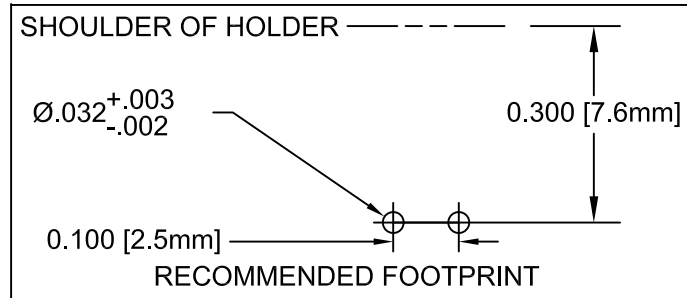
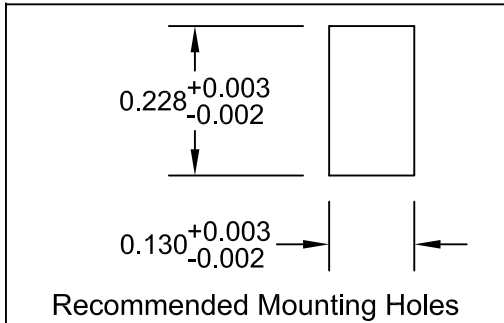
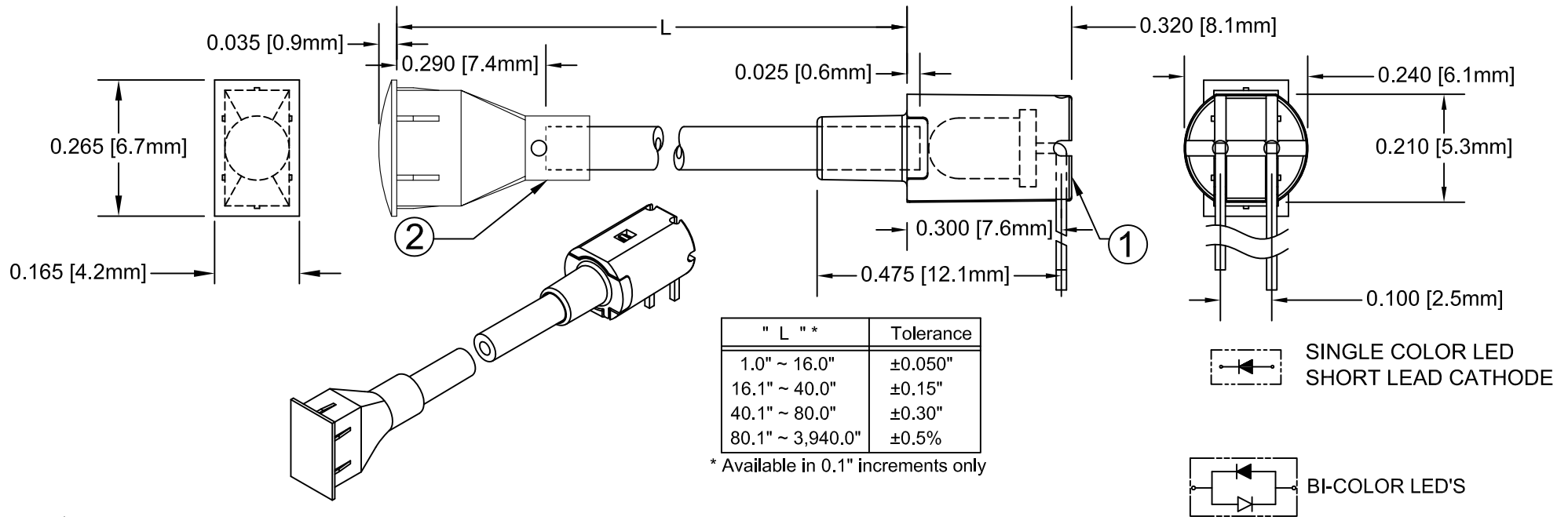


| ITEM | Q'TY | PART NUMBER | PART DESCRIPTION                                        |
|------|------|-------------|---------------------------------------------------------|
| 1    | 1    | FLPR-XX     | Flexible Light Pipe Adapter,90°, w/LED, See page 2 & 3. |
| 2    | 1    | FLPR1-XX.X  | Flexible Light-Pipe Lens Cap Assembly, Rectangular      |

| REV. | DESCRIPTION                            | DATE     | APPROVED |
|------|----------------------------------------|----------|----------|
| A    | Engineering Release.                   | 06/16/09 | T. Y.    |
| B    | Replaced 3UWC-0.6K-F with 3UWC1.035C-F | 04/26/12 | T. Y.    |
| C    | Updated Table For Length "L"           | 11/16/12 | T. Y.    |
|      |                                        |          |          |
|      |                                        |          |          |

NOTE: FLPR-XX ADAPTER SHIPPED NON-ASSEMBLED



| SHORT LEAD CATHODE | LED PART NO. | LONG LEAD CATHODE |
|--------------------|--------------|-------------------|
| RED                | 3xBCC-F      | GREEN             |
| YELLOW             | 3xBCC-Y/G-F  | GREEN             |
| RED                | 3xBCC-R/Y-F  | YELLOW            |
| AMBER              | 3xBCC-A/G-F  | GREEN             |

## ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

|                                             |                      |
|---------------------------------------------|----------------------|
| REVERSE VOLTAGE                             | 5V                   |
| REVERSE CURRENT                             | 100uA                |
| OPERATING TEMPERATURE RANGE                 | -25° C - 85° C       |
| STORAGE TEMPERATURE                         | -30° C - 100° C      |
| LEAD SOLDERING TEMPERATURE(1/16" FROM BODY) | 260° C FOR 5 SECONDS |

|                                                   |                 |                                                                                              |                       |
|---------------------------------------------------|-----------------|----------------------------------------------------------------------------------------------|-----------------------|
| STANDARD TOLERANCE ( UNLESS OTHERWISE SPECIFIED ) |                 | <br><b>BIVAR</b> ®<br>4 THOMAS, IRVINE, CA. 92618<br>TEL: (949) 951-8808 FAX: (949) 951-3974 |                       |
| DECIMALS                                          | ANGULAR         |                                                                                              |                       |
| .X ± .1                                           | X° ± 1°         |                                                                                              |                       |
| .XX ± .02                                         |                 |                                                                                              |                       |
| .XXX ± .010                                       |                 |                                                                                              |                       |
| DESIGNED:                                         | DATE:           | <b>TITLE:</b> FLEXIBLE LIGHT-PIPE ASSY<br>RIGHT ANGLE, RECTANGULAR LENS CAP W/LED            |                       |
| <b>Raffy Paje</b>                                 | <b>06/16/09</b> |                                                                                              |                       |
| CHECKED:                                          | DATE:           | <b>PART NO:</b> FLPR1RX.X-XX                                                                 | <b>REVISION:</b> C    |
| <b>F. Jensen</b>                                  | <b>06/16/09</b> | <b>CAGE CODE :</b> 32559                                                                     | <b>SHEET # 1 OF 3</b> |
| CAD GENERATED DOCUMENT, DO NOT MEASURE DRAWING.   |                 |                                                                                              |                       |

| REV. | DESCRIPTION  | DATE | APPROVED |
|------|--------------|------|----------|
|      | SEE SHEET#1. |      |          |
|      |              |      |          |

| FLPR1RX.X-XX<br>PART NO. | LED Part No. | Chip         |                               |               | Lens<br>Appearance | Absolute Max. Ratings |            |            |                | Electro-Optical<br>Data @ 20mA |     |             | Viewing<br>Angle<br>2 Θ ½<br>(Deg) |
|--------------------------|--------------|--------------|-------------------------------|---------------|--------------------|-----------------------|------------|------------|----------------|--------------------------------|-----|-------------|------------------------------------|
|                          |              | Material     | Peak Wave<br>Length<br>λp(nm) | Emitted Color |                    | Δλ<br>(nm)            | Pd<br>(mW) | If<br>(mA) | Peak<br>If(mA) | Vf<br>(V)                      |     | Iv<br>(mcd) |                                    |
|                          |              |              |                               |               |                    |                       |            |            |                | TYP                            | MAX | TYP         |                                    |
|                          |              |              |                               |               |                    |                       |            |            |                |                                |     |             |                                    |
| FLPR1RX.X-SG             | 3SGC-F       | GaP/GaP      | 568                           | SUPER GREEN   | WATER CLEAR        | 30                    | 80         | 30         | 150            | 2.2                            | 2.6 | 120         | 30                                 |
| FLPR1RX.X-SY             | 3SYC-F       | GaAsP/GaP    | 585                           | SUPER YELLOW  | WATER CLEAR        | 35                    | 80         | 30         | 150            | 2.1                            | 2.6 | 65          | 30                                 |
| FLPR1RX.X-SA             | 3SAC-F       | AlGaInP      | 620                           | SUPER AMBER   | WATER CLEAR        | 17                    | 100        | 30         | 150            | 2.0                            | 2.6 | 350         | 30                                 |
| FLPR1RX.X-SR             | 3SRC-F       | GaAiAsP/GaAs | 660                           | SUPER RED     | WATER CLEAR        | 20                    | 80         | 20         | 150            | 1.7                            | 2.6 | 250         | 30                                 |

| FLPR1RX.X-XX<br>PART NO. | LED Part No. | Chip        |                               |               | Lens<br>Appearance | Absolute Max. Ratings |            |            |                | Electro-Optical Data<br>@ 20mA |      |             | Viewing<br>Angle<br>2 Θ ½<br>(Deg) |
|--------------------------|--------------|-------------|-------------------------------|---------------|--------------------|-----------------------|------------|------------|----------------|--------------------------------|------|-------------|------------------------------------|
|                          |              | Material    | Peak Wave<br>Length<br>λp(nm) | Emitted Color |                    | Δλ<br>(nm)            | Pd<br>(mW) | If<br>(mA) | Peak<br>If(mA) | Vf<br>(V)                      |      | Iv<br>(mcd) |                                    |
|                          |              |             |                               |               |                    |                       |            |            |                | Typ.                           | Max. | Typ.        |                                    |
| FLPR1RX.XUBW.6K          | 3UBWC-0.6K-F | InGaN/SiC   | 466                           | BLUE          | WATER CLEAR        | 26                    | 76         | 50         | 150            | 3.5                            | 4.5  | 600         | 20                                 |
| FLPR1RX.X-UT             | 3UTC-F       | InGaN/SiC   | 502                           | TURQUOISE     | WATER CLEAR        | 30                    | 70         | 30         | 150            | 3.5                            | 4.5  | 900         | 20                                 |
| FLPR1RX.X-UG             | 3UGC-F       | InGaAlP     | 563                           | GREEN         | WATER CLEAR        | 11                    | 100        | 30         | 150            | 2.2                            | 2.6  | 800         | 30                                 |
| FLPR1RX.X-SUG            | 3SUGC-F      | InGaAlP     | 574                           | GREEN         | WATER CLEAR        | 22                    | 100        | 30         | 150            | 2.2                            | 3.0  | 1000        | 30                                 |
| FLPR1RX.X-UY             | 3UYC-F       | InGaAlP     | 588                           | YELLOW        | WATER CLEAR        | 15                    | 100        | 30         | 150            | 2.0                            | 2.6  | 600         | 20                                 |
| FLPR1RX.X-SUY            | 3SUYC-F      | InGaAlP     | 592                           | YELLOW        | WATER CLEAR        | 15                    | 100        | 30         | 150            | 2.0                            | 2.6  | 1000        | 30                                 |
| FLPR1RX.X-UUY            | 3UUYC-F      | InGaAlP     | 592                           | YELLOW        | WATER CLEAR        | 15                    | 100        | 30         | 150            | 2.1                            | 2.6  | 2000        | 30                                 |
| FLPR1RX.X-UO             | 3UOC-F       | AlGaInP     | 620                           | ORANGE        | WATER CLEAR        | 17                    | 100        | 30         | 150            | 2.2                            | 2.6  | 1500        | 30                                 |
| FLPR1RX.X-SUO            | 3SUOC-F      | InGaAlP     | 633                           | ORANGE        | WATER CLEAR        | 17                    | 100        | 30         | 150            | 2.2                            | 2.6  | 2200        | 30                                 |
| FLPR1RX.X-UR             | 3URC-F       | GaAlAs/GaAs | 660                           | RED           | WATER CLEAR        | 20                    | 60         | 30         | 150            | 1.7                            | 2.6  | 400         | 30                                 |
| FLPR1RX.X-SUR            | 3SURC-F      | GaAlAs/GaAs | 660                           | RED           | WATER CLEAR        | 20                    | 65         | 30         | 150            | 2.0                            | 2.6  | 600         | 30                                 |
| FLPR1RX.XUW0.6K          | 3UWC1.035C-F | InGaN/SiC   | X=.30 Y=.31                   | WHITE         | WATER CLEAR        | -                     | 120        | 20         | 100            | 3.4                            | 3.8  | 1000        | 35                                 |

|                                                                                               |                          |                                                                                                                                                                      |                       |
|-----------------------------------------------------------------------------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| STANDARD TOLERANCE<br>( UNLESS OTHERWISE SPECIFIED )<br><u>±10% ALL VALUES</u> <u>ANGULAR</u> |                          | <br>4 THOMAS, IRVINE, CA. 92618<br>TEL: (949) 951-8808      FAX: (949) 951-3974 |                       |
|          |                          | TITLE: FLEXIBLE LIGHT-PIPE ASSY<br>RIGHT ANGLE, RECTANGULAR LENS CAP W/LED                                                                                           |                       |
| DESIGNED:<br><b>Raffy Paje</b>                                                                | DATE:<br><b>06/16/09</b> | PART NO:<br><b>FLPR1RX.X-XX</b>                                                                                                                                      | REVISION:<br><b>C</b> |
| CHECKED:<br><b>F. Jensen</b>                                                                  | DATE:<br><b>06/16/09</b> | CAGE CODE : 32559                                                                                                                                                    | SHEET # 2 OF 3        |
| CAD GENERATED DOCUMENT. DO NOT MEASURE DRAWING.                                               |                          |                                                                                                                                                                      |                       |

| REV. | DESCRIPTION  | DATE | APPROVED |
|------|--------------|------|----------|
|      | SEE SHEET#1. |      |          |
|      |              |      |          |

| FLPR1RX.X-XX<br>PART NO. | LED Part No. | Chip      |                               |               | Lens<br>Appearance | Absolute Max. Ratings |            |            |                | Electro-Optical Data<br>@ 20mA |     |             | Viewing<br>Angle<br>2 θ ½<br>(Deg) |
|--------------------------|--------------|-----------|-------------------------------|---------------|--------------------|-----------------------|------------|------------|----------------|--------------------------------|-----|-------------|------------------------------------|
|                          |              | Material  | Peak Wave<br>Length<br>λp(nm) | Emitted Color |                    | Δλ<br>(nm)            | Pd<br>(mW) | If<br>(mA) | Peak<br>If(mA) | Vf<br>(V)                      |     | Iv<br>(mcd) |                                    |
|                          |              |           |                               |               |                    |                       |            |            |                | TYP                            | MAX | TYP         |                                    |
|                          |              |           |                               |               |                    |                       |            |            |                |                                |     |             |                                    |
| FLPR1RX.X-BC             | 3BCC-F       | GaAsP/GaP | 635                           | HE RED        | WATER CLEAR        | 45                    | 80         | 30         | 150            | 2.1                            | 2.6 | 65.0        | 45                                 |
|                          |              | GaP/GaP   | 568                           | GREEN         |                    | 30                    | 80         | 30         | 150            | 2.2                            | 2.6 | 65.0        |                                    |
| FLPR1RX.X-BCYG           | 3BCC-Y/G-F   | GaAsP/GaP | 585                           | YELLOW        | WATER CLEAR        | 35                    | 80         | 30         | 150            | 2.1                            | 2.6 | 50.0        | 45                                 |
|                          |              | GaP/GaP   | 568                           | GREEN         |                    | 30                    | 80         | 30         | 150            | 2.2                            | 2.6 | 60.0        |                                    |
| FLPR1RX.X-BCRY           | 3BCC-R/Y-F   | GaAsP/GaP | 585                           | YELLOW        | WATER CLEAR        | 35                    | 80         | 30         | 150            | 2.1                            | 2.6 | 50.0        | 45                                 |
|                          |              | GaAsP/GaP | 635                           | HE RED        |                    | 30                    | 80         | 30         | 150            | 2.1                            | 2.6 | 60.0        |                                    |
| FLPR1RX.X-BCAG           | 3BCC-A/G-F   | GaAsP/GaP | 610                           | AMBER         | WATER CLEAR        | 35                    | 80         | 30         | 150            | 2.1                            | 2.6 | 50.0        | 45                                 |
|                          |              | GaP/GaP   | 568                           | GREEN         |                    | 30                    | 80         | 30         | 150            | 2.2                            | 2.6 | 60.0        |                                    |

| FLPR1RX.X-XX<br>PART NO. | LED Part No. | Chip         |                               |               | Lens<br>Appearance | Absolute Max. Ratings |            |            |                | Electro-Optical Data<br>@ 20mA |     |             | Viewing<br>Angle<br>2 Θ ½<br>(Deg) |
|--------------------------|--------------|--------------|-------------------------------|---------------|--------------------|-----------------------|------------|------------|----------------|--------------------------------|-----|-------------|------------------------------------|
|                          |              | Material     | Peak Wave<br>Length<br>λp(nm) | Emitted Color |                    | Δλ<br>(nm)            | Pd<br>(mW) | If<br>(mA) | Peak<br>If(mA) | Vf<br>(V)                      |     | Iv<br>(mcd) |                                    |
|                          |              |              |                               |               |                    |                       |            |            |                | TYP                            | MAX | TYP         |                                    |
|                          |              |              |                               |               |                    |                       |            |            |                |                                |     |             |                                    |
| FLPR1RX.X-SBC            | 3SBCC-F      | GaAiAsP/GaAs | 660                           | SUPER RED     | WATER CLEAR        | 20                    | 60         | 30         | 150            | 1.8                            | 2.6 | 150         | 35                                 |
|                          |              | GaP/GaP      | 568                           | HE GREEN      |                    | 30                    | 80         | 30         | 150            | 2.2                            | 2.6 | 80          |                                    |
| FLPR1RX.X-SBCYG          | 3SBCC-Y/G-F  | GaAsP/GaP    | 590                           | SUPER YELLOW  | WATER CLEAR        | 15                    | 100        | 30         | 150            | 2.0                            | 2.6 | 400         | 35                                 |
|                          |              | GaP/GaP      | 568                           | HE GREEN      |                    | 30                    | 100        | 30         | 150            | 2.2                            | 2.6 | 80          |                                    |
| FLPR1RX.X-SBCRY          | 3SBCC-R/Y-F  | GaAiAsP/GaAs | 660                           | SUPER RED     | WATER CLEAR        | 20                    | 60         | 30         | 150            | 1.8                            | 2.6 | 150         | 35                                 |
|                          |              | GaAsP/GaP    | 590                           | SUPER YELLOW  |                    | 15                    | 100        | 30         | 150            | 2.0                            | 2.6 | 400         |                                    |

|                                                                                            |                          |                                                                                                                                                                                                 |                              |
|--------------------------------------------------------------------------------------------|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| STANDARD TOLERANCE<br>( UNLESS OTHERWISE SPECIFIED )<br>$\pm 10\%$ ALL VALUES      ANGULAR |                          | <br><b>BIVAR</b> <sup>®</sup><br>4 THOMAS, IRVINE, CA. 92618<br>TEL: (949) 951-8808    FAX: (949) 951-3974 |                              |
|                                                                                            |                          |  <b>TITLE:</b> FLEXIBLE LIGHT-PIPE ASSY<br>RIGHT ANGLE, RECTANGULAR LENS CAP W/LED                         |                              |
| DESIGNED:<br><b>Raffy Paje</b>                                                             | DATE:<br><b>06/16/09</b> | <b>PART NO:</b><br>FLPR1RX.X-XX                                                                                                                                                                 | REVISION:<br><b>C</b>        |
| CHECKED:<br><b>F. Jensen</b>                                                               | DATE:<br><b>06/16/09</b> | <b>CAGE CODE :</b> 32559                                                                                                                                                                        | <b>SHEET #</b> 3 <b>OF</b> 3 |
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