

# HB-2X2-WW

~65° wide beam

### **SPECIFICATION:**

| Dimensions     | 50.0 x 50.0 mm   |
|----------------|------------------|
| Height         | 8.5 mm           |
| Fastening      | glue, pin, screw |
| ROHS compliant | yes 🛈            |



### **MATERIALS:**

Component HB-2X2-WW **Type** Multi-lens

| Material | Colour | Finish |
|----------|--------|--------|
| PMMA     | clear  |        |

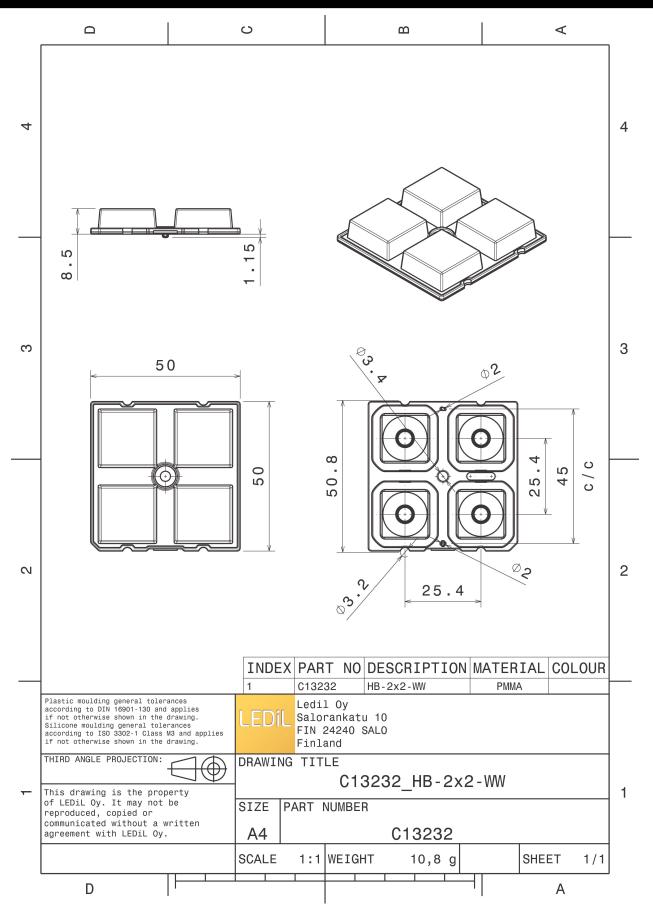
#### **ORDERING INFORMATION:**

Component C13232\_HB-2X2-WW » Box size: 480 x 280 x 300 mm

| Qty in box | MOQ | MPQ | Box weight (kg) |
|------------|-----|-----|-----------------|
| 800        | 160 | 160 | 9.5             |



# PRODUCT DATASHEET C13232\_HB-2X2-WW



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



|                                    |                               | 90°   | 90*             |
|------------------------------------|-------------------------------|---|-----------------|
| LED<br>FWHM / FWTM<br>Efficiency   | XP-G<br>69.0° / 92.0°<br>91 % | 32  | 300             |
| Peak intensity                     | 0.8 cd/lm                     | · · · · · · · · · · · · · · · · · · ·   |                 |
| LEDs/each optic                    | 1                             |   | 400             |
| Light colour<br>Required component | White                         | 5°*   |                 |
|                                    | ιις.                          | 240   | 500 - 500 - 500 |
|                                    |                               | 90  | 90*             |
| LED                                | XP-G2                         | 70  |                 |
| FWHM / FWTM                        | 69.0° / 92.0°                 |   |                 |
| Efficiency                         | 91 %                          | 50*   | 200             |
| Peak intensity                     | 0.7 cd/lm                     |   |                 |
| LEDs/each optic                    | 1                             |   | 400             |
| Light colour                       | White                         |   |                 |
| Required compone                   | ns.                           |   | JAK             |
|                                    |                               |   | 600             |
|                                    |                               | ar and a second s | 3.              |
|                                    |                               |   | 90*             |
| LED                                | XT-E                          |   |                 |
| FWHM / FWTM                        | 65.0° / 89.0°                 | 23-   | 200             |
| Efficiency                         | 91 %                          | 60.5  | 60°             |
| Peak intensity                     | 0.9 cd/lm                     |   |                 |
| LEDs/each optic                    | 1                             |   |                 |
| Light colour                       | White                         | 45°   | e.              |
| Required component                 | 115:                          |   | 00<br>00        |
|                                    | EDS                           | 954   | 5') 00' 135'    |
| LED                                |                               | 30°   |                 |
| LED<br>FWHM / FWTM                 | LUXEON Q<br>67.0° / 92.0°     | 78  |                 |
| Efficiency                         | 91 %                          |   |                 |
| Peak intensity                     | 0.8 cd/lm                     | 60e-  |                 |
| LEDs/each optic                    | 1                             |   | 400             |
| Light colour                       | White                         | e.  | 45              |
| Required component                 | nts:                          |   |                 |



|  |  | HEADER HEADER (Lowers 2 DS)  |
|--|--|--|
| 🤭 LUMIL  | .EDS   | 90* 90*  |
| LED  | LUXEON Z ES  |  |
| FWHM / FWTM  | 59.0° / 87.0°  |  |
| Efficiency   | 90 %   |  |
| Peak intensity   | 1 cd/lm  |  |
| LEDs/each optic  | 1  |  |
| Light colour   | White  | er de la companya de |
| Required compone   | ints:  |  |
|  |  | 840  |
|  |  |  |
|  |  | 34   |
|  |  | 257 of 157   |
| <b>Ø</b> NICHI∕  |  | 90 <sup>*</sup>  |
| LED  | NVSxE21A   |  |
| FWHM / FWTM  | 54.0° / 89.0°  |  |
| Efficiency   | 94 %   |  |
| Peak intensity   | 1.1 cd/lm  |  |
| LEDs/each optic  | 1  |  |
| Light colour   | White  | er de la companya de |
| Required compone   | ints:  |  |
|  |  |  |
|  |  |  |
|  |  | 30' 30'  |
|  |  | 157 07 157   |
| OSDAN  |  |  |
| OSRAM  |  | 90 <sup>4</sup>  |
| LED  | PrevaLED Brick HP 2x8  | 35<br>36<br>36   |
| LED<br>FWHM / FWTM   | PrevaLED Brick HP 2x8<br>67.0° / 92.0°   | 92°  |
| LED<br>FWHM / FWTM<br>Efficiency   | PrevaLED Brick HP 2x8<br>67.0° / 92.0°<br>92 %   | 95° 95° 95°<br>95° 95° 95°<br>96° 200 96°  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity   | PrevaLED Brick HP 2x8<br>67.0° / 92.0°<br>92 %<br>0.8 cd/lm  | 95 <sup>4</sup><br>95<br>96<br>96<br>90<br>90<br>90<br>90  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic  | PrevaLED Brick HP 2x8<br>67.0° / 92.0°<br>92 %<br>0.8 cd/lm<br>1   |  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour  | PrevaLED Brick HP 2x8<br>67.0° / 92.0°<br>92 %<br>0.8 cd/lm<br>1<br>White  |  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic  | PrevaLED Brick HP 2x8<br>67.0° / 92.0°<br>92 %<br>0.8 cd/lm<br>1<br>White  |  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour  | PrevaLED Brick HP 2x8<br>67.0° / 92.0°<br>92 %<br>0.8 cd/lm<br>1<br>White  |  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour  | PrevaLED Brick HP 2x8<br>67.0° / 92.0°<br>92 %<br>0.8 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  | PrevaLED Brick HP 2x8<br>67.0° / 92.0°<br>92 %<br>0.8 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  | PrevaLED Brick HP 2x8<br>67.0° / 92.0°<br>92 %<br>0.8 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  | PrevaLED Brick HP 2x8<br>67.0° / 92.0°<br>92 %<br>0.8 cd/lm<br>1<br>White<br>Ints:   | 90°  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone  | PrevaLED Brick HP 2x8<br>67.0° / 92.0°<br>92 %<br>0.8 cd/lm<br>1<br>White<br>Ints:<br>OSLON Square CSSRM2/CSSRM3   | 359 0 159  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone<br>OSRAM<br>Opto Semiconductors<br>LED<br>FWHM / FWTM  | PrevaLED Brick HP 2x8<br>67.0° / 92.0°<br>92 %<br>0.8 cd/lm<br>1<br>White<br>Ints:<br>OSLON Square CSSRM2/CSSRM3<br>67.0° / 92.0°                                    | 90°  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone<br>OSRAM<br>Opto Semiconductors<br>LED<br>FWHM / FWTM<br>Efficiency  | PrevaLED Brick HP 2x8<br>67.0° / 92.0°<br>92 %<br>0.8 cd/lm<br>1<br>White<br>ints:<br>OSLON Square CSSRM2/CSSRM3<br>67.0° / 92.0°<br>92 %                            | 90°  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone<br>Optio Semiconductors<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity  | PrevaLED Brick HP 2x8<br>67.0° / 92.0°<br>92 %<br>0.8 cd/lm<br>1<br>White<br>Ints:<br>OSLON Square CSSRM2/CSSRM3<br>67.0° / 92.0°                                    | 90°  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone<br>OSRAM<br>Optic Semiconductors<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic                | PrevaLED Brick HP 2x8<br>67.0° / 92.0°<br>92 %<br>0.8 cd/lm<br>1<br>White<br>ints:<br>OSLON Square CSSRM2/CSSRM3<br>67.0° / 92.0°<br>92 %<br>0.8 cd/lm<br>1          | 90°  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone<br>OSRAM<br>Opto Semiconductors<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour | PrevaLED Brick HP 2x8<br>67.0° / 92.0°<br>92 %<br>0.8 cd/lm<br>1<br>White<br>ints:<br>OSLON Square CSSRM2/CSSRM3<br>67.0° / 92.0°<br>92 %<br>0.8 cd/lm<br>1<br>White | 90°  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone<br>OSRAM<br>Optic Semiconductors<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic                | PrevaLED Brick HP 2x8<br>67.0° / 92.0°<br>92 %<br>0.8 cd/lm<br>1<br>White<br>ints:<br>OSLON Square CSSRM2/CSSRM3<br>67.0° / 92.0°<br>92 %<br>0.8 cd/lm<br>1<br>White | 90°  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone<br>OSRAM<br>Opto Semiconductors<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour | PrevaLED Brick HP 2x8<br>67.0° / 92.0°<br>92 %<br>0.8 cd/lm<br>1<br>White<br>ints:<br>OSLON Square CSSRM2/CSSRM3<br>67.0° / 92.0°<br>92 %<br>0.8 cd/lm<br>1<br>White | 90* 90°  |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone<br>OSRAM<br>Opto Semiconductors<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour | PrevaLED Brick HP 2x8<br>67.0° / 92.0°<br>92 %<br>0.8 cd/lm<br>1<br>White<br>ints:<br>OSLON Square CSSRM2/CSSRM3<br>67.0° / 92.0°<br>92 %<br>0.8 cd/lm<br>1<br>White | 90°  |



| OSRAM  |   |                                 |
|--|---|---------------------------------|
| Opto Semiconductors<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone | OSLON Square CSSRM2/CSSRM3<br>71.0° / 94.0°<br>94 %<br>0.7 cd/lm<br>1<br>White<br>ents: |                                 |
| OSRAM<br>Opto Semiconductors   |   | 50 <sup>4</sup>                 |
| opto Semiconductors<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone | OSLON Square PC<br>63.0° / 90.0°<br>91 %<br>0.9 cd/lm<br>1<br>White<br>ents:            |                                 |
| OSRAM<br>Opto Semiconductors   |   | 91 <sup>4</sup> 97 <sup>4</sup> |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone                        | OSLON SSL 80<br>54.0° / 80.0°<br>92 %<br>1.1 cd/lm<br>1<br>White<br>ents:               |                                 |
| SAMS<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone                | LH351A<br>68.0° / 91.0°<br>92 %<br>0.8 cd/lm<br>1<br>White                              |                                 |



| <b>S</b> ΛΜS  | JNG  |  | 90*                                    | 90'  |
|---|--|--|--|--|
| LED   | LH351B   |  |  |  |
| FWHM / FWTM   | 65.0° / 92.0°  |  | 75'                                    | 75'  |
| Efficiency  | 89 %   |  | 200                                    |  |
| Peak intensity  | 0.8 cd/lm  |  | 50°                                    | 60   |
| LEDs/each optic   | 1  |  | 400                                    |  |
| Light colour  | White  |  | 45*                                    | 45   |
| Required compone  |  |  |  | X  |
| i toquiloù oompono  |  |  |  |  |
|   |  |  |  |  |
|   |  |  |  |  |
|   |  |  | 30° 500 500                            | 15°  |
| <b>S</b> ΛΜS  | ING  |  | 90°                                    | 90'  |
| LED   | LH351Z   |  |  |  |
| FWHM / FWTM   | 63.0° / 89.0°  |  | 78'                                    | 75   |
| Efficiency  | 89 %   |  |  |  |
| Peak intensity  | 0.9 cd/lm  |  | 60 <sup>1</sup>                        | 60'  |
| LEDs/each optic   | 1  |  | 400                                    |  |
| Light colour  | White  |  | 45*                                    |  |
| Required compone  |  |  |  | X  |
| Required compone  | 1113.  |  |  |  |
|   |  |  |  |  |
|   |  |  | ***                                    |  |
|   |  |  | 36°                                    | 12°,<br>30,  |
| SEOUL   |  |  | 90*                                    | 90'  |
| LED   | Z8Y15  |  |  |  |
| FWHM / FWTM   | 56.0° / 92.0°  |  | 75°                                    | 778  |
|   |  |  |  |  |
|   | 85 %   |  | - 200                                  |  |
| Efficiency  | 85 %<br>0.9 cd/lm  |  | 200                                    | 60'  |
| Efficiency<br>Peak intensity  | 0.9 cd/lm  |  | 60 <sup>1</sup>                        | 60   |
| Efficiency<br>Peak intensity<br>LEDs/each optic   | 0.9 cd/lm<br>1   |  | 200<br>Ext<br>T                        |  |
| Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour   | 0.9 cd/lm<br>1<br>White  |  | er<br>er<br>eo                         | 65   |
| Efficiency<br>Peak intensity<br>LEDs/each optic   | 0.9 cd/lm<br>1<br>White  |  | 20<br>20<br>40<br>27                   | 67   |
| Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour   | 0.9 cd/lm<br>1<br>White  |  | 20<br>6<br>7<br>7<br>60<br>80          | 60   |
| Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour   | 0.9 cd/lm<br>1<br>White  |  | 200<br>200<br>400<br>200<br>400<br>000 | e<br>  |
| Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone   | 0.9 cd/lm<br>1<br>White  |  |  | 15°  |
| Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone   | 0.9 cd/lm<br>1<br>White  |  |  | 60<br>67<br>57<br>99   |
| Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone   | 0.9 cd/lm<br>1<br>White<br>nts:  |  |  | 5° 55  |
| Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone   | 0.9 cd/lm<br>1<br>White<br>nts:<br>Z8Y19   |  |  | 13°  |
| Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone   | 0.9 cd/lm<br>1<br>White<br>nts:<br>Z8Y19<br>56.0° / 92.0°                                    |  |  | 12, 23<br>12, 20<br>12, 20<br>12 |
| Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone<br>scoul staticonductor<br>LED<br>FWHM / FWTM<br>Efficiency   | 0.9 cd/lm<br>1<br>White<br>nts:<br>Z8Y19<br>56.0° / 92.0°<br>85 %                            |  |  | 12,<br>12,<br>12,<br>12,<br>12,<br>12,<br>12,<br>12,<br>12,<br>12,   |
| Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone<br>soul stanconductor<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity   | 0.9 cd/lm<br>1<br>White<br>nts:<br>Z8Y19<br>56.0° / 92.0°                                    |  |  | 57°  |
| Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone<br>stous semiconductor<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic   | 0.9 cd/lm<br>1<br>White<br>nts:<br>Z8Y19<br>56.0° / 92.0°<br>85 %<br>0.9 cd/lm<br>1          |  |  | -75  |
| Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone<br>stour semconductor<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour  | 0.9 cd/lm<br>1<br>White<br>nts:<br>Z8Y19<br>56.0° / 92.0°<br>85 %<br>0.9 cd/lm<br>1<br>White |  |  |  |
| Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone<br>sources<br>sources<br>sources<br>teD<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic   | 0.9 cd/lm<br>1<br>White<br>nts:<br>Z8Y19<br>56.0° / 92.0°<br>85 %<br>0.9 cd/lm<br>1<br>White |  |  | -75  |
| Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone<br>sources<br>sources<br>ted<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour  | 0.9 cd/lm<br>1<br>White<br>nts:<br>Z8Y19<br>56.0° / 92.0°<br>85 %<br>0.9 cd/lm<br>1<br>White |  |  | 5°<br>5°<br>5°<br>5°<br>5°<br>5°<br>5°   |
| Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone<br>SEQUESTIC COMPOSE<br>SEQUESTIC SEQUESTIC<br>SEQUESTIC SEQUESTIC<br>SEQUESTIC SEQUESTIC<br>SEQUESTIC SEQUESTIC<br>SEQUESTIC SEQUESTIC<br>SEQUESTIC SEQUESTIC<br>SEQUESTIC SEQUESTIC<br>SEQUESTIC SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUESTIC<br>SEQUES | 0.9 cd/lm<br>1<br>White<br>nts:<br>Z8Y19<br>56.0° / 92.0°<br>85 %<br>0.9 cd/lm<br>1<br>White |  |  |  |



| seoul semiconductor<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone    | Z8Y22<br>55.0° / 94.0°<br>94 %<br>1 cd/lm<br>1<br>White<br>nts:                        | 200<br>201<br>200<br>201<br>200<br>201<br>201<br>201                                  |
|---|--|---|
| SEOUL   |  |   |
| stour stemiconductor<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone   | Z8Y22P<br>65.0° / 95.0°<br>94 %<br>0.9 cd/lm<br>1<br>White<br>nts:                     | 200<br>200<br>200<br>200<br>200<br>200<br>200<br>200                                  |
| TOSHIBA   |  | 50* 90*   |
| Leading Innovation >>><br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone | TL1L4<br>60.0° / 87.0°<br>84 %<br>0.9 cd/lm<br>1<br>White<br>nts:                      |   |
| TRIDON  |  | 90° 90°   |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone                           | RLE G1 49x121mm 2000lm xxx EXC OTD<br>67.0° / 93.0°<br>94 %<br>0.9 cd/lm<br>1<br>White | xx xx   yx xx |



| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone                  | RLE G1 49x133mm 2000lm xxx EXC OTD<br>67.0° / 93.0°<br>94 %<br>0.9 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                  | RLE G1 49x223mm 4000lm xxx EXC OTD<br>67.0° / 93.0°<br>94 %<br>0.9 cd/lm<br>1<br>White |  |
| <b>TRIDON</b><br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required compone | RLE G1 49x245mm 4000lm xxx EXC OTD<br>67.0° / 93.0°<br>94 %<br>0.9 cd/lm<br>1<br>White |  |



# **OPTICAL RESULTS (SIMULATED):**

| CREE ≑  |  | 90° 90°   |
|---|--|---|
| LEDS  | XD16   |   |
| FWHM / FWTM   | 69.0° / 90.0°  | 25.   |
| Efficiency  | 95 %   | 200   |
| Peak intensity  | 0.8 cd/lm  | 60° 60°   |
| LEDs/each optic   | 1  |   |
| Light colour  | White  | 400   |
| Required components:  | white  |   |
|   |  |   |
|   |  |   |
|   |  |   |
|   |  | 30° 30° 30° 30°   |
|   |  | 90* 90*   |
| LED   | XP-G2  |   |
| FWHM / FWTM   | 72.0° / 94.0°  | 75'   |
| Efficiency  | 92 %   | 200   |
| Peak intensity  | 0.7 cd/lm  | 665-  |
| LEDs/each optic   | 1  |   |
| Light colour  | White  | 400 - 400 - 47 <sup>4</sup>   |
| Required components:  |  |   |
|   |  |   |
| Protective plate  | e, glass   |   |
|   |  |   |
|   |  | 15° - 35° - 15°   |
|   |  |   |
| MUMILED   | DS   | 90* 90*   |
|   |  | 90°   |
|   | LUXEON 3030 2D (Round LES)<br>64.0° / 82.0°  | 19°   |
| LED   | LUXEON 3030 2D (Round LES)   | 97<br>77<br>79<br>70<br>70<br>70<br>70<br>70  |
| LED<br>FWHM / FWTM  | LUXEON 3030 2D (Round LES)<br>64.0° / 82.0°  | 90* 90*<br>75* 75*<br>00* 00*   |
| LED<br>FWHM / FWTM<br>Efficiency  | LUXEON 3030 2D (Round LES)<br>64.0° / 82.0°<br>94 %  | 90* 90*<br>75: 75:<br>90* 60*   |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity  | LUXEON 3030 2D (Round LES)<br>64.0° / 82.0°<br>94 %<br>1 cd/lm   | 50° 50° 50° 50° 50° 50° 50° 50° 50° 50°   |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic   | LUXEON 3030 2D (Round LES)<br>64.0° / 82.0°<br>94 %<br>1 cd/lm<br>1  | 90* 90* 90* 90* 90* 90* 90* 90* 90* 90*   |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour                         | LUXEON 3030 2D (Round LES)<br>64.0° / 82.0°<br>94 %<br>1 cd/lm<br>1  | 5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5<br>5 |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour                         | LUXEON 3030 2D (Round LES)<br>64.0° / 82.0°<br>94 %<br>1 cd/lm<br>1  | 94°<br>95°<br>96°<br>90°<br>90°<br>90°<br>90°<br>90°<br>90°<br>90°<br>90°                   |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour                         | LUXEON 3030 2D (Round LES)<br>64.0° / 82.0°<br>94 %<br>1 cd/lm<br>1  | 34.<br>34.<br>35.<br>36.<br>36.<br>37.<br>37.<br>37.<br>37.<br>37.<br>37.<br>37.<br>37      |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required components: | LUXEON 3030 2D (Round LES)<br>64.0° / 82.0°<br>94 %<br>1 cd/lm<br>1<br>White   | 22°<br>00<br>00<br>00<br>00<br>00<br>00<br>00<br>00<br>00<br>0                              |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required components: | LUXEON 3030 2D (Round LES)<br>64.0° / 82.0°<br>94 %<br>1 cd/lm<br>1<br>White   | 30* 30*   30* 30*   30* 30*   |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required components: | LUXEON 3030 2D (Round LES)<br>64.0° / 82.0°<br>94 %<br>1 cd/lm<br>1<br>White<br>S<br>LUXEON C  |   |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required components: | LUXEON 3030 2D (Round LES)<br>64.0° / 82.0°<br>94 %<br>1 cd/lm<br>1<br>White<br>S<br>LUXEON C<br>65.0° / 88.0°                           |   |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required components: | LUXEON 3030 2D (Round LES)<br>64.0° / 82.0°<br>94 %<br>1 cd/lm<br>1<br>White<br>S<br>LUXEON C<br>65.0° / 88.0°<br>94 %                   |   |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required components: | LUXEON 3030 2D (Round LES)<br>64.0° / 82.0°<br>94 %<br>1 cd/lm<br>1<br>White<br>S<br>LUXEON C<br>65.0° / 88.0°<br>94 %<br>0.8 cd/lm      |   |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required components: | LUXEON 3030 2D (Round LES)<br>64.0° / 82.0°<br>94 %<br>1 cd/lm<br>1<br>White<br>S<br>LUXEON C<br>65.0° / 88.0°<br>94 %<br>0.8 cd/lm<br>1 | 200<br>60*<br>60*   |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required components: | LUXEON 3030 2D (Round LES)<br>64.0° / 82.0°<br>94 %<br>1 cd/lm<br>1<br>White<br>S<br>LUXEON C<br>65.0° / 88.0°<br>94 %<br>0.8 cd/lm      |   |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required components: | LUXEON 3030 2D (Round LES)<br>64.0° / 82.0°<br>94 %<br>1 cd/lm<br>1<br>White<br>S<br>LUXEON C<br>65.0° / 88.0°<br>94 %<br>0.8 cd/lm<br>1 | 200<br>60*<br>60*   |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required components: | LUXEON 3030 2D (Round LES)<br>64.0° / 82.0°<br>94 %<br>1 cd/lm<br>1<br>White<br>S<br>LUXEON C<br>65.0° / 88.0°<br>94 %<br>0.8 cd/lm<br>1 | 200<br>60*<br>60*   |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required components: | LUXEON 3030 2D (Round LES)<br>64.0° / 82.0°<br>94 %<br>1 cd/lm<br>1<br>White<br>S<br>LUXEON C<br>65.0° / 88.0°<br>94 %<br>0.8 cd/lm<br>1 | 500<br>600<br>600   |
| LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required components: | LUXEON 3030 2D (Round LES)<br>64.0° / 82.0°<br>94 %<br>1 cd/lm<br>1<br>White<br>S<br>LUXEON C<br>65.0° / 88.0°<br>94 %<br>0.8 cd/lm<br>1 | 200<br>60*<br>60*   |



# **OPTICAL RESULTS (SIMULATED):**

| OSRAM<br>Opto Semiconductors<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required components:                     | OSCONIQ C 2424<br>68.0° / 82.0°<br>97 %<br>0.9 cd/lm<br>1<br>White             | 200<br>200<br>200<br>200<br>200<br>200<br>200<br>200<br>200<br>200                               |
|---|--|--|
| OSRAM<br>Opto Semiconductors<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required components:<br>Protective plate | OSLON Square CSSRM2/CSSRM3<br>70.0° / 94.0°<br>88 %<br>0.7 cd/lm<br>1<br>White | 200<br>200<br>200<br>200<br>200<br>200<br>200<br>200   |
| seoul senconductor<br>LED<br>FWHM / FWTM<br>Efficiency<br>Peak intensity<br>LEDs/each optic<br>Light colour<br>Required components:                               | Z8Y22T<br>63.0° / 86.0°<br>94 %<br>1 cd/lm<br>1<br>White                       | 20 <sup>14</sup> 00<br>20 <sup>14</sup> 00<br>00<br>00<br>00<br>00<br>00<br>00<br>00<br>00<br>00 |



# PRODUCT DATASHEET C13232\_HB-2X2-WW

#### **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:

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