

# PRODUCT DATASHEET CP12939\_LARISA-RS-CLIP16

## LARISA-RS-CLIP16

~19° real spot beam. Clip fastening for 1.6 mm thick PCB

#### **SPECIFICATION:**

| Dimensions     | 9.9 x 9.9 mm |
|----------------|--------------|
| Height         | 7.5 mm       |
| Fastening      | clips        |
| ROHS compliant | yes 🛈        |



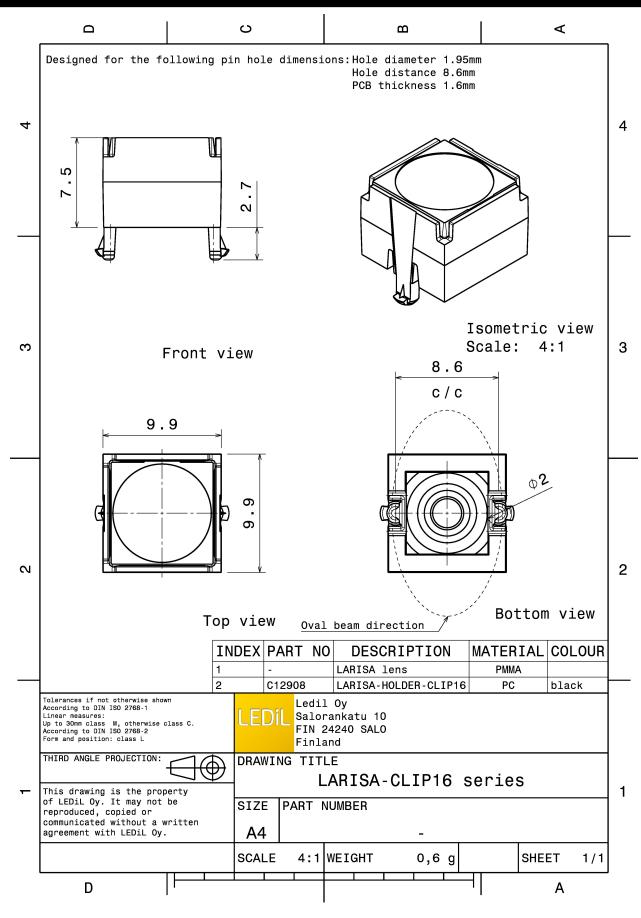
#### **MATERIALS:**

| Component            | Туре        | Material | Colour | Finish |
|----------------------|-------------|----------|--------|--------|
| LARISA-RS            | Single lens | PMMA     | clear  |        |
| LARISA-HOLDER-CLIP16 | Holder      | PC       | black  |        |

#### **ORDERING INFORMATION:**

| Component                      |             | Qty in box | MOQ | MPQ | Box weight (kg) |
|--------------------------------|-------------|------------|-----|-----|-----------------|
| CP12939_LARISA-RS-CLIP16       | Single lens | 10000      | 300 | 100 | 5.8             |
| » Box size: 300 x 250 x 250 mm |             |            |     |     |                 |

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(R)

See also our general installation guide: www.ledil.com/installation\_guide



| r   |  |   |
|---|--|---|
|   |  | 30* 30*   |
| LED   | XD16   |   |
| FWHM / FWTM   | 18.0° / 40.0°  | 75.   |
| Efficiency  | 80 %   | 1600  |
| Peak intensity  | 4.8 cd/lm  |   |
| LEDs/each optic   | 1  |   |
| Light colour  | White  | gzi ez:   |
| Required compone  | nts:   | 3200  |
|   |  |   |
|   |  |   |
|   |  | 300 300   |
|   |  | 123 00 125  |
| CREE <del>\$</del><br>LEDs  |  | 90° 90°   |
| LED   | XQ-E HD  | 75*   |
| FWHM / FWTM   | 16.0° / 33.0°  | 1000  |
| Efficiency  | 86 %   | 60°   |
| Peak intensity  | 6.9 cd/lm  |   |
| LEDs/each optic   | 1  | X /   |
| Light colour  | White  | gr dr   |
| Required compone  | nts:   |   |
|   |  |   |
|   |  | 000   |
|   |  | 300 100 VIII 100 VIII   |
|   |  |   |
| CREE ≑  |  |   |
|   |  | 90°   |
| LED   | XQ-E HI<br>11 08 (28 08  | 31  |
| LED<br>FWHM / FWTM  | 11.0° / 28.0°  | 30°   |
| LED<br>FWHM / FWTM<br>Efficiency  | 11.0° / 28.0°<br>80 %  | 50° 50° 50° 50°   |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity  | 11.0° / 28.0°<br>80 %<br>10.7 cd/lm  | 99° 99°<br>90° 99°<br>90° 90° 99°   |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic   | 11.0° / 28.0°<br>80 %<br>10.7 cd/lm<br>1   | 77  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour   | 11.0° / 28.0°<br>80 %<br>10.7 cd/lm<br>1<br>White  | 77  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic   | 11.0° / 28.0°<br>80 %<br>10.7 cd/lm<br>1<br>White  | 6.<br>61<br>92<br>92  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour   | 11.0° / 28.0°<br>80 %<br>10.7 cd/lm<br>1<br>White  | 6.<br>61<br>92<br>92  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour   | 11.0° / 28.0°<br>80 %<br>10.7 cd/lm<br>1<br>White  | 27<br>60<br>60<br>60<br>60<br>60<br>60<br>7<br>60<br>7<br>60<br>7<br>60<br>7<br>60  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone   | 11.0° / 28.0°<br>80 %<br>10.7 cd/lm<br>1<br>White<br>nts:  | g. 60<br>60<br>60<br>60<br>60<br>60<br>7<br>7<br>60<br>80<br>80<br>80<br>80<br>80<br>80<br>80<br>80<br>80<br>80<br>80<br>80<br>80                                       |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour   | 11.0° / 28.0°<br>80 %<br>10.7 cd/lm<br>1<br>White<br>nts:  | 2.<br>5.<br>6.<br>6.<br>6.<br>6.<br>6.<br>6.<br>6.<br>6.<br>6.<br>6   |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone   | 11.0° / 28.0°<br>80 %<br>10.7 cd/lm<br>1<br>White<br>Ints:   | 30*     30*       30*     400       60*     60%       60*     60%   |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone   | 11.0° / 28.0°<br>80 %<br>10.7 cd/lm<br>1<br>White<br>Ints:<br>EDS<br>LUXEON A  | 30<br>30<br>30<br>30<br>30<br>30<br>30<br>30<br>30<br>30  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone   | 11.0° / 28.0°<br>80 %<br>10.7 cd/lm<br>1<br>White<br>Ints:   | 31.     32.     32.     32.     32.       33.     33.     33.     35.     35.       60.     61.0     62.0     35.     35.       53.     10.0     10.0     10.0     10.0 |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone   | 11.0° / 28.0°<br>80 %<br>10.7 cd/lm<br>1<br>White<br>I<br>White<br>Mite<br>LUXEON A<br>26.0° / 51.0°   | 30<br>30<br>30<br>30<br>30<br>30<br>30<br>30<br>30<br>30  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone   | 11.0° / 28.0°<br>80 %<br>10.7 cd/lm<br>1<br>White<br>I<br>White<br>Mite<br>S<br>LUXEON A<br>26.0° / 51.0°<br>89 %  | 30<br>30<br>30<br>30<br>30<br>30<br>30<br>30<br>30<br>30  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone   | 11.0° / 28.0°<br>80 %<br>10.7 cd/lm<br>1<br>White<br>I<br>White<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>Mite<br>M |   |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone   | 11.0° / 28.0°<br>80 %<br>10.7 cd/lm<br>1<br>White<br>I<br>White<br>Mite<br>SEDS<br>LUXEON A<br>26.0° / 51.0°<br>89 %<br>3.2 cd/lm<br>1<br>White  | 37 30 37   64 60 61   64 60 61   95 90 91   37 30 91   95 90 91   95 90 91   95 90 91   95 90 91   95 90 91   95 90 91   95 90 91                                       |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone<br><b>Composition</b><br>LUMIL<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour | 11.0° / 28.0°<br>80 %<br>10.7 cd/lm<br>1<br>White<br>I<br>White<br>Mite<br>SEDS<br>LUXEON A<br>26.0° / 51.0°<br>89 %<br>3.2 cd/lm<br>1<br>White  |   |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone<br><b>Composition</b><br>LUMIL<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour | 11.0° / 28.0°<br>80 %<br>10.7 cd/lm<br>1<br>White<br>I<br>White<br>Mite<br>SEDS<br>LUXEON A<br>26.0° / 51.0°<br>89 %<br>3.2 cd/lm<br>1<br>White  |   |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone<br><b>Composition</b><br>LUMIL<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour | 11.0° / 28.0°<br>80 %<br>10.7 cd/lm<br>1<br>White<br>I<br>White<br>Mite<br>SEDS<br>LUXEON A<br>26.0° / 51.0°<br>89 %<br>3.2 cd/lm<br>1<br>White  | 37 30 37   64 60 61   64 60 61   95 90 91   37 30 91   95 90 91   95 90 91   95 90 91   95 90 91   95 90 91   95 90 91   95 90 91                                       |



| 🥙 LUMIL                           | EDS                   | 90* 90'                                  |
|-----------------------------------|-----------------------|--|
| LED                               | LUXEON C              |  |
| FWHM / FWTM                       | 17.0° / 36.0°         | 75                                       |
| Efficiency                        | 86 %                  | 50 <sup>1</sup> 500                      |
| Peak intensity                    | 6.1 cd/lm             |  |
| LEDs/each optic                   | 1                     |  |
| Light colour                      | White                 | er                                       |
| Required compone                  | nts:                  |  |
|                                   |                       | 400                                      |
|                                   |                       |  |
|                                   |                       | 30. 6400 30                              |
|                                   | EDS                   | 15" 0" 15"                               |
| LED                               | LUXEON Rebel          |  |
| FWHM / FWTM                       | 20.0° / 45.0°         |  |
| Efficiency                        | 90 %                  |  |
| Peak intensity                    | 4.6 cd/lm             |  |
| LEDs/each optic                   | 1                     |  |
| Light colour                      | White                 |  |
| Required compone                  |                       |  |
|                                   |                       |  |
|                                   |                       | 50° 50°                                  |
| LED                               | LUXEON Rebel ES       | 75.                                      |
| FWHM / FWTM                       | 24.0° / 53.0°<br>88 % |  |
| Efficiency                        | 3.2 cd/lm             | 60 60                                    |
| Peak intensity<br>LEDs/each optic | 1                     |  |
| Light colour                      | White                 | gr / / · · · · · · · · · · · · · · · · · |
| Required compone                  |                       |  |
|                                   |                       |  |
|                                   |                       |  |
|                                   |                       | 30. 30                                   |
| <b></b>                           |                       | <br>125° 0° 15°                          |
| 🖉 LUMIL                           | EDS                   | 90* 90                                   |
| LED                               | LUXEON Z              | 75                                       |
| FWHM / FWTM                       | 11.0° / 27.0°         |  |
| Efficiency                        | 85 %                  | en / / er                                |
| Peak intensity                    | 12.1 cd/lm            |  |
| LEDs/each optic                   | 1                     | 6530                                     |
| Light colour                      | White                 | 9° / / / / /                             |
| Required compone                  | nts:                  |  |
|                                   |                       |  |
|                                   |                       | $\times$ / $\vee$ $\times$               |
|                                   |                       | 30%                                      |
|                                   |                       | 15° 0° 15°                               |



| M LUMIL   | EDS   | 50°  |
|---|---|--|
| LED   | LUXEON Z ES   |  |
| FWHM / FWTM   | 16.0° / 37.0°   | 77   |
| Efficiency  | 89 %  |  |
| Peak intensity  | 6.1 cd/lm   |  |
| LEDs/each optic   | 1   |  |
| Light colour  | White   | gr av  |
| Required compone  |   |  |
|   |   | (60)   |
|   |   |  |
|   |   | 30 500 34  |
|   |   | 15 <sup>5</sup> Ø <sup>b</sup> 15 <sup>5</sup>   |
| <b>ØNICHI</b>   | k i i i i i i i i i i i i i i i i i i i   | 30* 30*  |
| LED   | NCSxx19A  |  |
| FWHM / FWTM   | 16.0° / 43.0°   |  |
| Efficiency  | 84 %  |  |
| Peak intensity  | 4.8 cd/lm   |  |
| LEDs/each optic   | 1   |  |
| Light colour  | White   | gi gi  |
| Required compone  | nts:  |  |
|   |   |  |
|   |   |  |
|   |   | 304 304  |
|   |   | 237 <sup>°</sup> 0 <sup>0</sup> 127 <sup>°</sup>                                       |
| MAUCHIA   |   |  |
| <b><i>⊗</i>NICHI</b> ∧  |   | 54 <sup>-</sup>  |
| LED   | NVSxx19A  | 25· 22·  |
| LED<br>FWHM / FWTM  | NVSxx19A<br>21.0° / 52.0°   |  |
| LED<br>FWHM / FWTM<br>Efficiency  | NVSxx19A<br>21.0° / 52.0°<br>81 %   |  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity  | NVSxx19A<br>21.0° / 52.0°<br>81 %<br>3.1 cd/lm  | 79<br>66 <sup>1</sup> 60 <sup>2</sup> 60 <sup>2</sup>                                  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic   | NVSxx19A<br>21.0° / 52.0°<br>81 %<br>3.1 cd/lm<br>1   | 55<br>56<br>50<br>50<br>50<br>50<br>50<br>50<br>50<br>50<br>50<br>50<br>50<br>50<br>50 |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour   | NVSxx19A<br>21.0° / 52.0°<br>81 %<br>3.1 cd/lm<br>1<br>White  | 79<br>66 <sup>1</sup> 60 <sup>2</sup> 60 <sup>2</sup>                                  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic   | NVSxx19A<br>21.0° / 52.0°<br>81 %<br>3.1 cd/lm<br>1<br>White  | 55<br>56<br>50<br>50<br>50<br>50<br>50<br>50<br>50<br>50<br>50<br>50<br>50<br>50<br>50 |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour   | NVSxx19A<br>21.0° / 52.0°<br>81 %<br>3.1 cd/lm<br>1<br>White  |  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour   | NVSxx19A<br>21.0° / 52.0°<br>81 %<br>3.1 cd/lm<br>1<br>White  |  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour   | NVSxx19A<br>21.0° / 52.0°<br>81 %<br>3.1 cd/lm<br>1<br>White  |  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour   | NVSxx19A<br>21.0° / 52.0°<br>81 %<br>3.1 cd/lm<br>1<br>White  |  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone   | NVSxx19A<br>21.0° / 52.0°<br>81 %<br>3.1 cd/Im<br>1<br>White<br>hts:  |  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone   | NVSxx19A<br>21.0° / 52.0°<br>81 %<br>3.1 cd/lm<br>1<br>White<br>hts:  |  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone   | NVSxx19A<br>21.0° / 52.0°<br>81 %<br>3.1 cd/lm<br>1<br>White<br>hts:<br>OSLON Square EC<br>22.0° / 47.0°                                    |  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone<br>Opto Semiconductors<br>LED<br>FWHM / FWTM<br>Efficiency  | NVSxx19A<br>21.0° / 52.0°<br>81 %<br>3.1 cd/lm<br>1<br>White<br>hts:<br>OSLON Square EC<br>22.0° / 47.0°<br>86 %                            |  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone<br>Opto Semiconductors<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity                                    | NVSxx19A<br>21.0° / 52.0°<br>81 %<br>3.1 cd/lm<br>1<br>White<br>hts:<br>OSLON Square EC<br>22.0° / 47.0°<br>86 %<br>3.8 cd/lm               |  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone<br>Opto Semiconductors<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic                 | NVSxx19A<br>21.0° / 52.0°<br>81 %<br>3.1 cd/lm<br>1<br>White<br>hts:<br>OSLON Square EC<br>22.0° / 47.0°<br>86 %<br>3.8 cd/lm<br>1          |  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone<br>Opto Semiconductors<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour | NVSxx19A<br>21.0° / 52.0°<br>81 %<br>3.1 cd/lm<br>1<br>White<br>hts:<br>OSLON Square EC<br>22.0° / 47.0°<br>86 %<br>3.8 cd/lm<br>1<br>White |  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone<br>Opto Semiconductors<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic                 | NVSxx19A<br>21.0° / 52.0°<br>81 %<br>3.1 cd/lm<br>1<br>White<br>hts:<br>OSLON Square EC<br>22.0° / 47.0°<br>86 %<br>3.8 cd/lm<br>1<br>White |  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone<br>Opto Semiconductors<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour | NVSxx19A<br>21.0° / 52.0°<br>81 %<br>3.1 cd/lm<br>1<br>White<br>hts:<br>OSLON Square EC<br>22.0° / 47.0°<br>86 %<br>3.8 cd/lm<br>1<br>White |  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone<br>Opto Semiconductors<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour | NVSxx19A<br>21.0° / 52.0°<br>81 %<br>3.1 cd/lm<br>1<br>White<br>hts:<br>OSLON Square EC<br>22.0° / 47.0°<br>86 %<br>3.8 cd/lm<br>1<br>White |  |



| OSRAM<br>Opto Semiconductors<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone | OSLON SSL 150<br>16.0° / 39.0°<br>87 %<br>8.1 cd/lm<br>1<br>White<br>ints: |  |
|---|--|--|
| OSRAM<br>Opto Semiconductors<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone | OSLON SSL 80<br>16.0° / 36.0°<br>83 %<br>6.5 cd/lm<br>1<br>White<br>ints:  |  |



## **OPTICAL RESULTS (SIMULATED):**

|                     |       |  | 9 <sup>4</sup>  | 90*      |
|---------------------|-------|--|---|----------|
| LED                 | XP-E  |  | 77  | 75*      |
| FWHM / FWTM         | 15.0° |  | 502   | 60*      |
| Efficiency          | 92 %  |  | 300   | $\sim 2$ |
| LEDs/each optic     | 1     |  |   | $\sim$   |
| Light colour        | White |  | 97  | 45°      |
| Required components | S:    |  | 0600<br>34 <sup>4</sup> 35 <sup>7</sup> 86 <sup>8</sup> 0 35 <sup>4</sup> | 36*      |