

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                                       |         |  |                |                         |                |
| .XXX ± .010                                     |         | DESIGNED: K. BARON   | DATE: 07/11/18 | PART NO: LPV4-XXXXX-XXX | REVISION: B    |
|   |         | REVISED: N/A   | DATE: N/A      | CAGE CODE: 32559        |                |
|   |         | CHECKED: TD. NGUYEN  | DATE: 07/11/18 | 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>PART NO:</b><br>LPV4-XXXXX-XXX              |                       | <b>REVISION:</b><br>B |
| <b>SCALE:</b> NONE                             | <b>SHEET # 2 OF 5</b> |                       |
| 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 A            |
| R480              | Red                  | 630                         | 1.7                              | 2.0               | 2.5               | 480              | FIGURE B            |
| 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             | FIGURE C            |
| OY                | Orange<br>Yellow     | 590<br>572                  | 1.7<br>1.7                       | 2.0<br>2.0        | 2.5<br>2.5        | 190<br>60        |                     |
| RY                | Red<br>Yellow        | 640<br>572                  | 1.7<br>1.7                       | 2.0<br>2.0        | 2.5<br>2.5        | 110<br>55        | FIGURE D            |
| RG                | Red<br>Green         | 640<br>520                  | 1.7<br>2.8                       | 2.0<br>3.2        | 2.5<br>3.7        | 200<br>810       | FIGURE E            |
| RW                | Red<br>White         | 630<br>X = 0.28<br>Y = 0.29 | 1.7<br>2.8                       | 2.0<br>3.2        | 2.5<br>3.7        | 130<br>520       | FIGURE F            |
| RB                | Red<br>Blue          | 650<br>465                  | 1.7<br>2.8                       | 2.0<br>3.2        | 2.5<br>3.7        | 80<br>150        | FIGURE G            |
| RGB               | Red<br>Green<br>Blue | 643<br>515<br>460           | 1.7<br>2.8<br>2.8                | 2.0<br>3.3<br>3.3 | 2.5<br>3.7<br>3.7 | 95<br>730<br>120 | FIGURE H            |



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



**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 |           |
| CAD GENERATED DOCUMENT, DO NOT MEASURE DRAWING |                |           |