</p> <p>FWHM 11.0°</p> <p>Efficiency 83 %</p> <p>Peak intensity 14.600 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F15859_HEKLA-SOCKET-I</p>		
<p>bridgelux.</p> <p>LED V9 HD</p> <p>FWHM 12.0°</p> <p>Efficiency 81 %</p> <p>Peak intensity 12.300 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F15859_HEKLA-SOCKET-I</p>		
<p><b>CITIZEN</b></p> <p>LED CLL02x/CLU02x (LES10)</p> <p>FWHM 13.0°</p> <p>Efficiency 82 %</p> <p>Peak intensity 10.700 cd/lm</p> <p>LEDs/each optic 1</p> <p>Light colour White</p> <p>Required components: F15255_HEKLA-SOCKET-C</p>		

#### PHOTOMETRIC DATA (MEASURED):

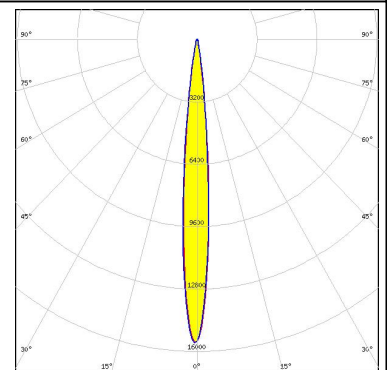
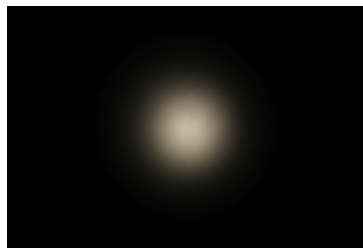
#### CITIZEN

LED CLL03x/CLU03x  
 FWHM 15.0°  
 Efficiency 82 %  
 Peak intensity 7.600 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F15859\_HEKLA-SOCKET-I



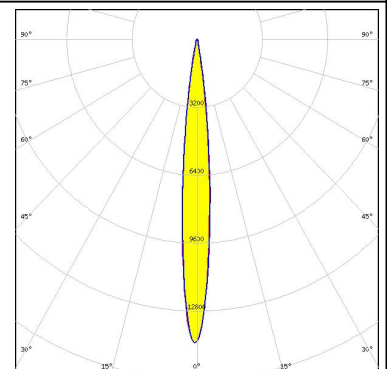
#### CITIZEN

LED CLU700/701  
 FWHM 10.0°  
 Efficiency 81 %  
 Peak intensity 15.600 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F15255\_HEKLA-SOCKET-C



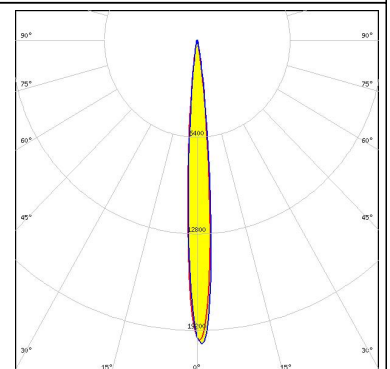
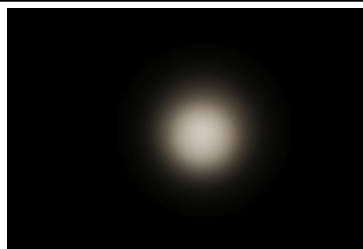
#### CITIZEN

LED CLU710/711  
 FWHM 11.0°  
 Efficiency 82 %  
 Peak intensity 14.600 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F15859\_HEKLA-SOCKET-I



#### CITIZEN

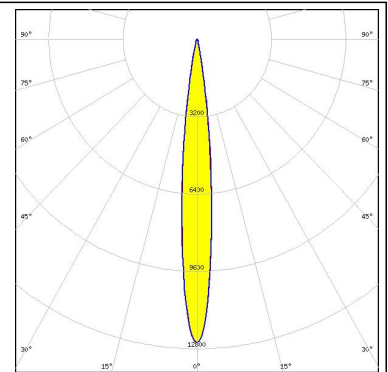
LED CLU7A2 (LES 4.2mm)  
 FWHM 9.0°  
 Efficiency 82 %  
 Peak intensity 20.300 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F15255\_HEKLA-SOCKET-C



#### PHOTOMETRIC DATA (MEASURED):

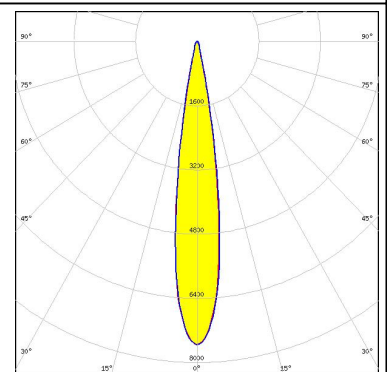
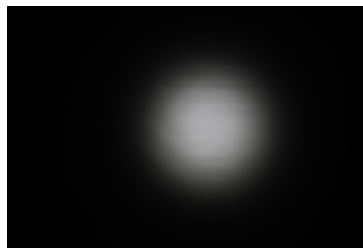
**CREE** 

LED CMT14xx  
 FWHM 12.0°  
 Efficiency 83 %  
 Peak intensity 12.600 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F15255\_HEKLA-SOCKET-C



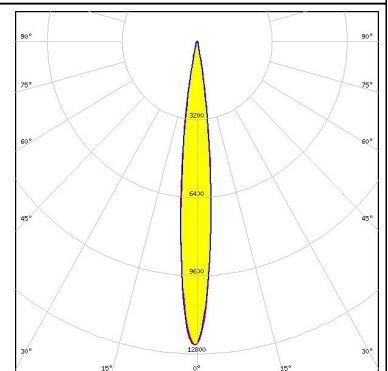
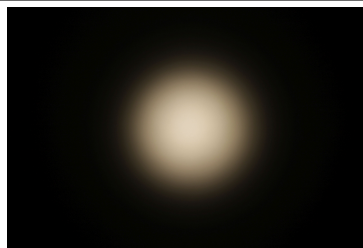
**CREE** 

LED CMT19xx  
 FWHM 16.0°  
 Efficiency 83 %  
 Peak intensity 7.560 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F15859\_HEKLA-SOCKET-I



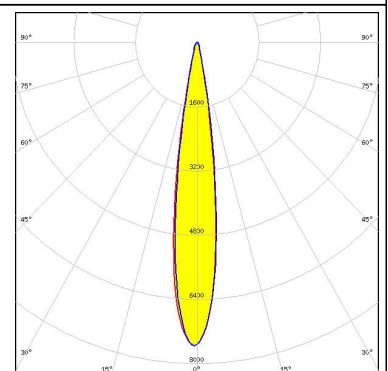
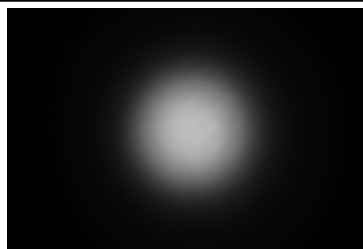
**CREE** 

LED CXA/B 15xx  
 FWHM 12.0°  
 Efficiency 83 %  
 Peak intensity 12.500 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F15256\_HEKLA-SOCKET-D



**CREE** 

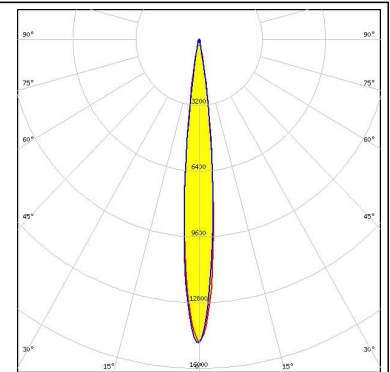
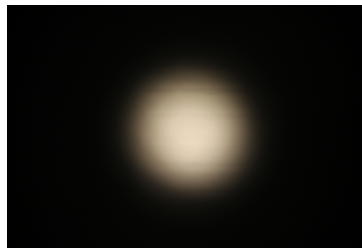
LED CXA/B 1816 & CXA/B 1820 & CXA 1850  
 FWHM 16.0°  
 Efficiency 82 %  
 Peak intensity 7.600 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F15254\_HEKLA-SOCKET-B



#### PHOTOMETRIC DATA (MEASURED):

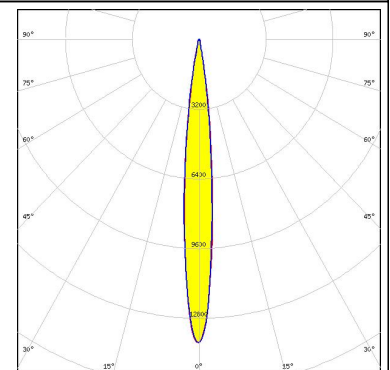
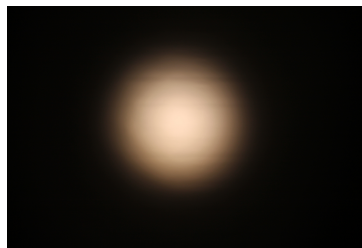
#### LUMILEDS

LED LUXEON CoB 1202HD  
 FWHM 11.0°  
 Efficiency 84 %  
 Peak intensity 14.800 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F15848\_HEKLA-SOCKET-G



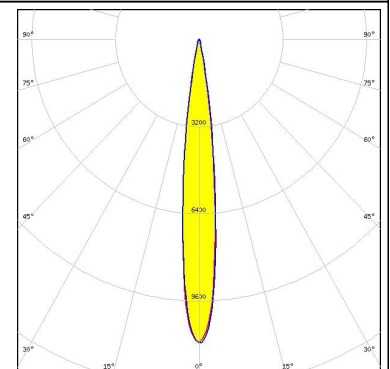
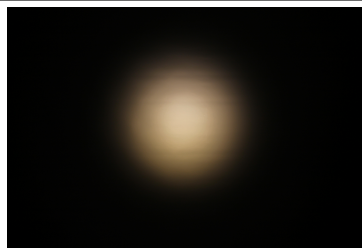
#### LUMILEDS

LED LUXEON CoB 1204HD  
 FWHM 11.0°  
 Efficiency 84 %  
 Peak intensity 14.000 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F15858\_HEKLA-SOCKET-H



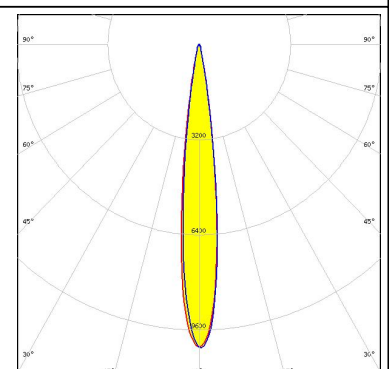
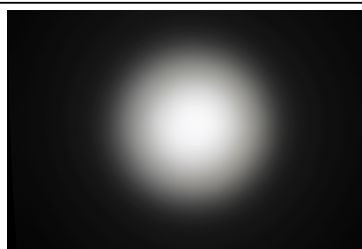
#### LUMILEDS

LED LUXEON CoB 1205HD  
 FWHM 13.0°  
 Efficiency 83 %  
 Peak intensity 11.150 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F15858\_HEKLA-SOCKET-H



#### SAMSUNG

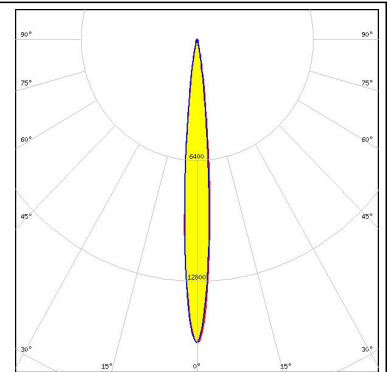
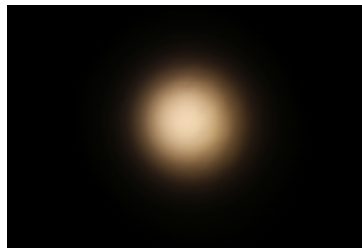
LED COB D Series LES 9.8 mm  
 FWHM 13.0°  
 Efficiency 83 %  
 Peak intensity 10.200 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F15255\_HEKLA-SOCKET-C



#### PHOTOMETRIC DATA (MEASURED):

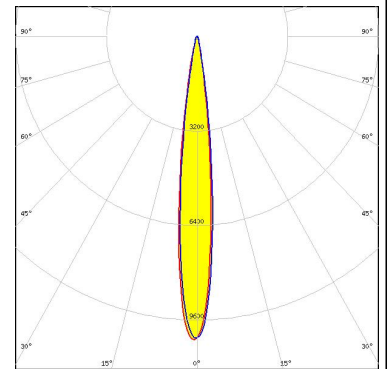
#### SAMSUNG

LED LC010C G2  
 FWHM 10.0°  
 Efficiency 81 %  
 Peak intensity 16.000 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F15255\_HEKLA-SOCKET-C



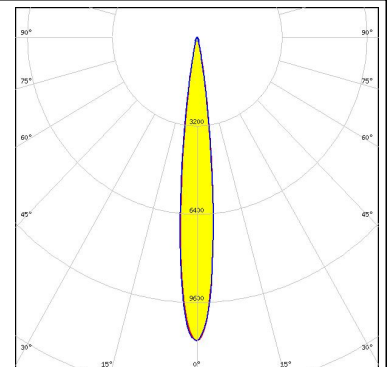
#### SAMSUNG

LED LC020C G2  
 FWHM 13.0°  
 Efficiency 80 %  
 Peak intensity 10.300 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F15859\_HEKLA-SOCKET-I



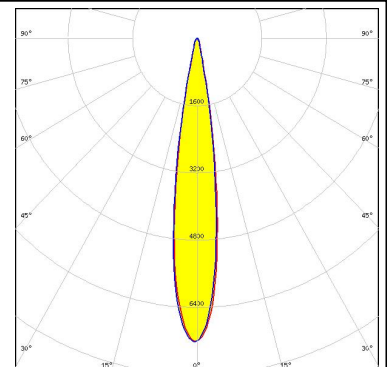
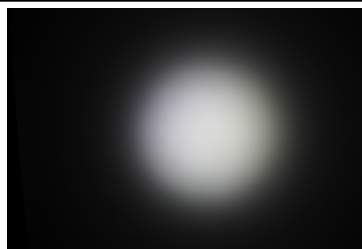
#### TRIDONIC

LED SLE G7 LES09  
 FWHM 13.0°  
 Efficiency 81 %  
 Peak intensity 11.000 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F15255\_HEKLA-SOCKET-C



#### TRIDONIC

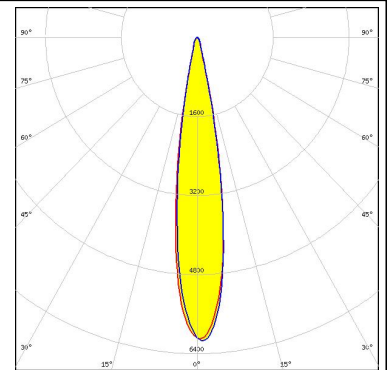
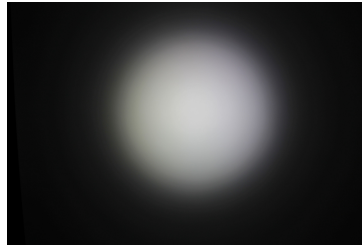
LED SLE G7 LES13  
 FWHM 16.0°  
 Efficiency 81 %  
 Peak intensity 7.200 cd/lm  
 LEDs/each optic 1  
 Light colour White  
 Required components:  
 F15859\_HEKLA-SOCKET-I



#### PHOTOMETRIC DATA (MEASURED):

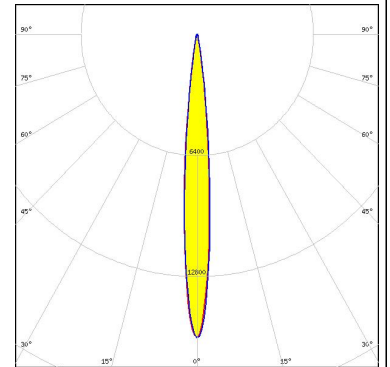
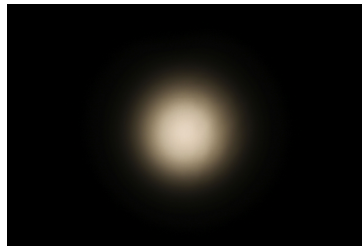
#### TRIDONIC

LED SLE G7 LES15  
FWHM 18.0°  
Efficiency 82 %  
Peak intensity 6.200 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
F15859\_HEKLA-SOCKET-I



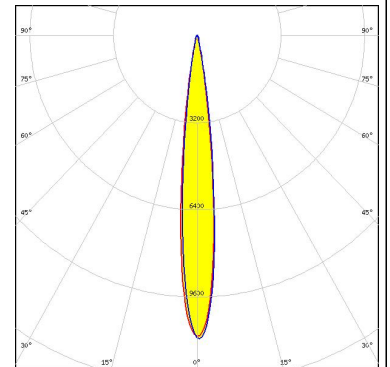
#### XICATO

LED XOB 6 mm  
FWHM 10.0°  
Efficiency 80 %  
Peak intensity 16.042 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
F15255\_HEKLA-SOCKET-C



#### XICATO

LED XOB 9.8 mm  
FWHM 13.0°  
Efficiency 81 %  
Peak intensity 11.137 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
F15255\_HEKLA-SOCKET-C

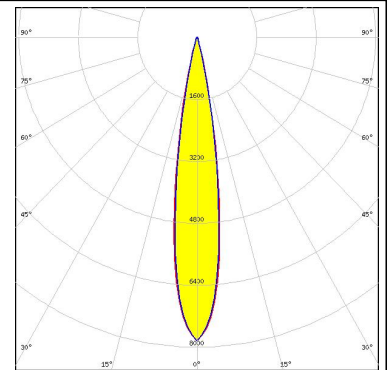




#### PHOTOMETRIC DATA (SIMULATED):

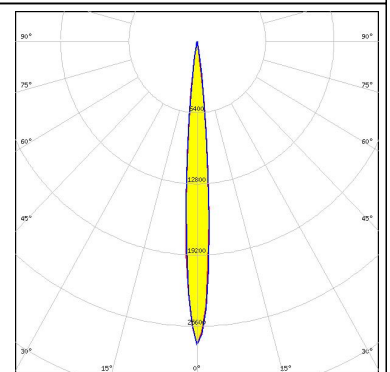
### CITIZEN

LED CLL03x/CLU03x  
FWHM 17.0°  
Efficiency 83 %  
Peak intensity 7.600 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
F15859\_HEKLA-SOCKET-I



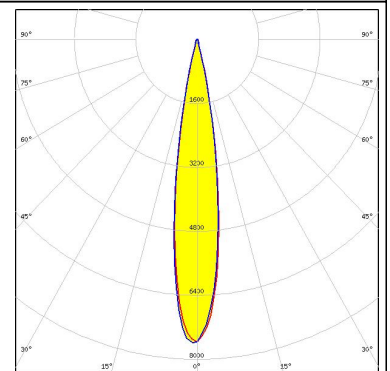
### CREE

LED CXA/B 13xx  
FWHM 9.0°  
Efficiency 86 %  
Peak intensity 27.300 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
F15956\_HEKLA-SOCKET-J



### LUMILEDS

LED LUXEON CoB 1208  
FWHM 17.0°  
Efficiency 85 %  
Peak intensity 7.590 cd/lm  
LEDs/each optic 1  
Light colour White  
Required components:  
C16142\_HEKLA-SOCKET-K



#### 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.

Due to use of high power COB's with this product, special attention to proper thermal design is highly recommended. LEDiL has no liability for direct, indirect or consecutive damages arising from the LEDiL products being used outside of the recommended temperature range.

#### 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

#### 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)

Компания «Океан Электроники» предлагает заключение долгосрочных отношений при поставках импортных электронных компонентов на взаимовыгодных условиях!

Наши преимущества:

- Поставка оригинальных импортных электронных компонентов напрямую с производств Америки, Европы и Азии, а так же с крупнейших складов мира;
- Широкая линейка поставок активных и пассивных импортных электронных компонентов (более 30 млн. наименований);
- Поставка сложных, дефицитных, либо снятых с производства позиций;
- Оперативные сроки поставки под заказ (от 5 рабочих дней);
- Экспресс доставка в любую точку России;
- Помощь Конструкторского Отдела и консультации квалифицированных инженеров;
- Техническая поддержка проекта, помощь в подборе аналогов, поставка прототипов;
- Поставка электронных компонентов под контролем ВП;
- Система менеджмента качества сертифицирована по Международному стандарту ISO 9001;
- При необходимости вся продукция военного и аэрокосмического назначения проходит испытания и сертификацию в лаборатории (по согласованию с заказчиком);
- Поставка специализированных компонентов военного и аэрокосмического уровня качества (Xilinx, Altera, Analog Devices, Intersil, Interpoint, Microsemi, Actel, Aeroflex, Peregrine, VPT, Syfer, Eurofarad, Texas Instruments, MS Kennedy, Miteq, Cobham, E2V, MA-COM, Hittite, Mini-Circuits, General Dynamics и др.);

Компания «Океан Электроники» является официальным дистрибьютором и эксклюзивным представителем в России одного из крупнейших производителей разъемов военного и аэрокосмического назначения «JONHON», а так же официальным дистрибьютором и эксклюзивным представителем в России производителя высокотехнологичных и надежных решений для передачи СВЧ сигналов «FORSTAR».



## JONHON

«JONHON» (основан в 1970 г.)

Разъемы специального, военного и аэрокосмического назначения:

(Применяются в военной, авиационной, аэрокосмической, морской, железнодорожной, горно- и нефтедобывающей отраслях промышленности)

«FORSTAR» (основан в 1998 г.)

ВЧ соединители, коаксиальные кабели, кабельные сборки и микроволновые компоненты:

(Применяются в телекоммуникациях гражданского и специального назначения, в средствах связи, РЛС, а так же военной, авиационной и аэрокосмической отраслях промышленности).



Телефон: 8 (812) 309-75-97 (многоканальный)

Факс: 8 (812) 320-03-32

Электронная почта: [ocean@oceanchips.ru](mailto:ocean@oceanchips.ru)

Web: <http://oceanchips.ru/>

Адрес: 198099, г. Санкт-Петербург, ул. Калинина, д. 2, корп. 4, лит. А