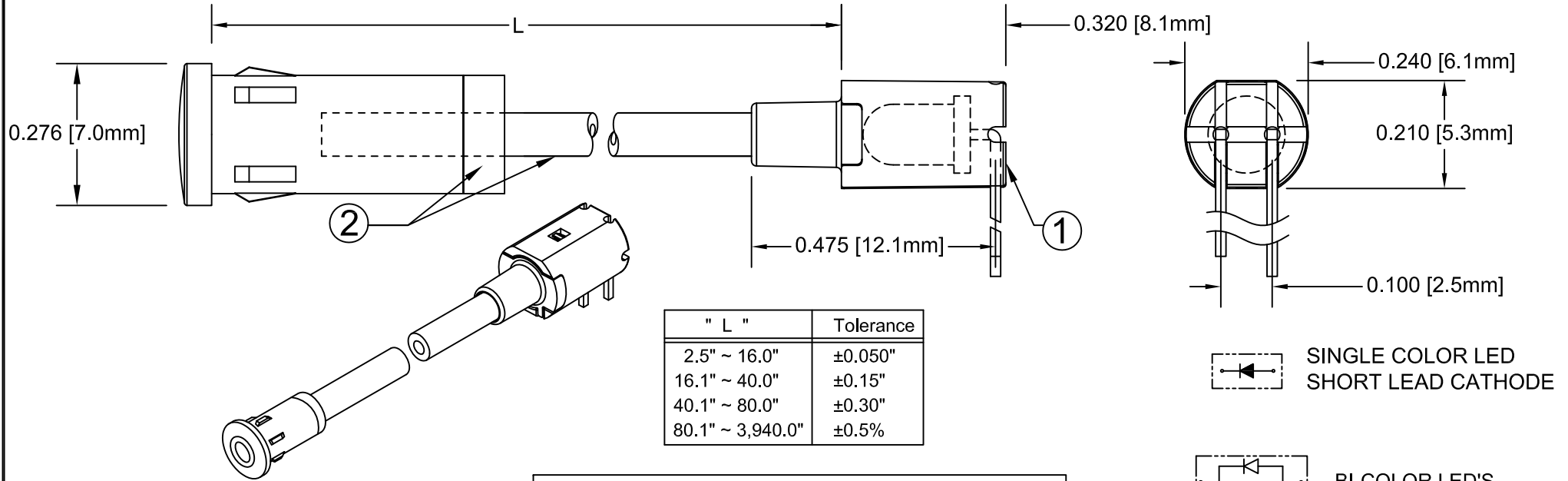


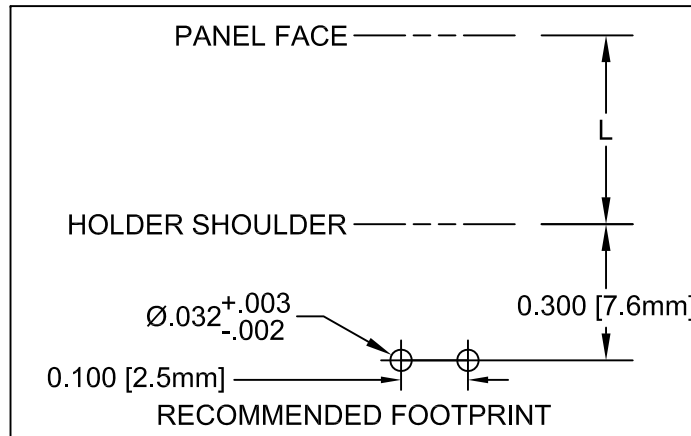
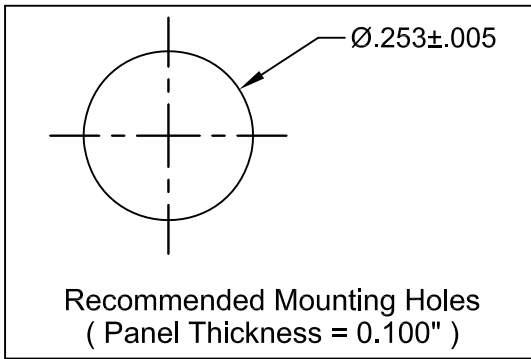
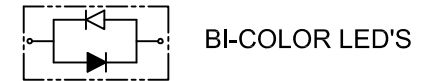
| ITEM | Q'TY | PART NUMBER | PART DESCRIPTION   |
|------|------|-------------|--|
| 1    | 1    | FLPR-XX     | Flexible Light Pipe Adapter, 90°, w/LED, See page 2 & 3. |
| 2    | 1    | FLP5-XX.X   | 7mm Lens Cap/FLP Assy                                    |

| REV. | DESCRIPTION          | DATE     | APPROVED |
|------|----------------------|----------|----------|
| A    | Engineering Release. | 06/05/08 | M. C.    |
|      |                      |          |          |
|      |                      |          |          |

NOTE: FLPR ADAPTER SHIPPED NON-ASSEMBLED



| " L "            | Tolerance |
|------------------|-----------|
| 2.5" ~ 16.0"     | ±0.050"   |
| 16.1" ~ 40.0"    | ±0.15"    |
| 40.1" ~ 80.0"    | ±0.30"    |
| 80.1" ~ 3,940.0" | ±0.5%     |



| 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> <sup>®</sup><br>4 THOMAS, IRVINE, CA. 92618<br>TEL: (949) 951-8808 FAX: (949) 951-3974                        |
|---|--------------------------|--|
| DECIMALS  | ANGULAR                  |  |
| .X ±.1  | X° ± 1°                  | <b>TITLE:</b> FLEXIBLE LIGHT-PIPE ASSY<br>RIGHT ANGLE, 7mm LENS CAP W/LED<br><b>PART NO:</b> FLP5RX.X-XX<br><b>REVISION:</b> A |
| .XX ±.02  |                          |  |
| .XXX ±.010  |                          |  |
| DESIGNED:<br><b>Raffy Paje</b>                    | DATE:<br><b>06/05/08</b> | <b>CAGE CODE :</b> 32559 <b>SHEET #</b> 1 <b>OF</b> 3<br>CAD GENERATED DOCUMENT, DO NOT MEASURE DRAWING.                       |
| CHECKED:<br><b>T. Yin</b>                         | DATE:<br><b>06/05/08</b> |  |

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

| FLPRX.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 $\theta$ 1/2<br>(Deg) |
|------------------------|--------------|--------------|---|---------------|--------------------|-------------------------|------------|------------|----------------|--------------------------------|-----|-------------|---|
|                        |              | Material     | Peak Wave<br>Length<br>$\lambda_p$ (nm) | Emitted Color |                    | $\Delta\lambda$<br>(nm) | Pd<br>(mW) | If<br>(mA) | Peak<br>If(mA) | Vf<br>(V)                      |     | Iv<br>(mcd) |   |
|                        |              |              |   |               |                    |                         |            |            |                | TYP                            | MAX | TYP         |   |
| FLP5RX.X-SG            | 3SGC-F       | GaP/GaP      | 568                                     | SUPER GREEN   | WATER CLEAR        | 30                      | 80         | 30         | 150            | 2.2                            | 2.6 | 120         | 30  |
| FLP5RX.X-SY            | 3SYC-F       | GaAsP/GaP    | 585                                     | SUPER YELLOW  | WATER CLEAR        | 35                      | 80         | 30         | 150            | 2.1                            | 2.6 | 65          | 30  |
| FLP5RX.X-SA            | 3SAC-F       | AlGaInP      | 620                                     | SUPER AMBER   | WATER CLEAR        | 17                      | 100        | 30         | 150            | 2.0                            | 2.6 | 350         | 30  |
| FLP5RX.X-SR            | 3SRC-F       | GaAiAsP/GaAs | 660                                     | SUPER RED     | WATER CLEAR        | 20                      | 80         | 20         | 150            | 1.7                            | 2.6 | 250         | 30  |



| FLPRX.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 $\theta$ 1/2<br>(Deg) |
|------------------------|--------------|-------------|---|---------------|--------------------|-------------------------|------------|------------|----------------|--------------------------------|------|-------------|---|
|                        |              | Material    | Peak Wave<br>Length<br>$\lambda_p$ (nm) | Emitted Color |                    | $\Delta\lambda$<br>(nm) | Pd<br>(mW) | If<br>(mA) | Peak<br>If(mA) | Vf<br>(V)                      |      | Iv<br>(mcd) |   |
|                        |              |             |   |               |                    |                         |            |            |                | Typ.                           | Max. | Typ.        |   |
| FLP5RX.X-UBW,6K        | 3UBWC-0.6K-F | InGaN/SiC   | 466                                     | BLUE          | WATER CLEAR        | 26                      | 76         | 50         | 150            | 3.5                            | 4.5  | 600         | 20  |
| FLP5RX.X-UT            | 3UTC-F       | InGaN/SiC   | 502                                     | TURQUOISE     | WATER CLEAR        | 30                      | 70         | 30         | 150            | 3.5                            | 4.5  | 900         | 20  |
| FLP5RX.X-UG            | 3UGC-F       | InGaAlP     | 563                                     | GREEN         | WATER CLEAR        | 11                      | 100        | 30         | 150            | 2.2                            | 2.6  | 800         | 30  |
| FLP5RX.X-SUG           | 3SUGC-F      | InGaAlP     | 574                                     | GREEN         | WATER CLEAR        | 22                      | 100        | 30         | 150            | 2.2                            | 3.0  | 1000        | 30  |
| FLP5RX.X-UY            | 3UYC-F       | InGaAlP     | 588                                     | YELLOW        | WATER CLEAR        | 15                      | 100        | 30         | 150            | 2.0                            | 2.6  | 600         | 20  |
| FLP5RX.X-SUY           | 3SUYC-F      | InGaAlP     | 592                                     | YELLOW        | WATER CLEAR        | 15                      | 100        | 30         | 150            | 2.0                            | 2.6  | 1000        | 30  |
| FLP5RX.X-UUY           | 3UUYC-F      | InGaAlP     | 592                                     | YELLOW        | WATER CLEAR        | 15                      | 100        | 30         | 150            | 2.1                            | 2.6  | 2000        | 30  |
| FLP5RX.X-UO            | 3UOC-F       | AlGaInP     | 620                                     | ORANGE        | WATER CLEAR        | 17                      | 100        | 30         | 150            | 2.2                            | 2.6  | 1500        | 30  |
| FLP5RX.X-SUO           | 3SUOC-F      | InGaAlP     | 633                                     | ORANGE        | WATER CLEAR        | 17                      | 100        | 30         | 150            | 2.2                            | 2.6  | 2200        | 30  |
| FLP5RX.X-UR            | 3URC-F       | GaAlAs/GaAs | 660                                     | RED           | WATER CLEAR        | 20                      | 60         | 30         | 150            | 1.7                            | 2.6  | 400         | 30  |
| FLP5RX.X-SUR           | 3SURC-F      | GaAlAs/GaAs | 660                                     | RED           | WATER CLEAR        | 20                      | 65         | 30         | 150            | 2.0                            | 2.6  | 600         | 30  |
| FLP5RX.X-UW,6K         | 3UWC-0.6K-F  | InGaN/SiC   | X=.30 Y=.31                             | WHITE         | WATER CLEAR        | -                       | 120        | 30         | 100            | 3.5                            | 4.0  | 1500        | 30  |

|   |  |  |  |
|---|--|--|--|
| STANDARD TOLERANCE<br>( UNLESS OTHERWISE SPECIFIED )<br>$\pm 10\%$ ALL VALUES |  | <br><b>BIVAR</b> <sup>®</sup><br>4 THOMAS, IRVINE, CA. 92618<br>TEL: (949) 951-8808 FAX: (949) 951-3974 |  |
| ANGULAR<br>X° $\pm$ 5°  |  |  |  |
| DESIGNED:<br><b>Raffy Paje</b>  |  | DATE:<br><b>06/05/08</b>   | TITLE:<br>FLEXIBLE LIGHT-PIPE ASSY<br>RIGHT ANGLE, 7mm LENS CAP W/LED  |
| CHECKED:<br><b>T. Yin</b>   |  | DATE:<br><b>06/05/08</b>   | PART NO: <b>FLP5RX.X-XX</b> REVISION:<br><b>A</b><br>CAGE CODE : <b>32559</b> SHEET # <b>2 OF 3</b><br>CAD GENERATED DOCUMENT, DO NOT MEASURE DRAWING. |

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|------|--------------|------|----------|
| REV. | DESCRIPTION  | DATE | APPROVED |
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|      |              |      |          |

| FLPRX.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         |                                    |
| FLP5RX.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        |                                    |
| FLP5RX.X-BC-Y/G        | 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        |                                    |
| FLP5RX.X-BC-R/Y        | 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        |                                    |
| FLP5RX.X-BC-A/G        | 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        |                                    |

| FLPRX.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         |                                    |
| FLP5RX.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          |                                    |
| FLP5RX.X-SBC-Y/G       | 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          |                                    |
| FLP5RX.X-SBC-R/Y       | 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         |                                    |

|   |                          |   |             |
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| ANGULAR<br>X° ± 5°  |                          |   |             |
|  |                          | TITLE: FLEXIBLE LIGHT-PIPE ASSY<br>RIGHT ANGLE, 7mm LENS CAP W/LED  |             |
| DESIGNED:<br><b>Raffy Paje</b>  | DATE:<br><b>06/05/08</b> | PART NO:  | FLP5RX.X-XX |
| CHECKED:<br><b>T. Yin</b>   | DATE:<br><b>06/05/08</b> | CAGE CODE :   | 32559       |
|   |                          | SHEET #   | 3 OF 3      |
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