# TINA2-RS

**~14° spot beam optimized for Osram Golden Dragon+. Assembly with holder and installation tape.**


## SPECIFICATION:

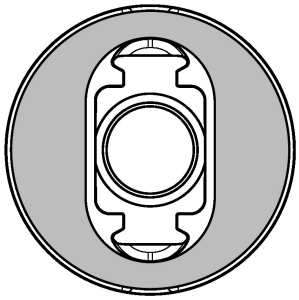
| | |
|---|---|
| Dimensions | Ø 16.1 |
| Height | 10.1 mm |
| Fastening | tape |
| ROHS compliant | yes |

## MATERIALS:

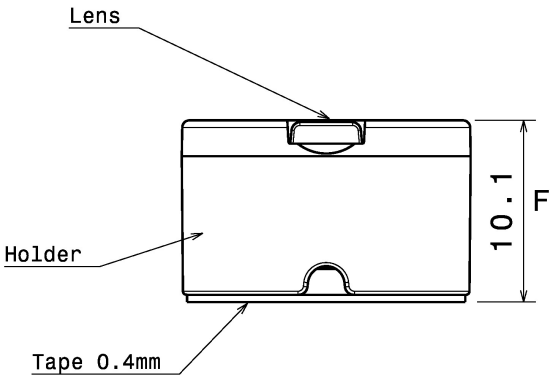
| Component | Type | Material | Colour | Finish | Length (mm) |
|---|---|---|---|---|---|
| TINA2-O-PLUS-RS | Single lens | PMMA | clear | | |
| TINA2-O-PLUS-HLD-WHT | Holder | PC | white | | |
| TINA-TAPE3 | Tape | Acryl tape | black | | |

## ORDERING INFORMATION:

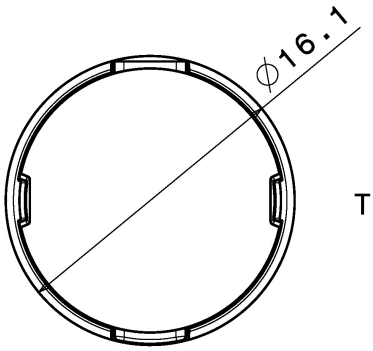
| Component | Qty in box | MOQ | MPQ | Box weight (kg) |
|---|---|---|---|---|
| CA11847_TINA2-RS<br>» Box size: 451 x 241 x 298 mm | 4140 | 230 | 230 | 0.0 |



Bottom view




Front view




Top view

MATERIALS
Lens: PMMA
Holder: PC
Tape: Acrylic foam



| | | | | | |
|---|---|---|---|---|---|
| DRAWN BY m | DATE 29.04.2011 | DRAWING TITLE: Datasheet Tina2-O-Plus Assy | | | |
| CHECKED BY t k | DATE 29.04.2011 | SIZE A4 | DRAWING NUMBER | | REV 2 |
| DESIGNED BY HH | DATE 01.01.2011 | SCALE 3:1 | WEIGHT(g) - | | SHEET 1/1 |

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

## OPTICAL RESULTS (MEASURED):

OSRAM
Opto Semiconductors

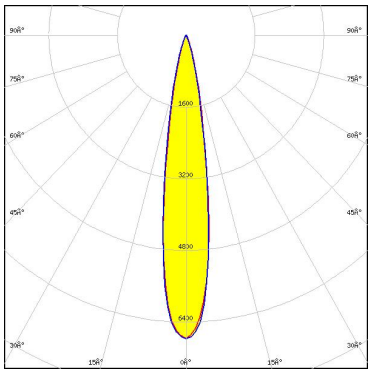
| | |
|---|---|
| LED | Golden Dragon+ |
| FWHM / FWTM | 10.0° / 20.0° |
| Efficiency | 93 % |
| Peak intensity | 18 cd/lm |
| LEDs/each optic | 1 |
| Light colour/type | White |

Required components:

## OPTICAL RESULTS (SIMULATED):

CREE LEDs

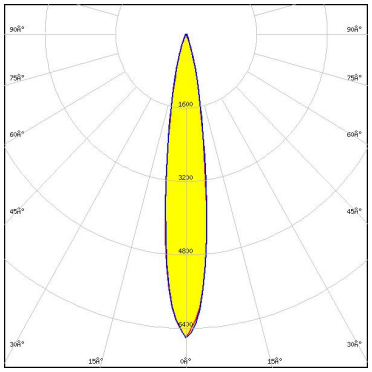
| | |
|---|---|
| LED | XP-G2 HE |
| FWHM / FWTM | 17.0° / 34.0° |
| Efficiency | 88 % |
| Peak intensity | 6.8 cd/lm |
| LEDs/each optic | 1 |
| Light colour/type | White |
| Required components: | |



Light distribution files

CREE LEDs

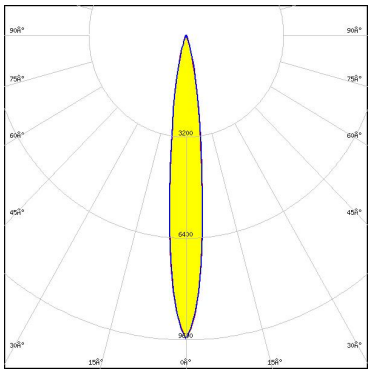
| | |
|---|---|
| LED | XP-G3 |
| FWHM / FWTM | 16.0° / 34.0° |
| Efficiency | 85 % |
| Peak intensity | 6.6 cd/lm |
| LEDs/each optic | 1 |
| Light colour/type | White |
| Required components: | |



Light distribution files

CREE LEDs

| | |
|---|---|
| LED | XP-L HI |
| FWHM / FWTM | 12.0° / 30.0° |
| Efficiency | 89 % |
| Peak intensity | 9.6 cd/lm |
| LEDs/each optic | 1 |
| Light colour/type | White |
| Required components: | |

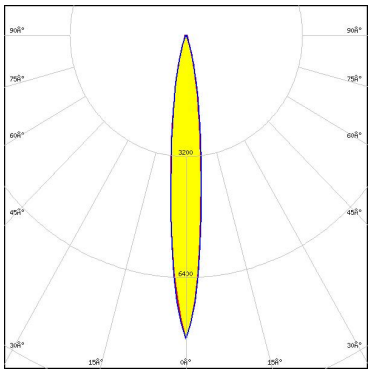


Light distribution files

## OPTICAL RESULTS (SIMULATED):

CREE LEDs

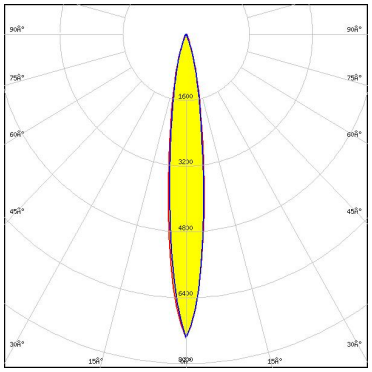
| | |
|---|---|
| LED | XT-E |
| FWHM / FWTM | 12.0° / 30.0° |
| Efficiency | 82 % |
| Peak intensity | 8 cd/lm |
| LEDs/each optic | 1 |
| Light colour/type | White |
| Required components: | |



Light distribution files

LUMILEDS

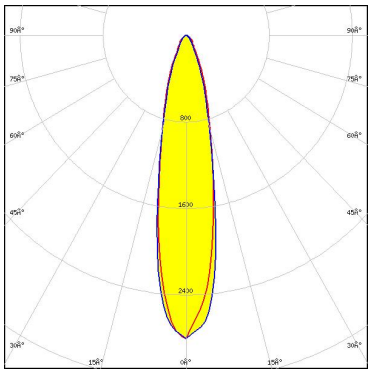
| | |
|---|---|
| LED | LUXEON 3030 HE Plus |
| FWHM / FWTM | 14.0° / 34.0° |
| Efficiency | 87 % |
| Peak intensity | 7.4 cd/lm |
| LEDs/each optic | 1 |
| Light colour/type | White |
| Required components: | |



Light distribution files

LUMILEDS

| | |
|---|---|
| LED | LUXEON 5050 Square LES |
| FWHM / FWTM | 22.0° / 52.0° |
| Efficiency | 85 % |
| Peak intensity | 2.8 cd/lm |
| LEDs/each optic | 1 |
| Light colour/type | White |
| Required components: | |

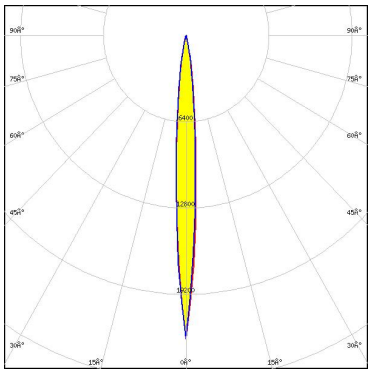


Light distribution files

## OPTICAL RESULTS (SIMULATED):

LUMILEDS

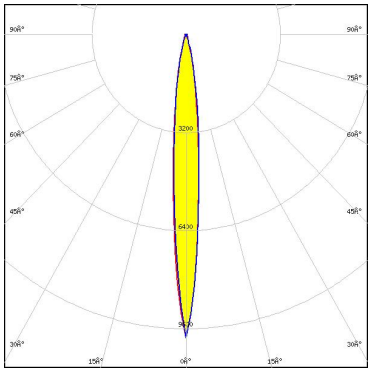
| | |
|---|---|
| LED | LUXEON CZ |
| FWHM / FWTM | 8.0° / 20.0° |
| Efficiency | 88 % |
| Peak intensity | 22.5 cd/lm |
| LEDs/each optic | 1 |
| Light colour/type | Red |
| Required components: | |



Light distribution files

LUMILEDS

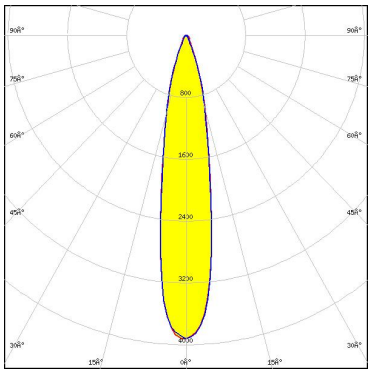
| | |
|---|---|
| LED | LUXEON IR Domed 150 (L1I0-0xxx150000000) |
| FWHM / FWTM | 10.0° / 27.0° |
| Efficiency | 81 % |
| LEDs/each optic | 1 |
| Light colour/type | IR |
| Required components: | |



Light distribution files

NICHIA

| | |
|---|---|
| LED | NV4WB35AM |
| FWHM / FWTM | 20.0° / 44.0° |
| Efficiency | 86 % |
| Peak intensity | 3.9 cd/lm |
| LEDs/each optic | 1 |
| Light colour/type | White |
| Required components: | |

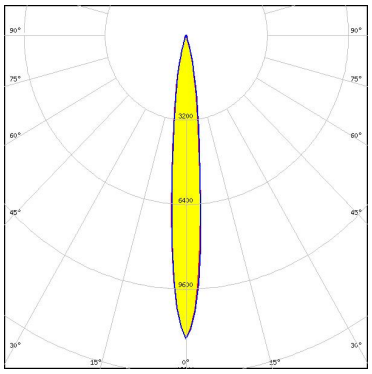


Light distribution files

## OPTICAL RESULTS (SIMULATED):

NICHIA

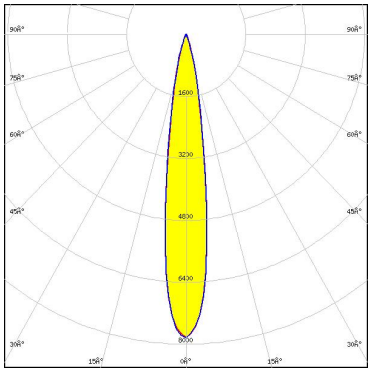
| | |
|---|---|
| LED | NVSW219C-V2 |
| FWHM / FWTM | 12.0° / 27.0° |
| Efficiency | 88 % |
| Peak intensity | 11.5 cd/lm |
| LEDs/each optic | 1 |
| Light colour/type | White |
| Required components: | |



Light distribution files

NICHIA

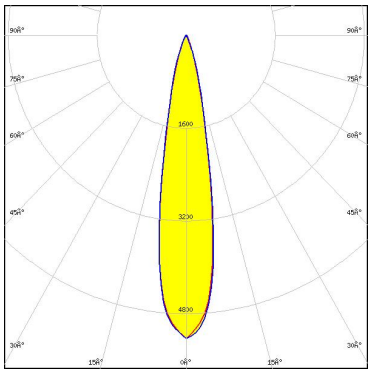
| | |
|---|---|
| LED | NVSW219F |
| FWHM / FWTM | 16.0° / 32.0° |
| Efficiency | 89 % |
| Peak intensity | 7.8 cd/lm |
| LEDs/each optic | 1 |
| Light colour/type | White |
| Required components: | |



Light distribution files

NICHIA

| | |
|---|---|
| LED | NVSW519A |
| FWHM / FWTM | 20.0° / 38.0° |
| Efficiency | 85 % |
| Peak intensity | 5.2 cd/lm |
| LEDs/each optic | 1 |
| Light colour/type | White |
| Required components: | |

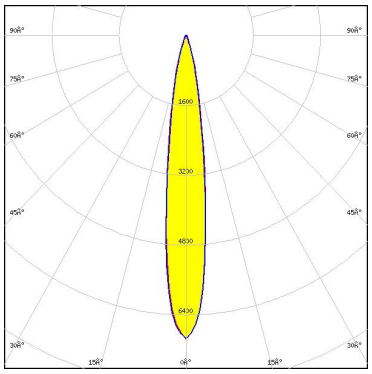


Light distribution files

## OPTICAL RESULTS (SIMULATED):

NICHIA

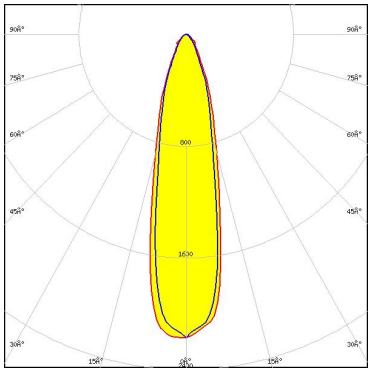
| | |
|---|---|
| LED | NVSxx19B/NVSxx19C |
| FWHM / FWTM | 16.0° / 33.0° |
| Efficiency | 84 % |
| Peak intensity | 6.9 cd/lm |
| LEDs/each optic | 1 |
| Light colour/type | White |
| Required components: | |



Light distribution files

OSRAM
Opto Semiconductors

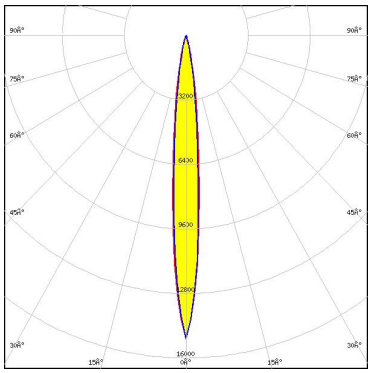
| | |
|---|---|
| LED | Duris S8 |
| FWHM / FWTM | 25.0° / 59.0° |
| Efficiency | 85 % |
| Peak intensity | 2.2 cd/lm |
| LEDs/each optic | 1 |
| Light colour/type | White |
| Required components: | |



Light distribution files

OSRAM
Opto Semiconductors

| | |
|---|---|
| LED | OSLON Boost HX (KW CULPM1.TG) |
| FWHM / FWTM | 10.0° / 24.0° |
| Efficiency | 89 % |
| Peak intensity | 15.1 cd/lm |
| LEDs/each optic | 1 |
| Light colour/type | White |
| Required components: | |

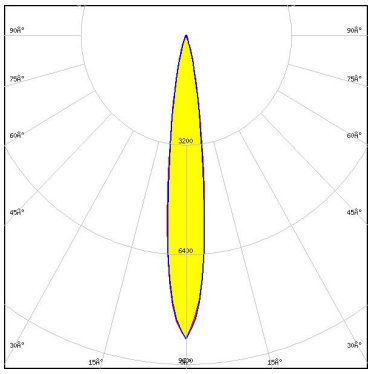


Light distribution files

## OPTICAL RESULTS (SIMULATED):

OSRAM
Opto Semiconductors

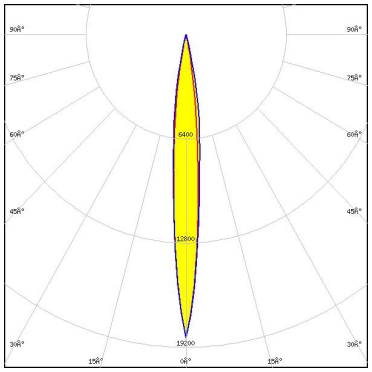
| | |
|---|---|
| LED | OSLON Square CSSRM2/CSSRM3 |
| FWHM / FWTM | 14.0° / 30.0° |
| Efficiency | 88 % |
| Peak intensity | 8.9 cd/lm |
| LEDs/each optic | 1 |
| Light colour/type | White |
| Required components: | |



Light distribution files

OSRAM
Opto Semiconductors

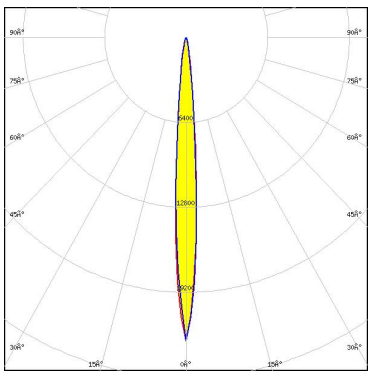
| | |
|---|---|
| LED | PLPVEC2 850A |
| FWHM / FWTM | 10.0° / 23.0° |
| Efficiency | 93 % |
| LEDs/each optic | 1 |
| Light colour/type | IR |
| Required components: | |



Light distribution files

OSRAM
Opto Semiconductors

| | |
|---|---|
| LED | SFH 4232A |
| FWHM / FWTM | 8.0° / 19.0° |
| Efficiency | 94 % |
| LEDs/each optic | 1 |
| Light colour/type | IR |
| Required components: | |

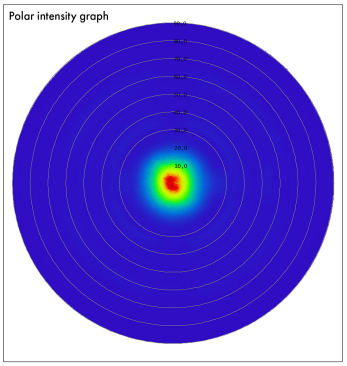


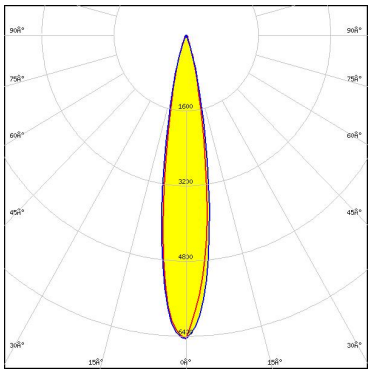
Light distribution files

## OPTICAL RESULTS (SIMULATED):

OSRAM
Opto Semiconductors

| | |
|---|---|
| LED | SFH 4715AS |
| FWHM / FWTM | 17.0° / 35.0° |
| Efficiency | 88 % |
| LEDs/each optic | 1 |
| Light colour/type | IR |
| Required components: | |

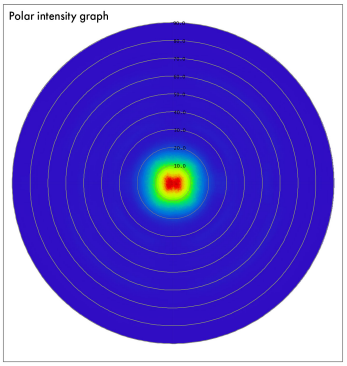


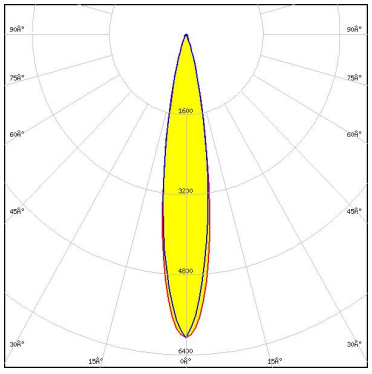



Light distribution files

OSRAM
Opto Semiconductors

| | |
|---|---|
| LED | SFH 4725AS |
| FWHM / FWTM | 18.0° / 34.0° |
| Efficiency | 88 % |
| LEDs/each optic | 1 |
| Light colour/type | IR |
| Required components: | |

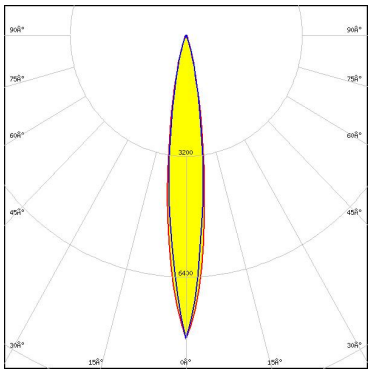


Light distribution files

OSRAM
Opto Semiconductors

| | |
|---|---|
| LED | SFH 4725S |
| FWHM / FWTM | 14.0° / 32.0° |
| Efficiency | 88 % |
| LEDs/each optic | 1 |
| Light colour/type | IR |
| Required components: | |

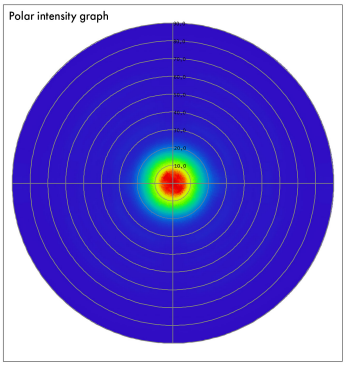


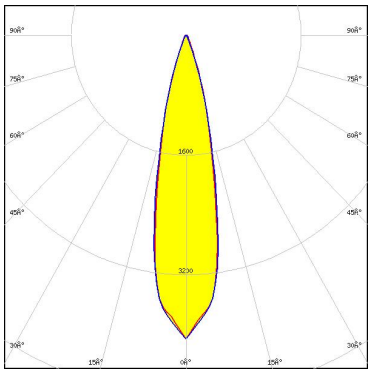
Light distribution files

## OPTICAL RESULTS (SIMULATED):

OSRAM
Opto Semiconductors

| | |
|---|---|
| LED | SFH 4727AS |
| FWHM / FWTM | 23.0° / 42.0° |
| Efficiency | 86 % |
| LEDs/each optic | 1 |
| Light colour/type | IR |
| Required components: | |

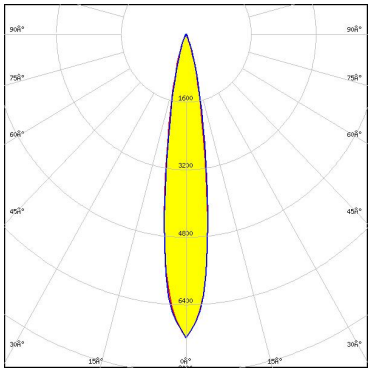


Light distribution files

SAMSUNG

| | |
|---|---|
| LED | LH351C |
| FWHM / FWTM | 16.0° / 34.0° |
| Efficiency | 91 % |
| Peak intensity | 7.2 cd/lm |
| LEDs/each optic | 1 |
| Light colour/type | White |
| Required components: | |



Light distribution files

## 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.

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