

LENA-SS

~18° smooth spot beam

TECHNICAL SPECIFICATIONS:

Dimensions Ø 111.0 mm

Height 80 mm
Fastening socket
Colour metal

Box size 400 x 280 x 380 mm

Box weight 4.1 kg

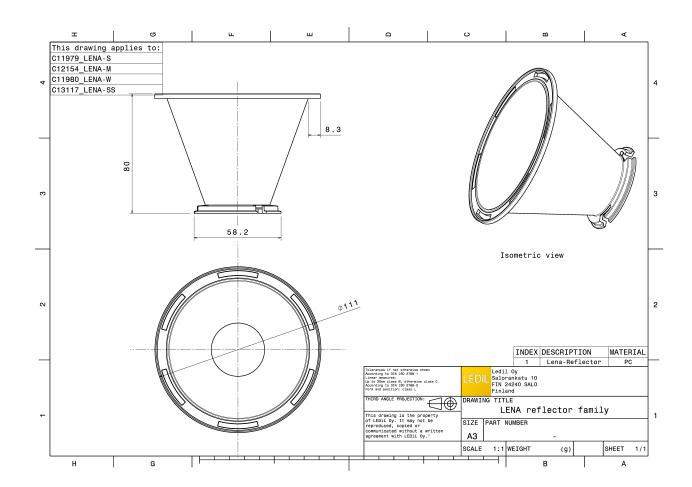
Quantity in Box 60 pcs

ROHS compliant yes 1

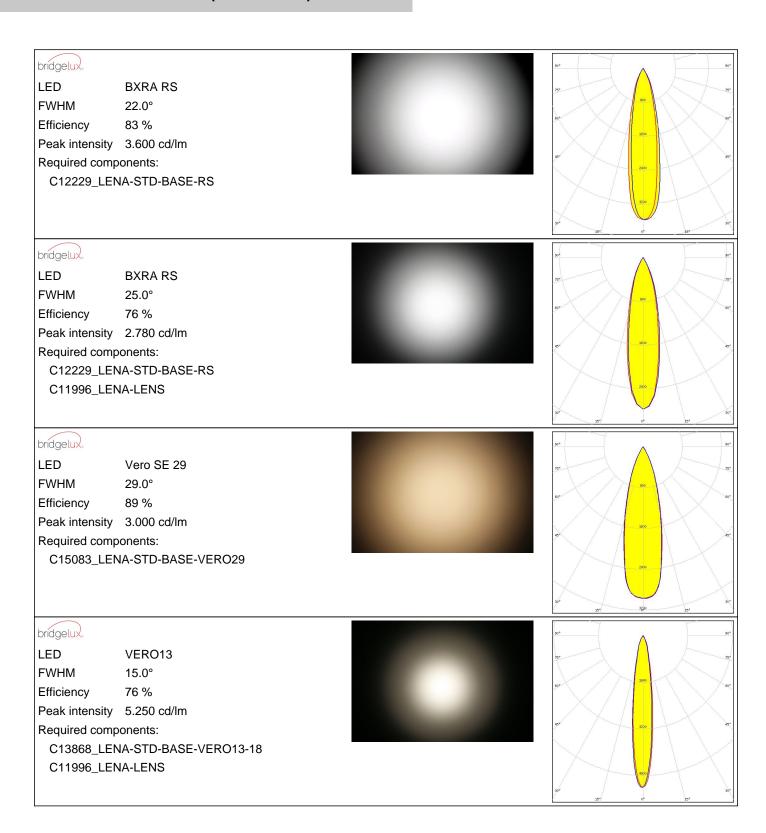


MATERIAL SPECIFICATIONS:

ComponentTypeMaterialColourCoatingLENA-SSReflectorPCmetallacquer



PHOTOMETRIC DATA (MEASURED):



PHOTOMETRIC DATA (MEASURED):

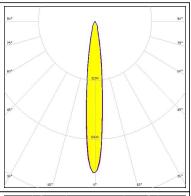
bridgelux.

LED VERO13
FWHM 13.0°
Efficiency 82 %
Peak intensity 8.250 cd/lm

Required components:

C13868_LENA-STD-BASE-VERO13-18





bridgelux.

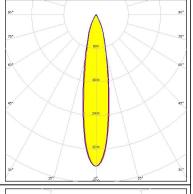
LED VERO18
FWHM 20.0°
Efficiency 76 %
Peak intensity 3.620 cd/lm

Required components:

C13868_LENA-STD-BASE-VERO13-18

C11996_LENA-LENS



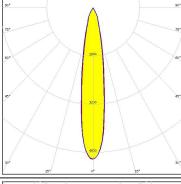


bridgelux

LED VERO18
FWHM 18.0°
Efficiency 82 %
Peak intensity 5.000 cd/lm
Required components:

C13868_LENA-STD-BASE-VERO13-18





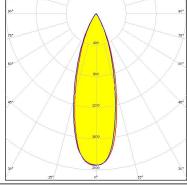
bridgelux.

LED VERO29
FWHM 32.0°
Efficiency 74 %
Peak intensity 1.940 cd/lm
Required components:

C13867_LENA-STD-BASE-VERO29

C11996_LENA-LENS





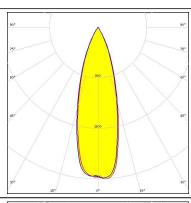
PHOTOMETRIC DATA (MEASURED):

bridgelux

LED VERO29
FWHM 31.0°
Efficiency 80 %
Peak intensity 2.400 cd/lm
Required components:

C13867_LENA-STD-BASE-VERO29





CITIZEN

LED CLL02x/CLU02x (LES10)

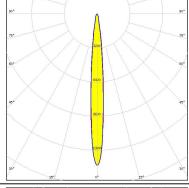
FWHM 10.0° Efficiency 87 % Peak intensity 14.200 cd/lm

Required components:

C13868_LENA-STD-BASE-VERO13-18

Bender Wirth: 434 Typ L1





CITIZEN

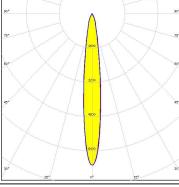
LED CLL02x/CLU02x (LES10)

FWHM 13.0°
Efficiency 82 %
Peak intensity 7.100 cd/lm
Required components:

C13868_LENA-STD-BASE-VERO13-18

C11996_LENA-LENS Bender Wirth: 434 Typ L1





CITIZEN

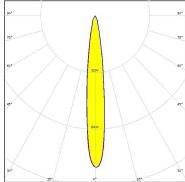
LED CLL03x/CLU03x

FWHM 14.0°
Efficiency 87 %
Peak intensity 8.600 cd/lm
Required components:

C13868_LENA-STD-BASE-VERO13-18

Bender Wirth: 433 Typ L1





PHOTOMETRIC DATA (MEASURED):

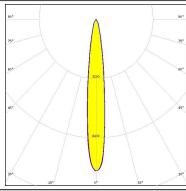
CITIZEN

LED CLL03x/CLU03x

FWHM 13.0°
Efficiency 85 %
Peak intensity 8.200 cd/lm
Required components:

A.A.G. STUCCHI: 8101/G2 + S-8000/11





CITIZEN

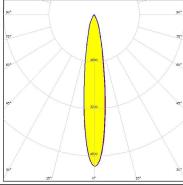
LED CLL03x/CLU03x

FWHM 17.0°
Efficiency 82 %
Peak intensity 5.200 cd/lm
Required components:

C13868_LENA-STD-BASE-VERO13-18

C11996_LENA-LENS Bender Wirth: 433 Typ L1





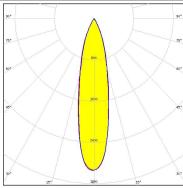
CITIZEN

LED CLL04x/CLU04x

FWHM 24.0°
Efficiency 77 %
Peak intensity 2.950 cd/lm
Required components:

C12692_LENA-STD-BASE-CLL040

C11996_LENA-LENS

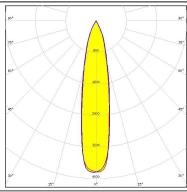


CITIZEN

LED CLL04x/CLU04x

FWHM 22.0°
Efficiency 82 %
Peak intensity 3.850 cd/lm
Required components:

C12692_LENA-STD-BASE-CLL040



PHOTOMETRIC DATA (MEASURED):

CITIZEN

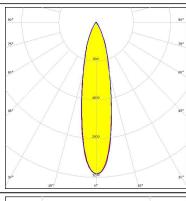
LED CLL04x/CLU04x

FWHM 23.0°
Efficiency 82 %
Peak intensity 3.100 cd/lm
Required components:

C13867_LENA-STD-BASE-VERO29

C11996_LENA-LENS Bender Wirth: 431 Typ L3





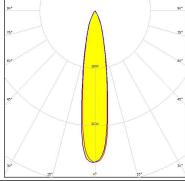
CITIZEN

LED CLL04x/CLU04x

FWHM 20.0°
Efficiency 79 %
Peak intensity 4.200 cd/lm
Required components:

A.A.G. STUCCHI: 8102/G2 + S-8000/12





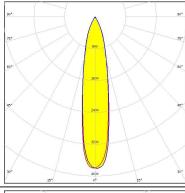
CITIZEN

LED CLL04x/CLU04x

FWHM 20.0°
Efficiency 80 %
Peak intensity 3.800 cd/lm
Required components:

IDEAL: 50-2204CT + 50-2100LN





CITIZEN

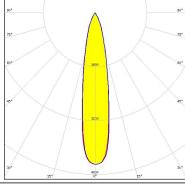
LED CLL04x/CLU04x

FWHM 20.0°
Efficiency 87 %
Peak intensity 4.500 cd/lm
Required components:

C13867_LENA-STD-BASE-VERO29

Bender Wirth: 431 Typ L3





PHOTOMETRIC DATA (MEASURED):

CITIZEN

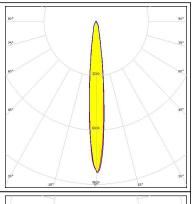
LED CLU700/701

FWHM 11.0°
Efficiency 82 %
Peak intensity 8.900 cd/lm
Required components:

C13868_LENA-STD-BASE-VERO13-18

C11996_LENA-LENS Bender Wirth: 434 Typ L1





CITIZEN

LED CLU700/701

FWHM 7.0° Efficiency 87 %

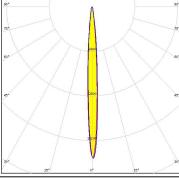
Peak intensity 21.800 cd/lm

Required components:

C13868_LENA-STD-BASE-VERO13-18

Bender Wirth: 434 Typ L1





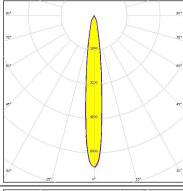
CITIZEN

LED CLU730/731

FWHM 13.0°
Efficiency 78 %
Peak intensity 7.100 cd/lm
Required components:

C12692_LENA-STD-BASE-CLL040





CREE 🕏

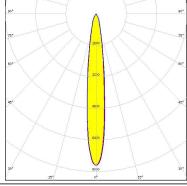
LED CMA1840 FWHM 13.0°

Efficiency 85 %
Peak intensity 7.700 cd/lm

Required components:

C14146_LENA-STD-BASE-CXA18





PHOTOMETRIC DATA (MEASURED):

CREE 💠

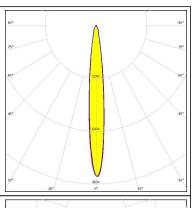
LED CXA/B 15xx

FWHM 12.0°
Efficiency 82 %
Peak intensity 9.200 cd/lm
Required components:

C13868_LENA-STD-BASE-VERO13-18

C11996_LENA-LENS Bender Wirth: 441 Typ L1





CREE \$

LED CXA/B 15xx

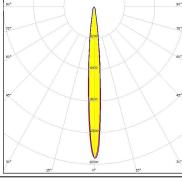
FWHM 9.0° Efficiency 87 % Peak intensity 15.400 cd/lm

Required components:

C13868_LENA-STD-BASE-VERO13-18

Bender Wirth: 441 Typ L1





CREE ÷

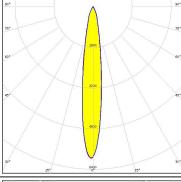
LED CXA/B 1816 & CXA/B 1820 & CXA 1850

FWHM 15.0°
Efficiency 84 %
Peak intensity 6.000 cd/lm
Required components:

C13868_LENA-STD-BASE-VERO13-18

C11996_LENA-LENS Bender Wirth: 437 Typ L1





CREE 🕏

LED CXA/B 1816 & CXA/B 1820 & CXA 1850

FWHM 11.0° Efficiency 89 %

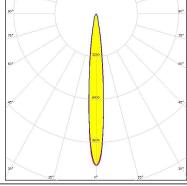
Peak intensity 11.300 cd/lm

Required components:

C13868_LENA-STD-BASE-VERO13-18

Bender Wirth: 437 Typ L1





PHOTOMETRIC DATA (MEASURED):

CREE 💠

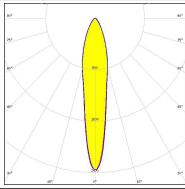
LED CXA/B 1830

FWHM 18.0°
Efficiency 77 %
Peak intensity 2.400 cd/lm
Required components:

C13868_LENA-STD-BASE-VERO13-18 C12231_LENA-FRESNEL-LENS

Bender Wirth: 437 Typ L1





CREE ÷

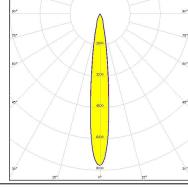
LED CXA/B 1830

FWHM 14.0°
Efficiency 84 %
Peak intensity 7.800 cd/lm
Required components:

C13868_LENA-STD-BASE-VERO13-18

C14169_LENA-CLEAR-LENS Bender Wirth: 437 Typ L1





CREE 🚓

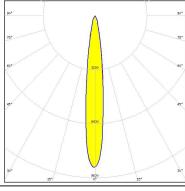
LED CXA/B 1830

FWHM 13.0°
Efficiency 89 %
Peak intensity 8.900 cd/lm
Required components:

C13868_LENA-STD-BASE-VERO13-18

Bender Wirth: 437 Typ L1





EVERLIGHT

LED CHI3030 19W

FWHM 21.0°
Efficiency 83 %
Peak intensity 3.500 cd/lm
Required components:

C13867_LENA-STD-BASE-VERO29

C11996_LENA-LENS Bender Wirth: 468 Typ L3



PHOTOMETRIC DATA (MEASURED):

EVERLIGHT

LED CHI3030 29W

FWHM 28.0°
Efficiency 82 %
Peak intensity 2.500 cd/lm
Required components:

C13867_LENA-STD-BASE-VERO29

C11996_LENA-LENS Bender Wirth: 468 Typ L3



LITEON

LED LTPL-M036

FWHM 9.0° Efficiency 77 % Peak intensity 13.450 cd/lm

Required components:

C13186_LENA-STD-BASE-CXA15



MILEDS

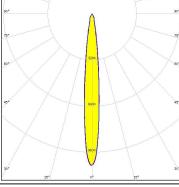
LED LUXEON CoB 1205HD

FWHM Asymmetric
Efficiency 85 %
Peak intensity 10.500 cd/lm

Required components:

C11981_LENA-STD-BASE-COB-L110





DESCRIPTION LUMILEDS

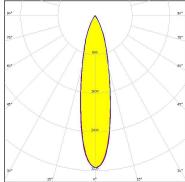
LED LUXEON CoB 1211

FWHM 19.0°
Efficiency 82 %
Peak intensity 4.200 cd/lm
Required components:

C13867_LENA-STD-BASE-VERO29

C11996_LENA-LENS Bender Wirth: 431 Typ L3





PHOTOMETRIC DATA (MEASURED):

MUMILEDS

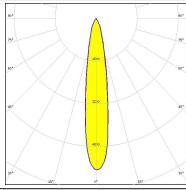
LED LUXEON CoB 1211

FWHM 17.0°
Efficiency 87 %
Peak intensity 6.600 cd/lm
Required components:

C13867_LENA-STD-BASE-VERO29

Bender Wirth: 431 Typ L3





MILEDS

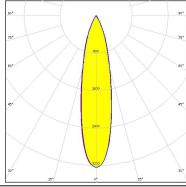
LED LUXEON CoB 1216/1812

FWHM 24.0°
Efficiency 82 %
Peak intensity 3.200 cd/lm
Required components:

C12692_LENA-STD-BASE-CLL040

C11996_LENA-LENS





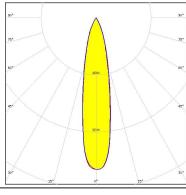
UMILEDS

LED LUXEON CoB 1216/1812

FWHM 21.0°
Efficiency 87 %
Peak intensity 4.250 cd/lm
Required components:

C12692_LENA-STD-BASE-CLL040





DESCRIPTION LUMILEDS

LED LUXEON K12

FWHM 14.0°
Efficiency 75 %
Peak intensity 6.150 cd/lm
Required components:

C12924_LENA-STD-BASE-LUXEON-K

C11996_LENA-LENS



PHOTOMETRIC DATA (MEASURED):

MUMILEDS

LED LUXEON K16

FWHM 15.0°
Efficiency 73 %
Peak intensity 5.000 cd/lm
Required components:

C12924_LENA-STD-BASE-LUXEON-K

C11996_LENA-LENS



ELUMINUS

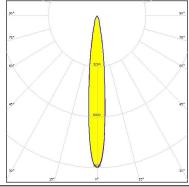
LED CDM-14 (Dim-To-Warm)

FWHM 13.0°
Efficiency 89 %
Peak intensity 9.600 cd/lm
Required components:

C13868_LENA-STD-BASE-VERO13-18

Bender Wirth: 491 Typ L2





ELUMINUS

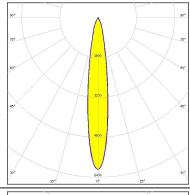
LED CDM-14 (Dim-To-Warm)

FWHM 16.0°
Efficiency 84 %
Peak intensity 6.100 cd/lm
Required components:

C13868_LENA-STD-BASE-VERO13-18

C11996_LENA-LENS Bender Wirth: 491 Typ L2





LUMINUS

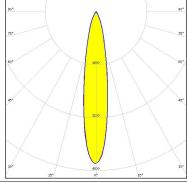
LED CDM-18 (Dim-To-Warm)

FWHM 19.0°
Efficiency 84 %
Peak intensity 4.600 cd/lm
Required components:

C13868_LENA-STD-BASE-VERO13-18

C11996_LENA-LENS Bender Wirth: 491 Typ L2





PHOTOMETRIC DATA (MEASURED):



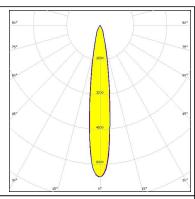
LED CDM-18 (Dim-To-Warm)

FWHM 16.0°
Efficiency 89 %
Peak intensity 7.000 cd/lm
Required components:

C13868_LENA-STD-BASE-VERO13-18

Bender Wirth: 491 Typ L2





ELUMINUS

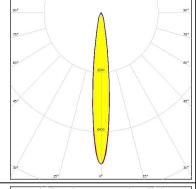
LED CDM-9 (Dim-To-Warm)

FWHM 13.0°
Efficiency 84 %
Peak intensity 8.200 cd/lm
Required components:

C13868_LENA-STD-BASE-VERO13-18

C11996_LENA-LENS Bender Wirth: 490 Typ L1





ELUMINUS

LED CDM-9 (Dim-To-Warm)

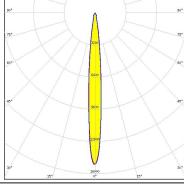
FWHM 10.0° Efficiency 89 % Peak intensity 15.200 cd/lm

Required components:

C13868_LENA-STD-BASE-VERO13-18

Bender Wirth: 490 Typ L1





LUMINUS

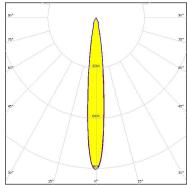
LED CTM-14 (Tunable White)

FWHM 13.0°
Efficiency 89 %
Peak intensity 9.700 cd/lm
Required components:

C13867_LENA-STD-BASE-VERO29

Bender Wirth: 442 Typ L3





PHOTOMETRIC DATA (MEASURED):

ELUMINUS

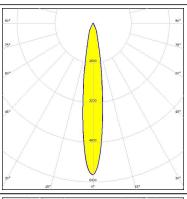
LED CTM-14 (Tunable White)

FWHM 15.0°
Efficiency 83 %
Peak intensity 6.100 cd/lm
Required components:

C13867_LENA-STD-BASE-VERO29

C12606_LENINA-DL Bender Wirth: 442 Typ L3





ELUMINUS

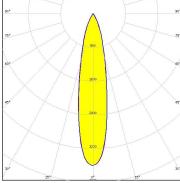
LED CTM-22 (Tunable White)

FWHM 22.0°
Efficiency 84 %
Peak intensity 3.600 cd/lm
Required components:

C13867_LENA-STD-BASE-VERO29

C11996_LENA-LENS Bender Wirth: 494 Typ L3





ELUMINUS

LED CTM-22 (Tunable White)

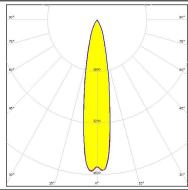
FWHM 20.0°
Efficiency 89 %
Peak intensity 4.700 cd/lm

Required components:

C13867_LENA-STD-BASE-VERO29

Bender Wirth: 494 Typ L3





LUMINUS

LED CXM-22
FWHM 25.0°
Efficiency 76 %
Peak intensity 3.000 cd/lm
Required components:

C12692_LENA-STD-BASE-CLL040

C11996_LENA-LENS

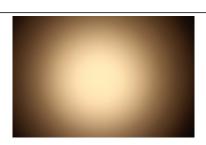


PHOTOMETRIC DATA (MEASURED):

LUMINUS

LED CXM-22
FWHM 23.0°
Efficiency 81 %
Peak intensity 3.800 cd/lm
Required components:

C12692_LENA-STD-BASE-CLL040



WNICHIA

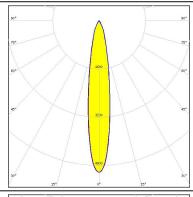
LED COB J-Type

FWHM 17.0°
Efficiency 84 %
Peak intensity 5.000 cd/lm
Required components:

C13868_LENA-STD-BASE-VERO13-18

C11996_LENA-LENS Bender Wirth: 463 Typ L2





WNICHIA

LED COB L-Type (LES 11)

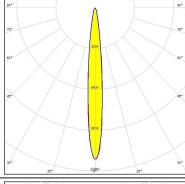
FWHM 11.0° Efficiency 89 % Peak intensity 11.900 cd/lm

Required components:

C13868_LENA-STD-BASE-VERO13-18

Bender Wirth: 438 Typ L1





WNICHIA

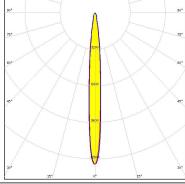
LED COB L-Type (LES 9)

FWHM 9.0°
Efficiency 84 %
Peak intensity 13.200 cd/lm
Required components:

C13868_LENA-STD-BASE-VERO13-18

Bender Wirth: 438 Typ L1





PHOTOMETRIC DATA (MEASURED):

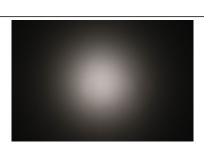
WNICHIA

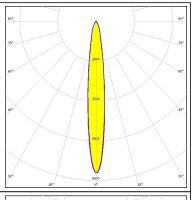
LED COB L-Type (LES 9)

FWHM 13.0°
Efficiency 78 %
Peak intensity 6.100 cd/lm
Required components:

C13868_LENA-STD-BASE-VERO13-18

C11996_LENA-LENS Bender Wirth: 438 Typ L1





OSRAM Opto Semiconductors

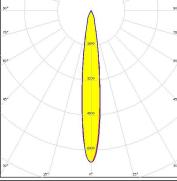
LED Soleriq S13 FWHM 14.0°

Efficiency 82 %
Peak intensity 7.000 cd/lm
Required components:

C13868_LENA-STD-BASE-VERO13-18

C11996_LENA-LENS Bender Wirth: 437 Typ L1





OSRAM Opto Service

LED Soleriq S13

FWHM 12.0° Efficiency 87 %

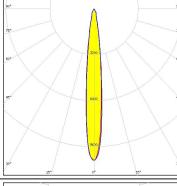
Peak intensity 11.000 cd/lm

Required components:

C13868_LENA-STD-BASE-VERO13-18

Bender Wirth: 437 Typ L1





OSRAM Opto Semiconductors

LED

Soleriq S19

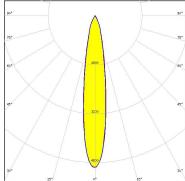
FWHM 17.0°
Efficiency 82 %
Peak intensity 5.000 cd/lm

Required components:

C13867_LENA-STD-BASE-VERO29

C11996_LENA-LENS Bender Wirth: 462 Typ L3





PHOTOMETRIC DATA (MEASURED):

OSRAM

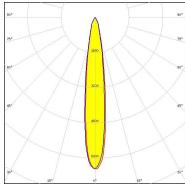
LED Soleriq S19
FWHM 15.0°
Efficiency 87 %
Peak intensity 6.900 cd/lm

Required components:

C13867_LENA-STD-BASE-VERO29

Bender Wirth: 462 Typ L3



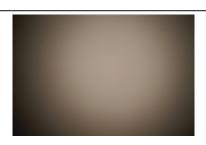


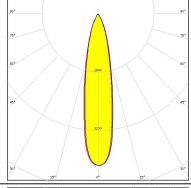
SAMSUNG

LED COB D Series LES 22 mm

FWHM 22.0°
Efficiency 87 %
Peak intensity 4.200 cd/lm
Required components:

C12692_LENA-STD-BASE-CLL040





SAMSUNG

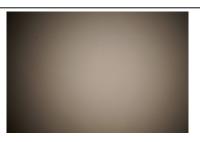
LED COB D Series LES 22 mm

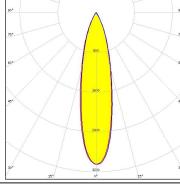
FWHM 25.0°
Efficiency 82 %
Peak intensity 3.100 cd/lm

Required components:

C12692_LENA-STD-BASE-CLL040

C11996_LENA-LENS







LED ZC25/40/60 FWHM 23.0°

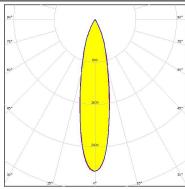
Efficiency 74 %

Peak intensity 2.860 cd/lm

Required components:

C12692_LENA-STD-BASE-CLL040

C11996_LENA-LENS





PHOTOMETRIC DATA (MEASURED):

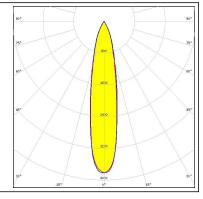


LED ZC25/40/60

FWHM 21.0° Efficiency 80 % Peak intensity 3.820 cd/lm

Required components:

C12692_LENA-STD-BASE-CLL040



PHOTOMETRIC DATA (SIMULATED):

bridgelux

LED V10 Gen7 FWHM 15.0° Efficiency 79 %

Peak intensity 7.710 cd/lm

Required components:

C13868_LENA-STD-BASE-VERO13-18

C11996_LENA-LENS Bender Wirth: 434 Typ L1

bridgelux.

LED V10 Gen7 FWHM 13.0° Efficiency 89 %

Peak intensity 11.450 cd/lm

Required components:

C13868_LENA-STD-BASE-VERO13-18

Bender Wirth: 434 Typ L1

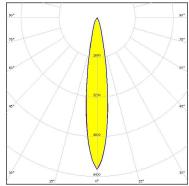
bridgelux

LED V13 Gen7
FWHM 17.0°
Efficiency 81 %
Peak intensity 6.120 cd/lm

Required components:

C13868_LENA-STD-BASE-VERO13-18

C11996_LENA-LENS Bender Wirth: 477 Typ L1

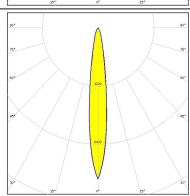


bridgelux.

LED V13 Gen7
FWHM 14.0°
Efficiency 88 %
Peak intensity 8.330 cd/lm

Required components:

IDEAL: 50-2103CT + 50-2100LN



PHOTOMETRIC DATA (SIMULATED):

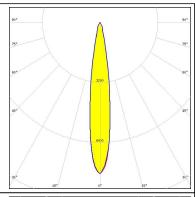
bridgelux

LED V13 Gen7
FWHM 16.0°
Efficiency 88 %
Peak intensity 8.080 cd/lm

Required components:

C13868_LENA-STD-BASE-VERO13-18

Bender Wirth: 477 Typ L1



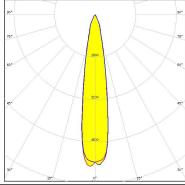
bridgelux

LED V22 Gen7
FWHM 18.0°
Efficiency 93 %
Peak intensity 5.744 cd/lm

Required components:

C13867_LENA-STD-BASE-VERO29

Bender Wirth: 431 Typ L3





LED CXM-14
FWHM 17.0°
Efficiency 82 %
Peak intensity 5.200 cd/lm

Required components:

C13868_LENA-STD-BASE-VERO13-18

C11996_LENA-LENS Bender Wirth: 433 Typ L1



LED CXM-14
FWHM 14.0°
Efficiency 87 %
Peak intensity 8.600 cd/lm

Required components:

C13868_LENA-STD-BASE-VERO13-18

Bender Wirth: 433 Typ L1

PHOTOMETRIC DATA (SIMULATED):

ELUMINUS

LED CXM-9
FWHM 13.0°
Efficiency 82 %
Peak intensity 7.100 cd/lm

Required components:

C13868_LENA-STD-BASE-VERO13-18

C11996_LENA-LENS Bender Wirth: 434 Typ L1

ELUMINUS

LED CXM-9 FWHM 10.0° Efficiency 87 %

Peak intensity 14.200 cd/lm

Required components:

C13868_LENA-STD-BASE-VERO13-18

Bender Wirth: 434 Typ L1

SEOUL SEMICONDUCTO

LED ZC12/18
FWHM 14.0°
Efficiency 87 %
Peak intensity 8.600 cd/lm

Required components:

C13868_LENA-STD-BASE-VERO13-18

Bender Wirth: 433 Typ L1

SEOUL SEMICONDUCTOR

LED ZC12/18
FWHM 17.0°
Efficiency 82 %
Peak intensity 5.200 cd/lm

Required components:

C13868_LENA-STD-BASE-VERO13-18

C11996_LENA-LENS Bender Wirth: 433 Typ L1



PHOTOMETRIC DATA (SIMULATED):

SEOUL SEMICONDUCTO

LED ZC4/6 FWHM 10.0° Efficiency 87 %

Peak intensity 14.200 cd/lm

Required components:

C13868_LENA-STD-BASE-VERO13-18

Bender Wirth: 434 Typ L1

SEOUL SEMICONDUCTOR

LED ZC4/6
FWHM 13.0°
Efficiency 82 %
Peak intensity 7.100 cd/lm

Required components:

C13868_LENA-STD-BASE-VERO13-18

C11996_LENA-LENS Bender Wirth: 434 Typ L1



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.

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