

NOTES:

1. PARTS ARE SHIPPED NON-ASSEMBLED.
2. SEE SHEET 4 FOR PACKAGING PLAN.

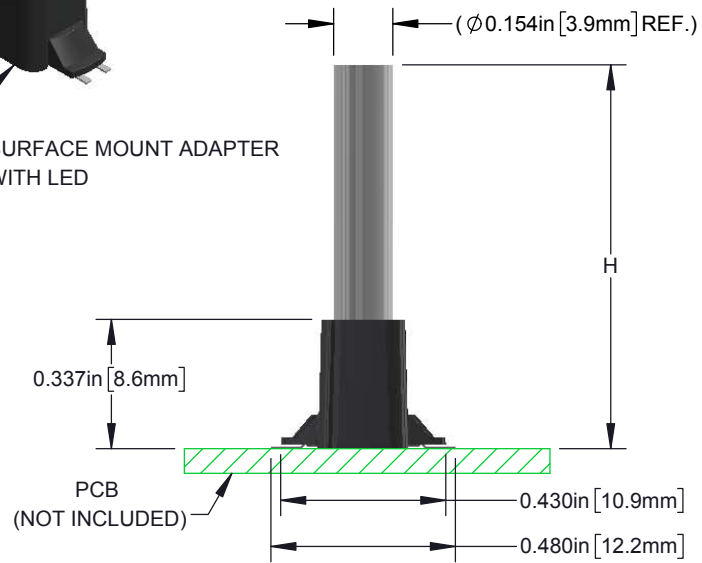
| REVISIONS |                     |           |          |
|-----------|---------------------|-----------|----------|
| REV.      | DESCRIPTION         | DATE      | APPROVED |
| B         | Engineering Release | 7/11/2018 | G.O.     |

PART NUMBER CONFIGURATION,

LPV4-XXXXX-XXX

LED COLOR (SEE PAGE 3)

LIGHT PIPE CALLOUT (SEE PAGE 2, TABLES A & B)



**FLAT FACE LENS**

DIMENSIONS ARE APPLICABLE TO BOTH LENS FACES UNLESS OTHERWISE NOTED



**DOME FACE LENS**



RECOMMENDED SOLDERING PATTERN

|   |         |  |                |
|---|---------|--|----------------|
| STANDARD TOLERANCE (UNLESS OTHERWISE SPECIFIED) |         | <br>4 THOMAS, IRVINE, CA. 92618<br>TEL: (949) 951-8808 FAX: (949) 951-3974 |                |
| DECIMALS  | ANGULAR |  |                |
| .X ± .1   | X° ± 1° | TITLE: BIVAR LIGHT PIPE SYSTEM<br>SAT VERTICAL, 4MM, SINGLE STATION        |                |
| .XX ± .02                                       |         | DESIGNED: K. BARON   | DATE: 07/11/18 |
| .XXX ± .010                                     |         | REVISION: N/A  | DATE: N/A      |
|   |         | CHECKED: TD. NGUYEN  | DATE: 07/11/18 |
|   |         | PART NO: LPV4-XXXXX-XXX  | REVISION: B    |
|   |         | CAGE CODE: 32559   |                |
|   |         | SCALE: 2:1   | SHEET # 1 OF 5 |
| CAD GENERATED DOCUMENT, DO NOT MEASURE DRAWING  |         |  |                |

| REVISIONS |             |      |          |
|-----------|-------------|------|----------|
| REV.      | DESCRIPTION | DATE | APPROVED |
|           | See Sheet 1 |      |          |

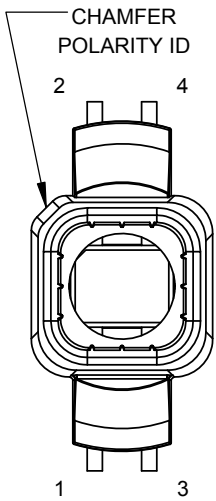
**STANDARD ORDERING INFORMATION**

| TABLE A - FLAT FACE LENS |                |
|--------------------------|----------------|
| PART NO.                 | H ± .01        |
| LPV4-0350F-XXX           | 0.350 [8.9mm]  |
| LPV4-0400F-XXX           | 0.400 [10.2mm] |
| LPV4-0450F-XXX           | 0.450 [11.4mm] |
| LPV4-0500F-XXX           | 0.500 [12.7mm] |
| LPV4-0550F-XXX           | 0.550 [14.0mm] |
| LPV4-0600F-XXX           | 0.600 [15.2mm] |
| LPV4-0750F-XXX           | 0.750 [19.1mm] |
| LPV4-1000F-XXX           | 1.000 [25.4mm] |
| LPV4-1250F-XXX           | 1.250 [31.8mm] |
| LPV4-1500F-XXX           | 1.500 [38.1mm] |
| LPV4-1750F-XXX           | 1.750 [44.5mm] |
| LPV4-2000F-XXX           | 2.000 [50.8mm] |

| TABLE B - DOME FACE LENS |                |
|--------------------------|----------------|
| PART NO.                 | H ± .01        |
| LPV4-0350D-XXX           | 0.350 [8.9mm]  |
| LPV4-0400D-XXX           | 0.400 [10.2mm] |
| LPV4-0450D-XXX           | 0.450 [11.4mm] |
| LPV4-0500D-XXX           | 0.500 [12.7mm] |
| LPV4-0550D-XXX           | 0.550 [14.0mm] |
| LPV4-0600D-XXX           | 0.600 [15.2mm] |
| LPV4-0750D-XXX           | 0.750 [19.1mm] |
| LPV4-1000D-XXX           | 1.000 [25.4mm] |
| LPV4-1250D-XXX           | 1.250 [31.8mm] |
| LPV4-1500D-XXX           | 1.500 [38.1mm] |
| LPV4-1750D-XXX           | 1.750 [44.5mm] |
| LPV4-2000D-XXX           | 2.000 [50.8mm] |

|  |                |
|--|----------------|
| <b>BIVAR</b> <sup>®</sup>                      |                |
| PART NO:<br>LPV4-XXXXX-XXX                     | REVISION:<br>B |
| SCALE: NONE                                    | SHEET # 2 OF 5 |
| CAD GENERATED DOCUMENT, DO NOT MEASURE DRAWING |                |

| Order Code<br>XXX | Emitted<br>Color | Peak<br>Wave L.        | Electro-Optical Data @20mA, 25°C |     |     |             | Polarity<br>Diagram |
|-------------------|------------------|------------------------|----------------------------------|-----|-----|-------------|---------------------|
|                   |                  | $\lambda_p$ [nm]       | $V_f$ [V]                        |     |     | $I_v$ [mcd] |                     |
|                   |                  | Chroma<br>TYP          | MIN                              | TYP | MAX | TYP         |                     |
|                   |                  |                        |                                  |     |     |             |                     |
| R130              | Red              | 640                    | 1.7                              | 2.0 | 2.5 | 130         | FIGURE B            |
| R480              | Red              | 630                    | 1.7                              | 2.0 | 2.5 | 480         |                     |
| A220              | Amber            | 610                    | 1.7                              | 2.0 | 2.5 | 220         |                     |
| O170              | Orange           | 590                    | 1.7                              | 2.0 | 2.5 | 170         |                     |
| Y50               | Yellow           | 570                    | 1.7                              | 2.0 | 2.5 | 50          |                     |
| G850              | Green            | 520                    | 2.8                              | 3.2 | 3.7 | 850         |                     |
| B150              | Blue             | 465                    | 2.8                              | 3.2 | 3.7 | 150         |                     |
| W305              | White            | X = 0.308<br>Y = 0.305 | 2.8                              | 3.0 | 3.7 | 1750        |                     |
| OY                | Orange           | 590                    | 1.7                              | 2.0 | 2.5 | 190         | FIGURE C            |
|                   | Yellow           | 572                    | 1.7                              | 2.0 | 2.5 | 60          |                     |
| RY                | Red              | 640                    | 1.7                              | 2.0 | 2.5 | 110         | FIGURE D            |
|                   | Yellow           | 572                    | 1.7                              | 2.0 | 2.5 | 55          |                     |
| RG                | Red              | 640                    | 1.7                              | 2.0 | 2.5 | 200         | FIGURE E            |
|                   | Green            | 520                    | 2.8                              | 3.2 | 3.7 | 810         |                     |
| RW                | Red              | 630                    | 1.7                              | 2.0 | 2.5 | 130         | FIGURE F            |
|                   | White            | X = 0.28<br>Y = 0.29   | 2.8                              | 3.2 | 3.7 | 520         |                     |
| RB                | Red              | 650                    | 1.7                              | 2.0 | 2.5 | 80          | FIGURE G            |
|                   | Blue             | 465                    | 2.8                              | 3.2 | 3.7 | 150         |                     |
| RGB               | Red              | 643                    | 1.7                              | 2.0 | 2.5 | 95          | FIGURE H            |
|                   | Green            | 515                    | 2.8                              | 3.3 | 3.7 | 730         |                     |
|                   | Blue             | 460                    | 2.8                              | 3.3 | 3.7 | 120         |                     |



Note: 10% Duty Cycle, Pulse Width  $\leq$  0.1msec for Peak If.



|  |                       |
|--|-----------------------|
| <b>BIVAR</b> <sup>®</sup>                      |                       |
| <b>PART NO:</b><br>LPV4-XXXXX-XXX              | <b>REVISION:</b><br>B |
| <b>SCALE:</b> 2:1                              | <b>SHEET # 3 OF 5</b> |
| CAD GENERATED DOCUMENT, DO NOT MEASURE DRAWING |                       |

**PACKAGING PLAN**

PARTS ARE SHIPPED IN QUANTITY OF 400 AS IN THE FOLLOWING:

1. ONE BAG CONTAINING FOUR LIGHT PIPE PACKAGES, 100 EACH, AND ONE LEVEL 4 MOISTURE SEALED TRAY WITH 400 SURFACE MOUNT ADAPTERS.
2. BAG SIZE IS APPROXIMATELY 16 X 18 INCHES (406.4 X 457.2 mm).
3. TRAY SIZE IS APPROXIMATELY 10 X 14 X 0.6 INCHES (254 X 355.6 X 15.2 mm), INCLUDING TOP COVER AND BOTTOM TRAY. ADAPTERS ARE ARRANGED AS SHOWN IN FIGURE 1.

10 ADAPTERS IN EACH POCKET



FIGURE 1  
BOTTOM TRAY  
4 X 10 POCKETS

|  |                |           |
|--|----------------|-----------|
| <b>BIVAR</b> <sup>®</sup>                      |                | REVISION: |
| PART NO:<br>LPV4-XXXXX-XXX                     |                | B         |
| SCALE: NONE                                    | SHEET # 4 OF 5 |           |
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RECOMMENDED REFLOW SOLDERING PROFILE



NOTE:

1. DO NOT CLEAN AFTER SOLDERING. ONLY USE NO-CLEAN SOLDER PASTE.

|  |                |           |
|--|----------------|-----------|
| <b>BIVAR</b> <sup>®</sup>                      |                | REVISION: |
| PART NO:<br>LPV4-XXXXX-XXX                     |                | <b>B</b>  |
| SCALE: NONE                                    | SHEET # 5 OF 5 |           |
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