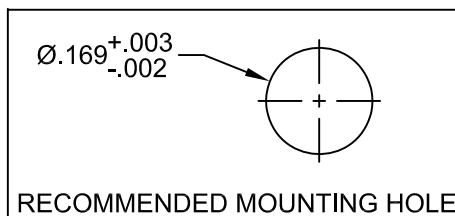
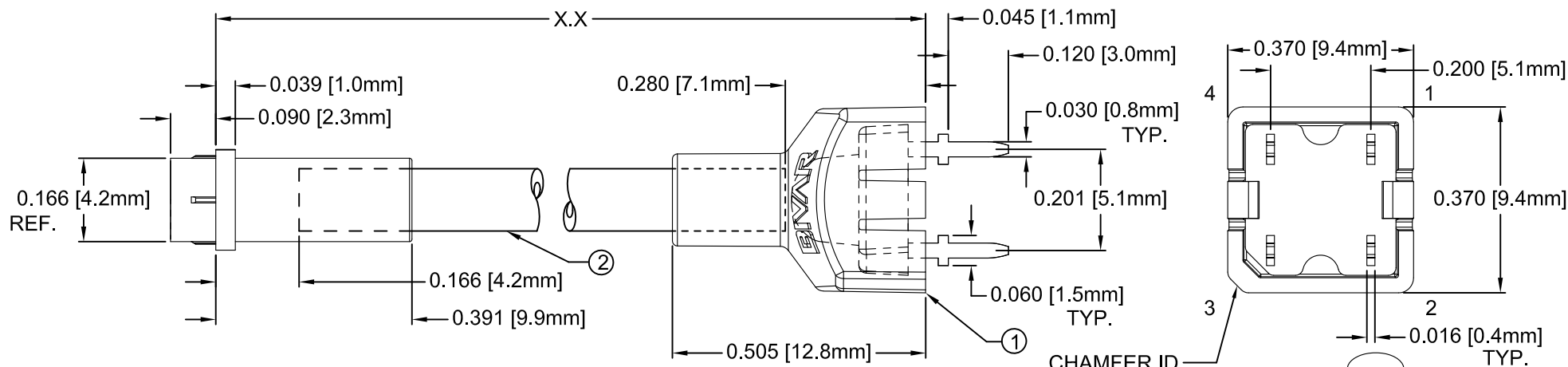


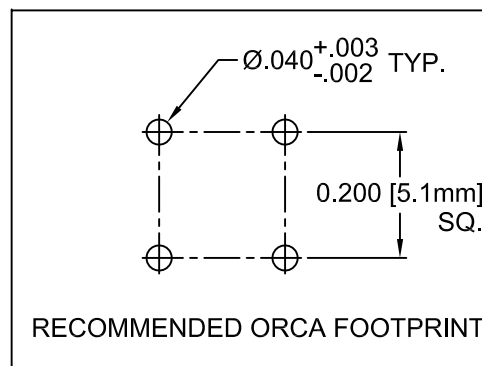
| ITEM | Q'TY | PART NUMBER | PART DESCRIPTION                            |
|------|------|-------------|---------------------------------------------|
| 1    | 1    | ORFLP2-XXX  | 2mm Flexible Light Pipe ORCA Adapter w/ LED |
| 2    | 1    | FLPF-XX.X   | Flexible Light Pipe Lens Cap Assembly, Flat |

| REV. | DESCRIPTION                    | DATE     | APPROVED |
|------|--------------------------------|----------|----------|
| A    | Engineering Release.           | 09/14/09 | T. Y.    |
| B    | Updated Table For Length "X.X" | 11/14/12 | T. Y.    |
|      |                                |          |          |
|      |                                |          |          |

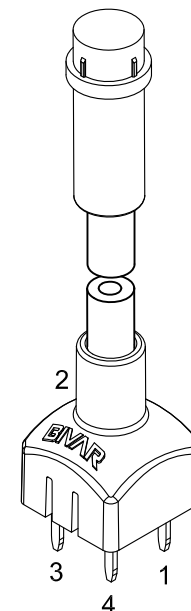


| "X.X" *          | Tolerance |
|------------------|-----------|
| 1.0" ~ 16.0"     | ±0.050"   |
| 16.1" ~ 40.0"    | ±0.15"    |
| 40.1" ~ 80.0"    | ±0.30"    |
| 80.1" ~ 3,940.0" | ±0.5%     |

\* Available in 0.1" increments only



NOTE: ORFLP2-XXX ADAPTER SHIPPED SEPARATELY



SEE PAGE 2 FOR POLARITY

## ABSOLUTE MAXIMUM RATINGS (Ta=25°C)

|                                              |                     |
|----------------------------------------------|---------------------|
| REVERSE VOLTAGE                              | 5V                  |
| REVERSE CURRENT                              | 10uA                |
| OPERATING TEMPERATURE RANGE                  | -25°C ~ +80°C       |
| STORAGE TEMPERATURE                          | -30°C ~ +80°C       |
| LEAD SOLDERING TEMPERATURE (1/16" FROM BODY) | 260°C FOR 5 SECONDS |

|                                                      |                          |                                                                                                                                                                 |                              |
|------------------------------------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| STANDARD TOLERANCE<br>( UNLESS OTHERWISE SPECIFIED ) |                          | <br>4 THOMAS, IRVINE, CA. 92618<br>TEL: (949) 951-8808 FAX: (949) 951-3974 |                              |
| DECIMALS                                             | ANGULAR                  |                                                                                                                                                                 |                              |
| .X ± .2                                              | X° ± 1°                  |                                                                            |                              |
| .XX ± .02                                            |                          |                                                                                                                                                                 |                              |
| .XXX ± .010                                          |                          | <b>TITLE:</b> 2mm FLP ORCA ASSEMBLY,<br>FLAT LENS CAP                                                                                                           |                              |
| DESIGNED:<br><b>Raffy Paje</b>                       | DATE:<br><b>09/14/09</b> | PART NO:<br><b>R2F-X.X-XXX</b>                                                                                                                                  | REVISION:<br><b>B</b>        |
| CHECKED:<br><b>F. Jensen</b>                         | DATE:<br><b>09/14/09</b> | CAGE CODE : <b>32559</b>                                                                                                                                        | SHEET # <b>1</b> OF <b>2</b> |
| CAD GENERATED DOCUMENT, DO NOT MEASURE DRAWING.      |                          |                                                                                                                                                                 |                              |

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

| Assy P/N                           | LED P/N       | Emitted Color | Dominant Length<br>λd(nm) / CCT (K) | Lens Appearance | Absolute Max. Ratings |         |              | Vf (V) |     |     | Iv (mcd) |      | Viewing Angle<br>2 θ½ (Deg) | POLARITY DIAGRAM |
|------------------------------------|---------------|---------------|-------------------------------------|-----------------|-----------------------|---------|--------------|--------|-----|-----|----------|------|-----------------------------|------------------|
|                                    |               |               |                                     |                 | Pd (mW)               | If (mA) | Peak If (mA) |        |     |     |          |      |                             |                  |
|                                    |               |               | MIN - MAX                           |                 |                       |         |              | MIN    | TYP | MAX | MIN      | TYP  |                             |                  |
| SINGLE COLOR LED ASSEMBLIES (20mA) |               |               |                                     |                 |                       |         |              |        |     |     |          |      |                             |                  |
| R2F-X.X-BLU                        | R20BLU-4-0045 | BLUE          | 465 -475                            | WATER CLEAR     | 220                   | 50      | 100          | 3.0    | 3.4 | 3.8 | 1000     | 1500 | 45                          | FIG. A           |
| R2F-X.X-GRN                        | R20GRN-4-0045 | GREEN         | 516 - 526                           |                 | 220                   | 50      | 100          | 3.0    | 3.4 | 3.8 | 6000     | 8000 | 45                          | FIG. A           |
| R2F-X.X-WHT                        | R20WHT-4-0045 | WHITE         | 6000K                               |                 | 220                   | 50      | 100          | 3.0    | 3.4 | 3.8 | 6000     | 8000 | 45                          | FIG. A           |
| SINGLE COLOR LED ASSEMBLIES (50mA) |               |               |                                     |                 |                       |         |              |        |     |     |          |      |                             |                  |
| R2F-X.X-RED                        | R50RED-4-0045 | RED           | 620 - 635                           | WATER CLEAR     | 140                   | 80      | 160          | 2.0    | 2.4 | 2.8 | 5000     | 6000 | 45                          | FIG. A           |
| R2F-X.X-YLW                        | R50YLW-4-0045 | YELLOW        | 588 - 594                           |                 | 140                   | 80      | 160          | 2.0    | 2.4 | 2.8 | 5000     | 6000 | 45                          | FIG. A           |
| BI-COLOR LED ASSEMBLIES (50mA)     |               |               |                                     |                 |                       |         |              |        |     |     |          |      |                             |                  |
| R2F-X.X-RG                         | R50RG2-4-0045 | RED           | 620 - 635                           | WATER CLEAR     | 150                   | 80      | 160          | 2.2    | 2.6 | 3.0 | 3000     | 4000 | 45                          | FIG. B           |
|                                    |               | GREEN         | 515 - 525                           |                 | 220                   | 80      | 150          | 3.4    | 3.8 | 4.4 | 4000     | 5000 |                             |                  |
| R2F-X.X-RB                         | R50RB2-4-0045 | RED           | 620 - 635                           | WATER CLEAR     | 150                   | 80      | 160          | 2.2    | 2.6 | 3.0 | 3000     | 4000 | 45                          | FIG. C           |
|                                    |               | BLUE          | 460 - 470                           |                 | 220                   | 80      | 150          | 3.4    | 3.8 | 4.4 | 200      | 400  |                             |                  |
| R2F-X.X-BG                         | R50BG2-4-0045 | BLUE          | 460 - 470                           | WATER CLEAR     | 220                   | 80      | 150          | 3.4    | 3.8 | 4.4 | 200      | 400  | 45                          | FIG. D           |
|                                    |               | GREEN         | 515 - 525                           |                 | 220                   | 80      | 150          | 3.4    | 3.8 | 4.4 | 4000     | 5000 |                             |                  |
| R2F-X.X-RGB                        | R50RGB-4-0045 | RED           | 620 - 635                           | WATER CLEAR     | 150                   | 80      | 160          | 2.2    | 2.6 | 3.0 | 3000     | 4000 | 45                          | FIG. E           |
|                                    |               | GREEN         | 515 - 525                           |                 | 220                   | 80      | 150          | 3.4    | 3.8 | 4.4 | 4000     | 5000 |                             |                  |
|                                    |               | BLUE          | 460 - 470                           |                 | 220                   | 80      | 150          | 3.4    | 3.8 | 4.4 | 200      | 400  |                             |                  |

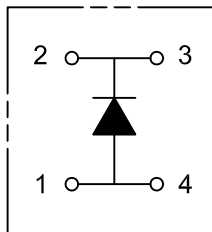


FIG. A

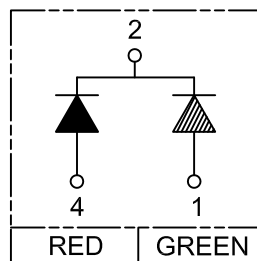


FIG. B

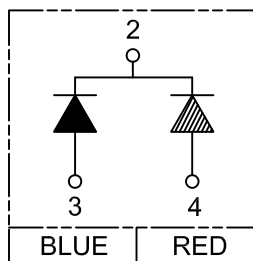


FIG. C

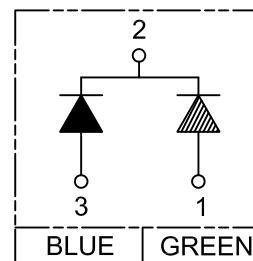


FIG. D

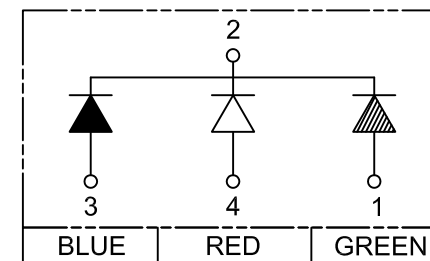


FIG. E

## NOTES:

1. INDIVIDUAL LED P/N DATA AVAILABLE @ WWW.BIVAR.COM.

|                                                      |                          |                                                                                                                                                                                              |                       |
|------------------------------------------------------|--------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------|
| STANDARD TOLERANCE<br>( 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                  |                                                                                                                                                                                              |                       |
| DESIGNED:<br><b>Raffy Paje</b>                       | DATE:<br><b>09/14/09</b> | TITLE: 2mm FLP ORCA ASSEMBLY,<br>FLAT LENS CAP                                                                                                                                               |                       |
| CHECKED:<br><b>F. Jensen</b>                         | DATE:<br><b>09/14/09</b> | PART NO:<br><b>R2F-X.X-XXX</b>                                                                                                                                                               | REVISION:<br><b>B</b> |
|                                                      |                          | CAGE CODE : 32559                                                                                                                                                                            | SHEET # 2 OF 2        |
| CAD GENERATED DOCUMENT, DO NOT MEASURE DRAWING.      |                          |                                                                                                                                                                                              |                       |