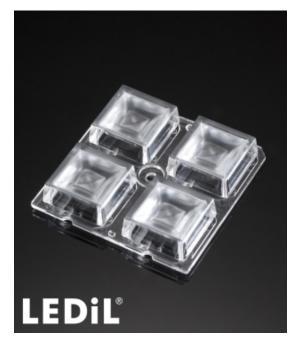


HB-2X2-W

~50° wide beam

TECHNICAL SPECIFICATIONS:

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



PRODUCT DATASHEET

C12361_HB-2X2-W

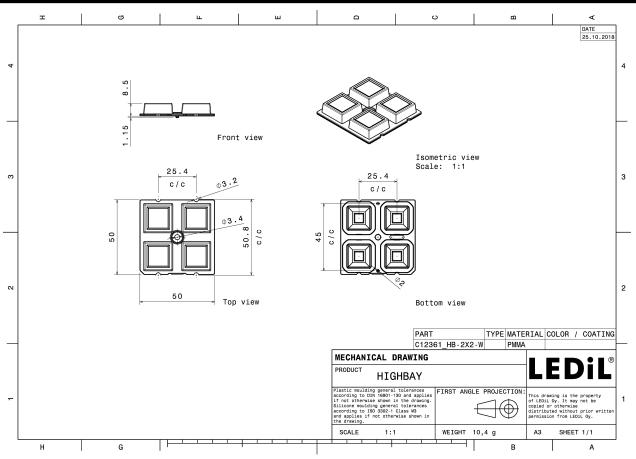
MATERIAL SPECIFICATIONS:

» Box size: 480 x 280 x 300 mm

| Component HB-2X2-W | Type Multi-lens | Material PMMA | | Colour clear | Finish |
|-------------------------------------|---------------------------|--------------------------|-------------------|------------------------|------------------------|
| ORDERING INFORMATION: | | | | | |
| Component C12361_HB-2X2-W | | Qty in box 800 | MOQ 160 | MPQ 160 | Box weight (kg) 9.1 |



PRODUCT DATASHEET C12361_HB-2X2-W



See also our general installation guide: <u>www.ledil.com/installation_guide</u>



| bridgelux. LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | Bridgelux SMD 5050 55.0° / 93.0° 94 % 0.9 cd/lm 1 White nts: | 20° 20° 20° 20° 20° 20° 20° 20° |
|---|--|---|
| ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | QUICK FLUX XTP 2x4 xxx LS G5 52.0° / 85.0° 94 % 1 cd/lm 1 White nts: | 20° |
| ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | QUICK FLUX XTP 2x6 xxx LS G5 52.0° / 86.0° 94 % 1 cd/lm 1 White nts: | 3 ⁴ 11 111 1111111111111 |
| CREE (LED) FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | XB-D White 48.0° / 85.0° 86 % 1 cd/lm 1 White | 20° 0° 10° 90° 0° 0° 90° 0° 0° 90° 0° 0° 90° 0° 10° |



| | | 100 |
|------------------|---------------|---|
| LED | XD16 | »»- |
| FWHM / FWTM | 54.0° / 94.0° | · · · · · · · · · · · · · · · · · · · |
| Efficiency | 91 % | 70 m |
| Peak intensity | 0.9 cd/lm | |
| LEDs/each optic | 4 | |
| Light colour | - White | |
| Required compone | | |
| | | 20 |
| | | 200 |
| | | 10 |
| | | |
| | | 5)* 55' |
| LED | XD16 | |
| FWHM / FWTM | 48.0° / 89.0° | 75 |
| Efficiency | 91 % | |
| Peak intensity | 0.9 cd/lm | |
| LEDs/each optic | 1 | |
| Light colour | White | ar ar |
| Required compone | nts: | |
| | | |
| | | |
| | | 20° 100 100 100 100 |
| | | 30 ⁴ 30 ⁴ |
| LED | XHP35 HD | |
| FWHM / FWTM | 57.0° / 92.0° | 72 |
| Efficiency | 85 % | 200 |
| Peak intensity | 0.8 cd/lm | |
| LEDs/each optic | 1 | |
| Light colour | White | gr and a start of the start of |
| Required compone | | |
| | | |
| | | |
| | | 30 |
| | | 129 ⁴ 0 ⁴ 129 |
| | | 90 ⁴ 90 ⁴ |
| LED | XM-L | 7 |
| FWHM / FWTM | 57.0° / 90.0° | 20 |
| Efficiency | 89 % | |
| Peak intensity | 0.9 cd/lm | |
| LEDs/each optic | 1 | |
| Light colour | White | |
| Required compone | nts: | |
| | | |
| | | - B0 |
| | | |
| | | 3° 30 |



| r | | |
|--|---|---------------|
| | 1 | 51* |
| LED | - XM-L2 | |
| FWHM / FWTM | 56.0° / 85.0° | 23 |
| Efficiency | 87 % | |
| Peak intensity | 0.9 cd/lm | |
| LEDs/each optic | 1 | |
| Light colour | White | e. |
| Required compone | | |
| | | |
| | | |
| | | 34 |
| | | 127 2005 125" |
| | | 8° |
| LED | XM-L3 | |
| FWHM / FWTM | 56.0° / 87.0° | |
| Efficiency | 95 % | |
| Peak intensity | 0.9 cd/lm | |
| LEDs/each optic | 1 | |
| Light colour | White | |
| Required compone | nts: | |
| | | |
| | | |
| | | 30* 300 30° |
| | | |
| | 1 | |
| | | |
| LED | XP-G | 75 |
| LED FWHM / FWTM | XP-G 52.0° | |
| LED FWHM / FWTM Efficiency | XP-G 52.0° 88 % | 75 |
| LED FWHM / FWTM Efficiency Peak intensity | XP-G 52.0° 88 % 0.9 cd/lm | 75 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic | XP-G 52.0° 88 % 0.9 cd/lm 1 | 75 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | XP-G 52.0° 88 % 0.9 cd/lm 1 White | 75 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic | XP-G 52.0° 88 % 0.9 cd/lm 1 White | 75 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | XP-G 52.0° 88 % 0.9 cd/lm 1 White | 75 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | XP-G 52.0° 88 % 0.9 cd/lm 1 White | 75 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | XP-G 52.0° 88 % 0.9 cd/lm 1 White | 75 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | XP-G 52.0° 88 % 0.9 cd/lm 1 White nts: | 75 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | XP-G 52.0° 88 % 0.9 cd/lm 1 White hts: | 75 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | XP-G 52.0° 88 % 0.9 cd/lm 1 White hts: | 75 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | XP-G 52.0° 88 % 0.9 cd/lm 1 White hts: XP-G2 51.0° / 84.0° | 75 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | XP-G 52.0° 88 % 0.9 cd/lm 1 White hts: XP-G2 51.0° / 84.0° 94 % | 75 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | XP-G 52.0° 88 % 0.9 cd/lm 1 White hts: XP-G2 51.0° / 84.0° | 75 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | XP-G 52.0° 88 % 0.9 cd/lm 1 White hts: XP-G2 51.0° / 84.0° 94 % 1 cd/lm 1 | 75 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone CREE (LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | XP-G 52.0° 88 % 0.9 cd/lm 1 White hts: XP-G2 51.0° / 84.0° 94 % 1 cd/lm 1 White | 75 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | XP-G 52.0° 88 % 0.9 cd/lm 1 White hts: XP-G2 51.0° / 84.0° 94 % 1 cd/lm 1 White | 75 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone CREE (LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | XP-G 52.0° 88 % 0.9 cd/lm 1 White hts: XP-G2 51.0° / 84.0° 94 % 1 cd/lm 1 White | 75 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone CREE (LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | XP-G 52.0° 88 % 0.9 cd/lm 1 White hts: XP-G2 51.0° / 84.0° 94 % 1 cd/lm 1 White | 75 |



| | | 90° 90° |
|---|---|---|
| LED | XP-L HD | |
| FWHM / FWTM | 56.0° / 90.0° | 73. 73. |
| Efficiency | 87 % | - 200 |
| Peak intensity | 0.8 cd/lm | 60* |
| LEDs/each optic | 1 | |
| Light colour | White | 95° |
| Required component | | |
| | | |
| | | |
| | | 30° 30° |
| | | 15 ⁵ 0 ⁶ 35 ⁵ |
| | | 90° |
| LED | XP-L HI | 75' |
| FWHM / FWTM | 50.0° / 83.0° | $\square \land \land$ |
| Efficiency | 93 % | 60 ⁴ 60 ⁴ |
| Peak intensity | 1 cd/im | |
| LEDs/each optic | 1 | |
| Light colour | White | 45° |
| Required component | nts: | |
| | | |
| | | |
| | | 36* 36* |
| | | 15° 0° 15° |
| | | 90 ⁴ 90 ⁴ 90 ⁴ |
| | | 30, 30, 30, 30, |
| CREE CLED | XP-L2 56.0° / 96.0° | |
| LED | XP-L2 | 200 24 25 20 26 26 26 26 26 26 27 |
| LED FWHM / FWTM | XP-L2 56.0° / 96.0° | 25 ⁴ 0 ⁴ 25 ⁴ |
| LED FWHM / FWTM Efficiency | XP-L2 56.0° / 96.0° 92 % | 20° 0° 20° |
| LED FWHM / FWTM Efficiency Peak intensity | XP-L2 56.0° / 96.0° 92 % 0.8 cd/lm | 20° 0° 20° 9° 9° 9° 9° 9° 9° 9° 9° 9° 9 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic | XP-L2 56.0° / 96.0° 92 % 0.8 cd/lm 1 White | 27 - 27 200 60 ⁵ - 60 ⁴ |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | XP-L2 56.0° / 96.0° 92 % 0.8 cd/lm 1 White | 27 - 27 200 60 ⁵ - 60 ⁴ |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | XP-L2 56.0° / 96.0° 92 % 0.8 cd/lm 1 White | 27 - 27 200 60 ⁵ - 60 ⁴ |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | XP-L2 56.0° / 96.0° 92 % 0.8 cd/lm 1 White | 27 - 27 200 60 ⁵ - 60 ⁴ |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component | XP-L2 56.0° / 96.0° 92 % 0.8 cd/lm 1 White nts: | 27 - 27 200 60 ⁵ - 60 ⁴ |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component | XP-L2 56.0° / 96.0° 92 % 0.8 cd/lm 1 White hts: | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component | XP-L2 56.0° / 96.0° 92 % 0.8 cd/lm 1 White ints: | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component CREE LED LED FWHM / FWTM | XP-L2 56.0° / 96.0° 92 % 0.8 cd/lm 1 White hts: XT-E 50.0° / 88.0° | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Required component LED FWHM / FWTM Efficiency | XP-L2 56.0° / 96.0° 92 % 0.8 cd/lm 1 White nts: XT-E 50.0° / 88.0° 87 % | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Equired component LED FWHM / FWTM Efficiency Peak intensity | XP-L2 56.0° / 96.0° 92 % 0.8 cd/lm 1 White nts: XT-E 50.0° / 88.0° 87 % 1 cd/lm | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Required component LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic | XP-L2 56.0° / 96.0° 92 % 0.8 cd/lm 1 White nts: XT-E 50.0° / 88.0° 87 % 1 cd/lm 1 | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Required component ELED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | XP-L2 56.0° / 96.0° 92 % 0.8 cd/lm 1 White nts: XT-E 50.0° / 88.0° 87 % 1 cd/lm 1 White | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Required component Efficiency Peak intensity LEDs/each optic | XP-L2 56.0° / 96.0° 92 % 0.8 cd/lm 1 White nts: XT-E 50.0° / 88.0° 87 % 1 cd/lm 1 White | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Required component ELED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | XP-L2 56.0° / 96.0° 92 % 0.8 cd/lm 1 White nts: XT-E 50.0° / 88.0° 87 % 1 cd/lm 1 White | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required component Required component ELED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | XP-L2 56.0° / 96.0° 92 % 0.8 cd/lm 1 White nts: XT-E 50.0° / 88.0° 87 % 1 cd/lm 1 White | |



| | EDS | 50' |
|---|--|---|
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | LUXEON 5050 Round LES 55.0° / 91.0° 94 % 0.9 cd/lm 1 White | |
| | EDS | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | LUXEON 5050 Square LES 55.0° / 91.0° 94 % 0.9 cd/lm 1 White | |
| | EDS | ાસદાન ગામેલા નામેના નામેલા નામેલા ગામના ગામના ગામના ગામના નામના ગામના ગામન |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | LUXEON MZ 53.0° / 86.0° 92 % 1 cd/lm 1 White | |
| ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | LUXEON Q 50.0° / 86.0° 86 % 0.9 cd/lm 1 White | |



| | EDS | 20 ⁴ 200 |
|---|---|---------------------|
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | LUXEON Rebel ES 51.0° / 82.0° 87 % 0.9 cd/lm 1 White | |
| ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | LUXEON T 55.0° 87 % 0.9 cd/lm 1 White | |
| ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | LUXEON TX 50.0° / 80.0° 88 % 1 cd/lm 1 White | |
| ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | LUXEON V 55.0° / 91.0° 93 % 0.9 cd/lm 1 White | |



| COMIL | EDS | 90 ⁴ 90 ⁹ |
|---|---|--|
| LED | LUXEON V2 | |
| FWHM / FWTM | 51.0° / 86.0° | |
| Efficiency | 94 % | |
| Peak intensity | 1 cd/lm | |
| LEDs/each optic | 1 | |
| Light colour | ' White | |
| Required compone | | |
| Required compone | 5113. | |
| | | |
| | | |
| | | 30" 30 125" 0" 15" |
| | .EDS | 212151_00-2244((Liquedi,(Lift)) |
| LED | LUXEON Z ES | |
| FWHM / FWTM | 46.0° / 76.0° | |
| Efficiency | 87 % | |
| Peak intensity | 1.2 cd/lm | |
| LEDs/each optic | 1 | |
| Light colour | White | e |
| Required compone | ents: | |
| | | |
| | | |
| | | 39. 200 - 39 |
| | | 155 07 159 |
| ELUM | INUS | 90 ⁴ |
| LED | SST-10-B130 | |
| FWHM / FWTM | 51.0° / 80.0° | |
| Efficiency | 99 % | |
| Peak intensity | 1 cd/lm | |
| LEDs/each optic | 1 | |
| | I | |
| Light colour | Deep Red | ay a |
| | Deep Red | 5° |
| Light colour | Deep Red | ₹ ² 00 |
| Light colour | Deep Red | gr → → → → → → → → → → → → → → → → → → → |
| Light colour | Deep Red | |
| Light colour Required compone | Deep Red ents: | |
| Light colour Required compone | Deep Red ents: | |
| Light colour Required compone | Deep Red ents: //////////////////////////////////// | |
| Light colour Required compone MST LED FWHM / FWTM | Deep Red ents: //////////////////////////////////// | |
| Light colour Required compone MST LED FWHM / FWTM Efficiency | Deep Red ents: //////////////////////////////////// | |
| Light colour Required compone MSST LED FWHM / FWTM Efficiency Peak intensity | Deep Red ents: //////////////////////////////////// | |
| Light colour Required compone MSST Your solu LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic | Deep Red ents: //////////////////////////////////// | |
| Light colour Required compone MSST Vour solu LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | Deep Red ents: //////////////////////////////////// | |
| Light colour Required compone MSST Your solu LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic | Deep Red ents: //////////////////////////////////// | |
| Light colour Required compone MSST Vour solu LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | Deep Red ents: //////////////////////////////////// | 9° |
| Light colour Required compone MSST Vour solu LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | Deep Red ents: //////////////////////////////////// | |
| Light colour Required compone MSST Vour solu LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | Deep Red ents: //////////////////////////////////// | |



| - (| | |
|--|--|--|
| MNICHIA | | 50° 50° |
| LED | NCSxx19A | |
| FWHM / FWTM | 48.0° / 77.0° | |
| Efficiency | 85 % | |
| Peak intensity | 1.1 cd/lm | |
| LEDs/each optic | 1 | |
| Light colour | White | gr at |
| Required compone | nts: | |
| | | |
| | | |
| | | 304 |
| ØNICHI | | 25 ⁴ 25 ⁶ 25 ⁴ |
| | | |
| | NCSxx19B | |
| FWHM / FWTM | 50.0° / 83.0° | |
| Efficiency | 85 % | |
| Peak intensity | 1 cd/lm | |
| LEDs/each optic | 1 White | |
| Light colour | | |
| Required compone | its: | |
| | | |
| | | |
| | | 30 ⁶ 35 ⁷ 0 ⁴ 35 ⁷ |
| ØNICHI | | 51, 51, |
| LED | NS9x383 | |
| FWHM / FWTM | 54.0° / 93.0° | |
| Efficiency | 86 % | |
| Peak intensity | 0.9 cd/lm | |
| LEDs/each optic | 1 | |
| Light colour | | |
| Light colour | White | er et |
| Required compone | | |
| | | |
| | | |
| | | |
| Required component | nts: | |
| Required component | its: | |
| Required component | nts: NVSW219D | |
| Required component NICHIA LED FWHM / FWTM | NVSW219D 53.0° / 83.0° | |
| Required component NICHIA LED FWHM / FWTM Efficiency | NVSW219D 53.0° / 83.0° 94 % | |
| Required component NICHIA LED FWHM / FWTM Efficiency Peak intensity | NVSW219D 53.0° / 83.0° 94 % 0.9 cd/lm | |
| Required component Component LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic | NVSW219D 53.0° / 83.0° 94 % 0.9 cd/lm 1 | |
| Required component Component LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | NVSW219D 53.0° / 83.0° 94 % 0.9 cd/lm 1 White | |
| Required component Component LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic | NVSW219D 53.0° / 83.0° 94 % 0.9 cd/lm 1 White | |
| Required component CONTINUED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | NVSW219D 53.0° / 83.0° 94 % 0.9 cd/lm 1 White | |
| Required component CONTINUED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | NVSW219D 53.0° / 83.0° 94 % 0.9 cd/lm 1 White | |



| | • | |
|---|--|--|
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | NVSW219F 54.0° / 81.0° 97 % 1 cd/lm 1 White | |
| ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | NVSW319B 56.0° / 93.0° 93 % 0.9 cd/lm 1 White | |
| ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | NVSW3x9A 53.0° / 88.0° 92 % 0.9 cd/lm 1 White | |
| ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | NVSxE21A 43.0° / 80.0° 86 % 1.1 cd/lm 1 White | |



| ØNICHI | | 30° |
|--|--|--|
| LED | NVSxx19B/NVSxx19C | |
| FWHM / FWTM | 51.0° / 82.0° | |
| Efficiency | 85 % | |
| Peak intensity | 1 cd/lm | |
| LEDs/each optic | 1 | |
| Light colour | White | |
| Required compone | | |
| | | |
| | | |
| | | 30" 2000 |
| | | 127 07 127 |
| | | <u>30*</u> |
| LED | NWSx229A | 75 |
| FWHM / FWTM | 57.0° / 90.0° | |
| Efficiency | 86 % | |
| Peak intensity | 0.9 cd/lm | |
| LEDs/each optic | 1 | |
| Light colour | White | |
| Required compone | ents: | |
| | | |
| | | |
| | | 30 ⁴ 15 ⁵ 0 ⁵ 15 ⁵ |
| | | |
| орт@сг | | 90 ⁴ |
| | | 9* |
| | OLP-5065F6L-06A 56.0° / 90.0° | 30 ¹ |
| LED | OLP-5065F6L-06A | 99* 73 80 |
| LED FWHM / FWTM | OLP-5065F6L-06A 56.0° / 90.0° | 50* 200 60* |
| LED FWHM / FWTM Efficiency | OLP-5065F6L-06A 56.0° / 90.0° 88 % | 9x* 721 624 400 |
| LED FWHM / FWTM Efficiency Peak intensity | OLP-5065F6L-06A 56.0° / 90.0° 88 % 0.9 cd/lm | 91* 20 67* 60* 60* 60* |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic | OLP-5065F6L-06A 56.0° / 90.0° 88 % 0.9 cd/lm 1 White | 91 37 97 90 90 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | OLP-5065F6L-06A 56.0° / 90.0° 88 % 0.9 cd/lm 1 White | 99* 73° 94° 84° 86° 86° 86° 86° 86° 86° |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | OLP-5065F6L-06A 56.0° / 90.0° 88 % 0.9 cd/lm 1 White | 59* 75* 64* 60* 60* 60* 60* 60* 60* 60* 60* 60* 60 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | OLP-5065F6L-06A 56.0° / 90.0° 88 % 0.9 cd/lm 1 White | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | OLP-5065F6L-06A 56.0° / 90.0° 88 % 0.9 cd/lm 1 White | 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | OLP-5065F6L-06A 56.0° / 90.0° 88 % 0.9 cd/lm 1 White ents: | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | OLP-5065F6L-06A 56.0° / 90.0° 88 % 0.9 cd/lm 1 White Ints: | 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | OLP-5065F6L-06A 56.0° / 90.0° 88 % 0.9 cd/lm 1 White ents: PL-BRICK HP 3800 2x8 SSG 52.0° / 75.0° | 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone OSRAN LED FWHM / FWTM Efficiency | OLP-5065F6L-06A 56.0° / 90.0° 88 % 0.9 cd/lm 1 White ents: PL-BRICK HP 3800 2x8 SSG 52.0° / 75.0° 98 % | 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone NUTE COSRAN LED FWHM / FWTM Efficiency Peak intensity | OLP-5065F6L-06A 56.0° / 90.0° 88 % 0.9 cd/lm 1 White ents: PL-BRICK HP 3800 2x8 SSG 52.0° / 75.0° 98 % 1.1 cd/lm | 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone Required compone SOSRAN LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic | OLP-5065F6L-06A 56.0° / 90.0° 88 % 0.9 cd/lm 1 White onts: PL-BRICK HP 3800 2x8 SSG 52.0° / 75.0° 98 % 1.1 cd/lm 1 | 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone OSRAN LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | OLP-5065F6L-06A 56.0° / 90.0° 88 % 0.9 cd/lm 1 White white PL-BRICK HP 3800 2x8 SSG 52.0° / 75.0° 98 % 1.1 cd/lm 1 White | 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone Required compone SCOSRAN LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic | OLP-5065F6L-06A 56.0° / 90.0° 88 % 0.9 cd/lm 1 White white PL-BRICK HP 3800 2x8 SSG 52.0° / 75.0° 98 % 1.1 cd/lm 1 White | 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone OSRAN LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | OLP-5065F6L-06A 56.0° / 90.0° 88 % 0.9 cd/lm 1 White white PL-BRICK HP 3800 2x8 SSG 52.0° / 75.0° 98 % 1.1 cd/lm 1 White | 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone OSRAN LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | OLP-5065F6L-06A 56.0° / 90.0° 88 % 0.9 cd/lm 1 White white PL-BRICK HP 3800 2x8 SSG 52.0° / 75.0° 98 % 1.1 cd/lm 1 White | 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5 |



| OSRAM Opto Semiconductors | | | 30* 90* |
|------------------------------|--------------------------------|----------|---|
| LED | Duris S8 | | |
| FWHM / FWTM | 55.0° / 91.0° | | 200 72* |
| Efficiency | 93 % | | |
| Peak intensity | 1 cd/lm | | 400 |
| LEDs/each optic | 1 | | |
| Light colour | White | | e A et |
| Required compone | | | |
| | | | |
| | | | |
| | | | |
| | | | 10° 1000 30° 30° 30° |
| OSRAM Opto Semiconductors | | <u>.</u> | 50° 90° |
| LED | OSLON Square PC | | |
| FWHM / FWTM | 54.0° / 85.0° | | 200 225* |
| Efficiency | 87 % | | |
| Peak intensity | 0.9 cd/lm | (| |
| LEDs/each optic | 1 | | \times // \sim |
| Light colour | White | 9 | p* |
| Required compone | | | |
| | | | |
| | | | |
| | | | |
| | | | 15° 1860 15° |
| OSRAM Opto Semiconductors | | <u> </u> | 90° |
| LED | OSLON SSL 80 | | |
| FWHM / FWTM | 43.0° / 70.0° | | |
| Efficiency | 89 % | | 400 60* |
| Peak intensity | 1.3 cd/lm | | |
| LEDs/each optic | 1 | | |
| Light colour | White | | 15× 63* |
| Required compone | nts: | | |
| | | | \times \land \land \times |
| | | | 1270 |
| | | 2 | 36. 36. |
| | | | 15% 0° 35% |
| | PS | | 90° |
| LED | Fortimo FastFlex LED 2x8 DA G4 | | 5· / / / / / / / / / / / / / / / / / / / |
| FWHM / FWTM | 52.0° / 82.0° | | \rightarrow \square \land \square |
| Efficiency | 94 % | | 50° |
| Peak intensity | 1 cd/lm | | 400 |
| LEDs/each optic | 1 | | |
| Light colour | White | | |
| Required compone | nts: | | |
| | | | |
| | | | |
| | | 3 | |
| 1 | | | 10 V 3D |



| PHILIF | S | 20° 20° |
|----------------------------------|---------------------------------|--|
| LED | Fortimo FastFlex LED 2x8 DA G4+ | 75 |
| FWHM / FWTM | 55.0° / 88.0° | |
| Efficiency | 97 % | |
| Peak intensity | 0.9 cd/lm | |
| LEDs/each optic | 1 White | |
| Light colour Required compone | | |
| Required compone | 115. | |
| | | |
| | | 30' 10' 100' 10' 30' |
| PHILIF | 20 | 25° (a) 15° |
| LED | Fortimo FastFlex LED 2x8 DA G5 | |
| FWHM / FWTM | 50.0° / 77.0° | 79 |
| Efficiency | 97 % | |
| Peak intensity | 1.1 cd/lm | 6° |
| LEDs/each optic | 1 | |
| Light colour | White | |
| Required compone | | |
| | | |
| | | |
| | | 34 |
| PHILIF | DS | 20 ² 20 ² |
| LED | Fortimo FastFlex LED 2x8 DA HE | |
| FWHM / FWTM | 54.0° / 87.0° | 77 |
| Efficiency | 97 % | |
| Peak intensity | 1 cd/lm | |
| LEDs/each optic | 1 | |
| Light colour | White | a, e. |
| Required compone | nts: | |
| | | |
| | | |
| | | 30° 15° 0° 15° 36° |
| SVWSI | JNG | 95, 95, |
| LED | HiLOM RC12 Z (LH181B) | |
| FWHM / FWTM | 46.0° / 84.0° | |
| Efficiency | 97 % | |
| Peak intensity | 1.1 cd/lm | |
| LEDs/each optic | 1 | |
| Light colour | White | gr i i i i i i i i i i i i i i i i i i i |
| Required compone | nts: | |
| | | |
| | | |
| | | |



| SAMS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | HiLOM RH12 Z (LH351C) 54.0° / 84.0° 96 % 1 cd/lm 1 White | |
|---|---|--|
| SAMS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | HiLOM RH16 (LH351C) 53.0° / 83.0° 94 % 1 cd/lm 1 White | |
| SAMS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | HiLOM RM12 Z (LH502C) 55.0° / 94.0° 94 % 0.9 cd/lm 1 White | |
| SAMS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | HiLOM RM16 Z (LH502C) 55.0° / 95.0° 96 % 0.9 cd/lm 1 White | |



| SAMS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | HiLOM RM8 Z (LH502C) 56.0° / 95.0° 96 % 0.9 cd/lm 1 White | |
|---|--|--|
| SAMS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | UNG LH351A 49.0° / 81.0° 89 % 1 cd/lm 1 White | |
| Required compone | ents: | 24 [*] 25 [*] 26 [*] 26 [*] |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | LH351B 55.0° / 85.0° 86 % 0.9 cd/lm 1 White | |
| SAMS LED FWHM / FWTM Efficiency | UNG LH351C 53.0° / 85.0° 93 % | 00 30 ⁴ 30 ⁴ 30 30 30 30 30 30 30 30 30 30 |
| Peak intensity LEDs/each optic Light colour Required compone | 1 cd/lm 1 White | |



| SAMS | | 90 ⁴ 99 ⁴ |
|--|--|---------------------------------|
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | LH351D 56.0° / 90.0° 91 % 0.9 cd/lm 1 White | |
| SAMS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | LH351Z 50.0° / 77.0° 87 % 1 cd/lm 1 White | |
| SAMS LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | LH508A 56.0° / 92.0° 93 % 0.9 cd/lm 1 White | |
| Elektronik GmbH LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | LED-Pa-L15c2W11c2-xxx-C050-01 50.0° / 78.0° 96 % 1.1 cd/lm 1 White ents: | |



| SEOUL | | 201 201 |
|------------------------------|---|--|
| SEOUL SEMICONDUCTOR | 2v2 V22 module CMIC D40W46AA XX | |
| FWHM / FWTM | 2x2 Y22 module - SMJQ-D48W16AA-XX 54.0° / 102.0° | 72 72 |
| | | 200 |
| Efficiency | 92 % | |
| Peak intensity | 0.8 cd/lm | |
| LEDs/each optic | 1 | er er |
| Light colour | White | |
| Required compone | ints: | |
| | | |
| | | 80 |
| | | and the second s |
| SEOUL | | |
| SEOUL SEMICONDUCTOR | | <u>50'</u> |
| LED | Z5 | |
| FWHM / FWTM | 48.0° / 80.0° | |
| Efficiency | 88 % | |
| Peak intensity | 1 cd/lm | |
| LEDs/each optic | 1 | |
| Light colour | White | gr at |
| Required compone | nts: | |
| | | |
| | | |
| | | |
| | | 15% 00 25% |
| SEOUL SEOUL SEMICONDUCTOR | | 50°* |
| LED | Z5M1/Z5M2 | |
| FWHM / FWTM | 51.0° / 82.0° | |
| Efficiency | 85 % | |
| Peak intensity | 1 cd/lm | 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 |
| LEDs/each optic | 1 | |
| Light colour | White | gr ar |
| Required compone | | |
| | | × × × × × × |
| | | |
| | | |
| | | 30° 15° 0° 15° |
| SEOUL | | 99 ⁴ 99 ⁴ |
| | 7510 | |
| | Z5M3 | 7 |
| FWHM / FWTM | 53.0° / 93.0° | |
| Efficiency | 94 % | |
| Peak intensity | 0.9 cd/lm | |
| LEDs/each optic | 1 | |
| Light colour | White | |
| Required compone | nts: | |
| | | |
| | | |
| | | |
| | | 24 ¹ |



| With Very Mile ZSM4 PWHM / FWTM 54.0° / 80.0° Efficiency 97 % Peak intensity 1 duin LED zeach opic 1 Light colour While Required components: Image: Color of the second secon | 82- 92- 92- 92- 95- 95- |
|--|--|
| FWHM / FWTM 54.0° / 80.0° Efficiency 97% Peak intensity 0.8 cd/m LED Z8Y15 FWHM / FWTM 45.0° / 89.0° Efficiency 79% Peak intensity 0.9 cd/m LED 20 cmponents: Sustance | 82 92 92 |
| Peak intensity 1 cd/m LEDs/each optic 1 Light colour White Required components: | 80. 20. 20. 20. |
| Peak intensity 1 od/m LEDs/each optic 1 Light colour White Required components: Sets second FMHM / FWTM 45.0° / 89.0° Efficiency 79 % Peak intensity 0.9 od/m LEDs/each optic 1 LED X8719 FWMM / FWTM 54.0° / 102.0° Efficiency 92 % Peak intensity 0.8 od/m LEDs/each optic 4 LED X8719 FWMM / FWTM 54.0° / 102.0° Efficiency 92 % Peak intensity 0.8 od/m LEDs/each optic 4 LEDs/each optic 4 LEDs/each optic 4 Light colour White Required components: | 72. 25. 26. |
| LEDs/each optic 1 Light colour White Required components: LED Z8Y15 FWHM / FWTM 45.0° / 83.0° Efficiency 79 % Peak intensity 0.9 cd/m LEDs/each optic 1 Light colour White Required components: WMM / FWTM 54.0° / 102.0° Efficiency 92 % Peak intensity 0.8 cd/m LEDs/each optic 4 Light colour White Required components: WMM / FWTM 54.0° / 102.0° Efficiency 92 % Peak intensity 0.8 cd/m LEDs/each optic 4 Light colour White Required components: | 35, 36, |
| Light colour White Required components: Security Components: Security Components: Security Components: Security 29% Peak intensity 0.9 od/m LEDs/each optic 1 Light colour White Required components: Security Components: Security 29% Peak intensity 0.8 od/m LEDs/each optic 4 LEDs/each optic 4 LEDs/each optic 4 LEDs/each optic 4 Light colour White Required components: Security 0.8 od/m LEDs/each optic 4 LIght colour White Required components: Security 0.8 od/m LIght colour White Required components: Security 0.8 od/m LIght colour White Required components: Security 0.8 od/m | 32, 34, |
| Required components: | 32, 30, |
| STOLERANCE LED Z8Y15 FWHM / FWTM 45.0° / 89.0° Efficiency 79 % Peak intensity 0.9 cd/lm LEDs/each optic 1 Light colour White Required components: STOLERANCE LED Z8Y19 FWHM / FWTM 54.0° / 102.0° Efficiency 92 % Peak intensity 0.8 cd/lm LEDs/each optic 4 Light colour White Required components: | 15° |
| sexesurements LED Z8Y15 FWHM / FWTM 45.0° / 89.0° Efficiency 79 % Peak intensity 0.9 cd/lm LEDs/each optic 1 Light colour White Required components Sexesurements LED Z8Y19 FWHM / FWTM 54.0° / 102.0° Efficiency 92 % Peak intensity 0.8 cd/lm LEDs/each optic 4 Light colour White Required components Sexesurements Sexesure | |
| FWHM / FWTM 45.0° / 89.0° Efficiency 79 % Peak intensity 0.9 cd/m LEDs/each optic 1 Light colour White Required components: SUBJECTIVE Required components: SUBJECTIVE Required components: SUBJECTIVE SUBJEC | 90* |
| Efficiency 79 % Peak intensity 0.9 cd/lm LEDS/each optic 1 Light colour White Required components: sourcement | |
| Peak intensity 0.9 cd/lm LEDs/each optic 1 Light colour White Required components: sources LED Z8Y19 FWHM / FWTM 54.0° / 102.0° Efficiency 92 % Peak intensity 0.8 cd/lm LEDs/each optic 4 Light colour White Required components: Sources LED Z8Y19 FWHM / FWTM 54.0° / 102.0° Efficiency 92 % Peak intensity 0.8 cd/lm LEDs/each optic 4 Light colour White Required components: Sources LED Z8Y19 FWHM / FWTM 54.0° / 102.0° Efficiency 92 % Peak intensity 0.8 cd/lm LEDs/each optic 4 Light colour White Required components: Sources LED Z8Y19 FWHM / FWTM 54.0° / 102.0° Efficiency 92 % Peak intensity 0.8 cd/lm LEDs/each optic 4 Light colour White Required components: Sources S | ~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~ |
| LEDs/each optic 1 Light colour White Required components: SKUL SWIGGORDECTOR LED Z8Y19 FWHM /FWTM 54.0° / 102.0° Efficiency 92 % Peak intensity 0.8 cd/m LEDs/each optic 4 Light colour White Required components: | 604 |
| Light colour White Required components: sour successful components: Sour successful components: Sour successful components: Sour successful components: Sour successful components: Sour successful components: Source com | |
| Required components: | |
| SOUSSECONDUCTOR LED Z8Y19 FWHM / FWTM 54.0° / 102.0° Efficiency 92 % Peak intensity 0.8 cd/lm LEDs/each optic 4 Light colour White Required components: | 45* |
| SEQUISEMENDAUTOR LED Z8Y19 FWHM / FWTM 54.0° / 102.0° Efficiency 92 % Peak intensity 0.8 cd/lm LEDs/each optic 4 Light colour White Required components | |
| SEQUISEMENDAUTOR LED Z8Y19 FWHM / FWTM 54.0° / 102.0° Efficiency 92 % Peak intensity 0.8 cd/lm LEDs/each optic 4 Light colour White Required components | |
| SEQUISEMENDAUTOR LED Z8Y19 FWHM / FWTM 54.0° / 102.0° Efficiency 92 % Peak intensity 0.8 cd/lm LEDs/each optic 4 Light colour White Required components | |
| SEQUISEMENDAUTOR LED Z8Y19 FWHM / FWTM 54.0° / 102.0° Efficiency 92 % Peak intensity 0.8 cd/lm LEDs/each optic 4 Light colour White Required components | 35° 30° |
| LED Z8Y19 FWHM / FWTM 54.0° / 102.0° Efficiency 92 % Peak intensity 0.8 cd/m LEDs/each optic 4 Light colour White Required components | |
| Efficiency 92 % Peak intensity 0.8 cd/m LEDs/each optic 4 Light colour White Required components: | |
| Efficiency 92 % Peak intensity 0.8 cd/m LEDs/each optic 4 Light colour White Required components: | |
| Peak intensity 0.8 cd/m LEDs/each optic 4 Light colour White Required components: | |
| LEDs/each optic 4 Light colour White Required components: | |
| Light colour White Required components: | |
| Required components: | |
| 90° | |
| | 6.4° 9.4° 10.4° 10.4 |
| SEOUL SEMICONDUCTOR LED Z8Y19 | 94, 104, 104, 204 |
| FWHM / FWTM 46.0° / 89.0° | _ |
| Efficiency 79 % | _ |
| Peak intensity 0.9 cd/lm | _ |
| LEDs/each optic 1 | _ |
| Light colour White | _ |
| Required components: | _ |



| scour semiconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | Z8Y22 48.0° / 94.0° 92 % 0.9 cd/lm 1 White nts: | 200 200 200 200 200 200 200 200 |
|---|--|--|
| SEOUL | | 50° 50° |
| seoul semiconductor LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | Z8Y22P 51.0° / 93.0° 92 % 0.9 cd/lm 1 White nts: | 20 20 27 27 27 27 27 27 27 27 27 27 27 27 27 |
| TOSHIBA | | 50° 50° |
| Leading Innovation » LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | TL1L4 48.0° / 78.0° 81 % 1 cd/lm 1 White nts: | |
| TRIDON | | 50* 50* |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | RLE 2x4 2000lm HP EXC2 OTD 51.0° / 84.0° 94 % 1 cd/lm 1 White | 2 72 60 60 60 60 60 60 |



| TRIDO | | |
|---|---|---|
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | RLE 2x8 4000lm HP EXC2 OTD 51.0° / 84.0° 94 % 1 cd/lm 1 White | |
| TRIDO | NIC | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | RLE G1 49x121mm 2000lm xxx EXC OTD 52.0° / 83.0° 94 % 1 cd/lm 1 White | |
| | | المتلكة |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | RLE G1 49x133mm 2000lm xxx EXC OTD 52.0° / 83.0° 94 % 1 cd/lm 1 White ents: | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required compone | RLE G1 49x223mm 4000lm xxx EXC OTD 52.0° / 83.0° 94 % 1 cd/lm 1 White | |

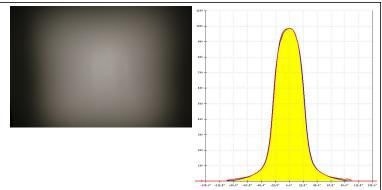


TRIDONIC

LED

FWHM / FWTM52Efficiency94Peak intensity1LEDs/each optic1Light colourWRequired components:

RLE G1 49x245mm 4000lm xxx EXC OTD 52.0° / 83.0° 94 % 1 cd/lm 1 White





| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | J Series 5050 Round LES 57.0° / 84.0° 94 % 1 cd/lm 1 White | 97 97 97 97 90 40 60 60 60 60 60 60 60 60 60 6 |
|---|---|---|
| | | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | MHB-A/B 58.0° / 93.0° 94 % 1 cd/lm 1 White | 27 27 20 20 20 20 20 20 20 20 20 20 |
| | | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | XHP35 HI 52.0° / 73.0° 93 % 1.2 cd/lm 1 White | 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5° 5 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | XP-E 50.0° / 68.0° 94 % 1.2 cd/lm 1 White | 21. 23. 60. 60. 60. 60. 60. 60. 60. 60 |



| | | 90* 90* |
|---|---|---|
| LED | XP-E2 | |
| FWHM / FWTM | 48.0° / 70.0° | 73* |
| Efficiency | 96 % | |
| Peak intensity | 1.2 cd/lm | 60° |
| LEDs/each optic | 1 | |
| Light colour | White | gy/ |
| Required components: | | 800 |
| | | |
| | | |
| | | 30° 2200 30° |
| | | 15° 0° 15° |
| | | 50* 50* |
| LED | XP-G2 HE | 25* |
| FWHM / FWTM | 57.0° / 82.0° | |
| Efficiency | 95 % | 60° |
| Peak intensity | 0.9 cd/lm | 400 |
| LEDs/each optic | 1 | |
| Light colour | White | 5° |
| Required components: | | |
| | | |
| | | |
| | | 30° 1000 30° |
| | | |
| | | 01 ⁶ 01 ⁶ |
| | ¥7. 03 | 90° 90° |
| LED | XP-G3 | 351 35 ¹ |
| LED FWHM / FWTM | 54.0° / 79.0° | 99 ¹ 79 ¹ |
| LED FWHM / FWTM Efficiency | 54.0° / 79.0° 94 % | |
| LED FWHM / FWTM Efficiency Peak intensity | 54.0° / 79.0° 94 % 1 cd/lm | 99° 99° 99° 99° 99° 99° 99° 99° 99° 99° |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic | 54.0° / 79.0° 94 % 1 cd/lm 1 | 97 97 97 97 97 97 97 97 97 97 97 97 97 9 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | 54.0° / 79.0° 94 % 1 cd/lm | 99 ⁴ 99 ⁴ |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic | 54.0° / 79.0° 94 % 1 cd/lm 1 | gr gr gr gr egr egr egr egr egr egr egr |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | 54.0° / 79.0° 94 % 1 cd/lm 1 | 99 ⁴ 99 ⁴ 99 97 97 97 97 97 98 99 99 99 99 99 99 99 99 99 99 99 99 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | 54.0° / 79.0° 94 % 1 cd/lm 1 | 99' 79' 60' 60' 60' 60' 60' |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | 54.0° / 79.0° 94 % 1 cd/lm 1 | 20° 0° 20° 0° |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | 54.0° / 79.0° 94 % 1 cd/lm 1 | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | 54.0° / 79.0° 94 % 1 cd/lm 1 | 30. 30. 30. 30. 30. 30. 30. 90. 90. 30. 90. 90. 40. 90. 90. 30. 90. 90. 30. 90. 90. 30. 90. 90. 30. 90. 90. 30. 90. 90. |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | 54.0° / 79.0° 94 % 1 cd/lm 1 White | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | 54.0° / 79.0° 94 % 1 cd/lm 1 White XP-G3 | 30. 30. 30. 30. 30. 30. 30. 90. 90. 30. 90. 90. 40. 90. 90. 30. 90. 90. 30. 90. 90. 30. 90. 90. 30. 90. 90. 30. 90. 90. |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | 54.0° / 79.0° 94 % 1 cd/lm 1 White XP-G3 55.0° / 81.0° | 30. 30. 30. 30. 30. 30. 30. 90. 90. 30. 90. 90. 40. 90. 90. 30. 90. 90. 30. 90. 90. 30. 90. 90. 30. 90. 90. 30. 90. 90. |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | 54.0° / 79.0° 94 % 1 cd/lm 1 White XP-G3 55.0° / 81.0° 88 % 1 cd/lm 1 | 30. 30. 30. 30. 30. 10. 60 60 60. 60 60 60 33. 10. 60 60 33. 10. 60 60 33. 10. 10. 60 33. 10. 10. 60 33. 10. 10. 10. |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | 54.0° / 79.0° 94 % 1 cd/lm 1 White XP-G3 55.0° / 81.0° 88 % 1 cd/lm | 30. 40. 40. |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | 54.0° / 79.0° 94 % 1 cd/lm 1 White XP-G3 55.0° / 81.0° 88 % 1 cd/lm 1 | 30. 30. 30. 30. 30. 10. 60 60 60. 60 60 60 33. 10. 60 60 33. 10. 60 60 33. 10. 10. 60 33. 10. 10. 60 33. 10. 10. 10. |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREE LED EWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | 54.0° / 79.0° 94 % 1 cd/lm 1 White XP-G3 55.0° / 81.0° 88 % 1 cd/lm 1 White | 30. 30. |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | 54.0° / 79.0° 94 % 1 cd/lm 1 White XP-G3 55.0° / 81.0° 88 % 1 cd/lm 1 White | 30. 30. |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: CREE LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | 54.0° / 79.0° 94 % 1 cd/lm 1 White XP-G3 55.0° / 81.0° 88 % 1 cd/lm 1 White | 30. 30. |



| [| | |
|--|--|--|
| | | 90* 90° |
| LED | XP-L HD | |
| FWHM / FWTM | 58.0° / 80.0° | 75' |
| Efficiency | 87 % | |
| Peak intensity | 0.9 cd/lm | 60 ⁺ |
| LEDs/each optic | 1 | 400 |
| Light colour | ' White | 45° 65' |
| Required components: | wille | |
| required components. | | |
| Protective plate | e, glass | 200 |
| | | |
| | | 30° |
| | | 90° 90' |
| LED | XP-L HI | |
| FWHM / FWTM | 52.0° / 72.0° | |
| Efficiency | 88 % | 605 |
| Peak intensity | 1.1 cd/lm | 400 |
| LEDs/each optic | 1 | |
| Light colour | White | at at |
| Required components: | | |
| | | |
| Protective plate | e, glass | |
| | | 30* |
| | | |
| | | 13° 0° 15 |
| | | 80. 10. 10. 10. 10. 10. 10. 10. 1 |
| LED | XP-L2 | 35 95 125 0 125 0 15 15 |
| LED FWHM / FWTM | 58.0° / 86.0° | 99° 73° 73° 000 |
| LED FWHM / FWTM Efficiency | 58.0° / 86.0° 89 % | 99 ³ 99 ³ 22 ³ 9 ³ 200 200 200 200 200 200 200 200 200 20 |
| LED FWHM / FWTM Efficiency Peak intensity | 58.0° / 86.0° 89 % 0.9 cd/lm | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic | 58.0° / 86.0° 89 % 0.9 cd/lm 1 | 50 50 50 50 50 50 50 50 50 50 50 50 50 5 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | 58.0° / 86.0° 89 % 0.9 cd/lm | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic | 58.0° / 86.0° 89 % 0.9 cd/lm 1 | 50 50 50 50 50 50 50 50 50 50 50 50 50 5 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | 58.0° / 86.0° 89 % 0.9 cd/lm 1 White | 50 50 50 50 50 50 50 50 50 50 50 50 50 5 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | 58.0° / 86.0° 89 % 0.9 cd/lm 1 White | 50 50 50 50 50 50 50 50 50 50 50 50 50 5 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | 58.0° / 86.0° 89 % 0.9 cd/lm 1 White | 50 50 50 50 50 50 50 50 50 50 50 50 50 5 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | 58.0° / 86.0° 89 % 0.9 cd/lm 1 White | 99 ³ 73 ⁴ 200 400 400 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate | 58.0° / 86.0° 89 % 0.9 cd/lm 1 White | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate | 58.0° / 86.0° 89 % 0.9 cd/lm 1 White | 50 50 50 50 50 50 50 50 50 50 50 50 50 5 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate | 58.0° / 86.0° 89 % 0.9 cd/lm 1 White a, glass | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate | 58.0° / 86.0° 89 % 0.9 cd/lm 1 White e, glass XQ-E HI 42.0° / 68.0° | 99 ³ 73 ⁴ 200 400 400 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate CREE LED LED FWHM / FWTM Efficiency | 58.0° / 86.0° 89 % 0.9 cd/lm 1 White 2, glass XQ-E HI 42.0° / 68.0° 93 % | 99 ³ 73 ⁴ 200 400 400 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate Protective plate LED FWHM / FWTM Efficiency Peak intensity | 58.0° / 86.0° 89 % 0.9 cd/lm 1 White e, glass XQ-E HI 42.0° / 68.0° 93 % 1.4 cd/lm | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate Protective plate LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic | 58.0° / 86.0° 89 % 0.9 cd/lm 1 White e, glass XQ-E HI 42.0° / 68.0° 93 % 1.4 cd/lm 1 | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate Protective plate LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | 58.0° / 86.0° 89 % 0.9 cd/lm 1 White e, glass XQ-E HI 42.0° / 68.0° 93 % 1.4 cd/lm 1 | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate Protective plate LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | 58.0° / 86.0° 89 % 0.9 cd/lm 1 White e, glass XQ-E HI 42.0° / 68.0° 93 % 1.4 cd/lm 1 | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Protective plate Protective plate ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | 58.0° / 86.0° 89 % 0.9 cd/lm 1 White e, glass XQ-E HI 42.0° / 68.0° 93 % 1.4 cd/lm 1 | |



| | DS | 90° 90 |
|---|--|--|
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components | LUXEON 3030 2D (Round LES) 49.0° / 73.0° 94 % 1.2 cd/lm 1 White S: | |
| | DS | 90 ⁴ 9 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components | LUXEON 3535L 49.0° / 73.0° 94 % 1.2 cd/lm 1 White S: | |
| | INS | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components Protective pl | LUXEON 5050 Square LES 54.0° / 84.0° 89 % 1 cd/lm 1 White S: | 94* 9 35* 2 90* 600 6 95* 600 6 |
| | | |
| | DS | |
| LED FWHM / FWTM Efficiency LEDs/each optic Light colour Required components | LUXEON A 52.0° % 1 White S: | |



| UMILE | DS | 90 ⁴ |
|--|--|--------------------------------------|
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components | LUXEON C 50.0° / 75.0° 94 % 1.1 cd/lm 1 White | |
| | DS | 80+ 232, <u>60</u> 232, |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components | LUXEON H50-2 52.0° / 68.0° 91 % 4.7 cd/lm 1 White | |
| <u></u> | | 200 ¹ dt 200 ² |
| CONTRACTOR OF CO | LUXEON HL2X 56.0° / 76.0° 93 % 1 cd/lm 1 White | |
| CONTRACTOR OF CO | LUXEON HL2X-P 56.0° / 80.0° 95 % 1 cd/lm 1 White | |



| | S | |
|--|---|---|
| LED FWHM / FWTM Efficiency LEDs/each optic Light colour Required components: | LUXEON Rebel 52.0° % 1 White | |
| ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | NFMW48xA 57.0° / 86.0° 94 % 1 cd/lm 1 White | |
| ED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | NV4WB35AM 54.0° / 78.0° 95 % 1.2 cd/lm 1 White | 91 ⁴ 91 ⁷ 77 61 ⁴ 62 ⁴ |
| ED FWHM / FWTM Efficiency LEDs/each optic Light colour Required components: | NVSxx19A 50.0° % 1 White | μ. σ ^α 15 ² |



| OSRAM | | 50° 50° |
|--|--|--|
| Opto Semiconductors | Duris S8 | |
| FWHM / FWTM | 57.0° / 88.0° | 25* 25* |
| Efficiency | 90 % | |
| Peak intensity | 1 cd/lm | 60° 60° |
| LEDs/each optic | 1 | |
| Light colour | ' White | |
| Required components: | White | |
| required components. | | |
| Protective plate | e, glass | |
| | | |
| | | 30° 1000 30° 1000 30° |
| OSRAM Opto Semiconductors | | 90* 90* |
| LED | OSCONIQ C 2424 | |
| FWHM / FWTM | 48.0° / 70.0 + 69.0° | 23. |
| Efficiency | 96 % | 400 |
| Peak intensity | 1.3 cd/lm | |
| LEDs/each optic | 1 | |
| Light colour | White | gr det |
| Required components: | | |
| | | |
| | | |
| | | 2200 |
| | | 12° 0° 12° |
| | | |
| OSRAM Opto Semiconductors | | 90* |
| OSRAM Opto Semiconductors | OSCONIQ P 3737 (2W version) | 54 |
| OSRAM Opto Semiconductors LED FWHM / FWTM | OSCONIQ P 3737 (2W version) 48.0° / 70.0° | 99° |
| LED FWHM / FWTM | | 99 ⁴ 75 75 76 79 79 79 79 79 79 79 |
| LED FWHM / FWTM Efficiency | 48.0° / 70.0° | 5 ¹ 5 ¹ 5 ¹ 5 ¹ 5 ¹ 5 ¹ 5 ¹ 5 ¹ |
| LED FWHM / FWTM Efficiency Peak intensity | 48.0° / 70.0° 93 % | 9 ⁴ 97 97 97 97 97 97 97 97 97 97 97 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic | 48.0° / 70.0° 93 % 1.2 cd/lm | gy 60 |
| LED FWHM / FWTM Efficiency Peak intensity | 48.0° / 70.0° 93 % 1.2 cd/lm 1 | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | 48.0° / 70.0° 93 % 1.2 cd/lm 1 | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | 48.0° / 70.0° 93 % 1.2 cd/lm 1 | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | 48.0° / 70.0° 93 % 1.2 cd/lm 1 | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | 48.0° / 70.0° 93 % 1.2 cd/lm 1 | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | 48.0° / 70.0° 93 % 1.2 cd/lm 1 | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | 48.0° / 70.0° 93 % 1.2 cd/lm 1 White | 24 20 20 20 20 20 20 20 20 20 20 20 20 20 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | 48.0° / 70.0° 93 % 1.2 cd/lm 1 | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Optio Semiconductors LED | 48.0° / 70.0° 93 % 1.2 cd/lm 1 White OSCONIQ P 3737 (3W version) | 24 20 20 20 20 20 20 20 20 20 20 20 20 20 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OPIS Semiconductors LED FWHM / FWTM | 48.0° / 70.0° 93 % 1.2 cd/lm 1 White OSCONIQ P 3737 (3W version) 54.0° / 77.0° | 24 20 20 20 20 20 20 20 20 20 20 20 20 20 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency | 48.0° / 70.0° 93 % 1.2 cd/lm 1 White OSCONIQ P 3737 (3W version) 54.0° / 77.0° 94 % | 24 20 20 20 20 20 20 20 20 20 20 20 20 20 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity | 48.0° / 70.0° 93 % 1.2 cd/lm 1 White OSCONIQ P 3737 (3W version) 54.0° / 77.0° 94 % 1.1 cd/lm | 24 20 20 20 20 20 20 20 20 20 20 20 20 20 |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | 48.0° / 70.0° 93 % 1.2 cd/lm 1 White OSCONIQ P 3737 (3W version) 54.0° / 77.0° 94 % 1.1 cd/lm 1 | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | 48.0° / 70.0° 93 % 1.2 cd/lm 1 White OSCONIQ P 3737 (3W version) 54.0° / 77.0° 94 % 1.1 cd/lm 1 | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | 48.0° / 70.0° 93 % 1.2 cd/lm 1 White OSCONIQ P 3737 (3W version) 54.0° / 77.0° 94 % 1.1 cd/lm 1 | |
| LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | 48.0° / 70.0° 93 % 1.2 cd/lm 1 White OSCONIQ P 3737 (3W version) 54.0° / 77.0° 94 % 1.1 cd/lm 1 | |



| r | | |
|--|--|---|
| OSRAM Opto Semiconductors | | 90* 90* |
| LED | OSCONIQ P 3737 Flat | |
| FWHM / FWTM | 50.0° / 73.0° | 73* |
| Efficiency | 96 % | 400 |
| Peak intensity | 1.2 cd/lm | |
| LEDs/each optic | 1 | $ \times / / \times $ |
| Light colour | White | gr |
| Required components: | | 500 |
| | | |
| | | |
| | | 30* 30* |
| OSRAM | | 110 T |
| Opto Semiconductors | | 100 |
| LED | OSCONIQ S 5050 | |
| FWHM / FWTM | 56.0° / 84.0° | |
| Efficiency | 87 % | 799 |
| Peak intensity | 1 cd/lm | ••• |
| LEDs/each optic | 1 | 100 |
| Light colour | White | w |
| Required components: | | 200 |
| Protective plate | | |
| Protective plate | , glass | 100 |
| | | |
| | | |
| OSRAM | | 20° |
| Opto Semiconductors | OSCONIO S 5050 | 39° 39° 39° 46.0° |
| Opto Semiconductors LED | OSCONIQ S 5050 56 0° / 82 0 + 84 0° | |
| Opto Semiconductors LED FWHM / FWTM | 56.0° / 82.0 + 84.0° | 364° - 3164° - 464° - 464° - 484° - 642° - 844° - 642° - 642° - 642° - 642° - 642° - 942° - 942° - 942° - 942° 39° |
| opto Semiconductors LED FWHM / FWTM Efficiency | 56.0° / 82.0 + 84.0° 95 % | |
| opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity | 56.0° / 82.0 + 84.0° 95 % 1.1 cd/lm | 364° 3042° 364° 364° 364° 364° 364° 364° 367° 384° 384° 384° 384° 384° 394° 395° 395° 395° 395° 395° 395° 395° 395 |
| opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic | 56.0° / 82.0 + 84.0° 95 % 1.1 cd/lm 1 | |
| opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | 56.0° / 82.0 + 84.0° 95 % 1.1 cd/lm | 59° 50° |
| opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic | 56.0° / 82.0 + 84.0° 95 % 1.1 cd/lm 1 | 59° 50° |
| opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | 56.0° / 82.0 + 84.0° 95 % 1.1 cd/lm 1 | 59° 50° |
| opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | 56.0° / 82.0 + 84.0° 95 % 1.1 cd/lm 1 | 59° 59° 59° 59° 69° 60° 69° 60° 60° 60° |
| opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | 56.0° / 82.0 + 84.0° 95 % 1.1 cd/lm 1 | 59° 50° |
| opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | 56.0° / 82.0 + 84.0° 95 % 1.1 cd/lm 1 | 59° 59° 59° 59° 69° 60° 69° 60° 60° 60° |
| opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | 56.0° / 82.0 + 84.0° 95 % 1.1 cd/lm 1 White | |
| opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: | 56.0° / 82.0 + 84.0° 95 % 1.1 cd/lm 1 White OSLON Square CSSRM2/CSSRM3 | |
| opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM | 56.0° / 82.0 + 84.0° 95 % 1.1 cd/lm 1 White OSLON Square CSSRM2/CSSRM3 52.0° / 74.0° | |
| opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency | 56.0° / 82.0 + 84.0° 95 % 1.1 cd/lm 1 White OSLON Square CSSRM2/CSSRM3 52.0° / 74.0° 96 % | 201 201 201 201 201 201 201 201 |
| opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: OSRAM Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity | 56.0° / 82.0 + 84.0° 95 % 1.1 cd/lm 1 White OSLON Square CSSRM2/CSSRM3 52.0° / 74.0° 96 % 1.1 cd/lm | 201 201 201 201 201 201 201 201 |
| opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic | 56.0° / 82.0 + 84.0° 95 % 1.1 cd/lm 1 White OSLON Square CSSRM2/CSSRM3 52.0° / 74.0° 96 % 1.1 cd/lm 1 | |
| opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | 56.0° / 82.0 + 84.0° 95 % 1.1 cd/lm 1 White OSLON Square CSSRM2/CSSRM3 52.0° / 74.0° 96 % 1.1 cd/lm | |
| opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic | 56.0° / 82.0 + 84.0° 95 % 1.1 cd/lm 1 White OSLON Square CSSRM2/CSSRM3 52.0° / 74.0° 96 % 1.1 cd/lm 1 | |
| opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | 56.0° / 82.0 + 84.0° 95 % 1.1 cd/lm 1 White OSLON Square CSSRM2/CSSRM3 52.0° / 74.0° 96 % 1.1 cd/lm 1 | |
| opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour Required components: Opto Semiconductors LED FWHM / FWTM Efficiency Peak intensity LEDs/each optic Light colour | 56.0° / 82.0 + 84.0° 95 % 1.1 cd/lm 1 White OSLON Square CSSRM2/CSSRM3 52.0° / 74.0° 96 % 1.1 cd/lm 1 | |



| | 1 | |
|----------------------|---------------------------------|--|
| PHILIPS | | 90* 90 |
| LED | Fortimo FastFlex LED 2x8 DAX G4 | 75 |
| FWHM / FWTM | 54.0° / 79.0° | |
| Efficiency | 94 % | 60° 60 |
| Peak intensity | 1 cd/lm | 400 |
| LEDs/each optic | 1 | |
| Light colour | White | 43 ⁴ 435 |
| Required components: | | |
| | | |
| | | |
| | | 30. |
| SEOUL | | 157 00 25* |
| SEOUL SEMICONDUCTOR | | 90* 90* |
| LED | Acrich MJT 4040 | |
| FWHM / FWTM | 52.0° / 77.0° | 75* |
| Efficiency | 94 % | |
| Peak intensity | 1.1 cd/lm | 400 |
| LEDs/each optic | 1 | |
| Light colour | White | gy ¹ |
| Required components: | | |
| | | |
| | | |
| | | |
| | | 30 ⁶ 30 ⁷ 10 ⁹⁰ 30 ⁷ |
| SEOUL | | |
| LED | MJT 5050 | |
| FWHM / FWTM | 57.0° / 88.0° | |
| Efficiency | 94 % | |
| Peak intensity | 1 cd/lm | |
| LEDs/each optic | 1 | |
| Light colour | White | |
| Required components: | White | |
| required components. | | |
| | | |
| | | |
| SEOUL | | |
| SEOUL SEMICONDUCTOR | | 90* 90* |
| LED | SEOUL DC 5050 6V | 73. |
| FWHM / FWTM | 54.0° / 84.0° | |
| Efficiency | 94 % | 60° 60° |
| Peak intensity | 1.1 cd/lm | |
| LEDs/each optic | 1 | $ \times / / \times \times $ |
| Light colour | White | er la |
| Required components: | | 800 |
| | | |
| | | |
| | | 36. |
| | | 15% 19%0 15% |



| SEOUL SEOUL SEMICONDUCTOR | | 50° 50° |
|------------------------------|---------------|-------------|
| LED | Z8Y22T | 77 |
| FWHM / FWTM | 50.0° / 76.0° | |
| Efficiency | 94 % | 60* 400 60* |
| Peak intensity | 1.2 cd/lm | |
| LEDs/each optic | 1 | |
| Light colour | White | g. a. |
| Required component | S: | |



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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