

#### Certifications & Ratings

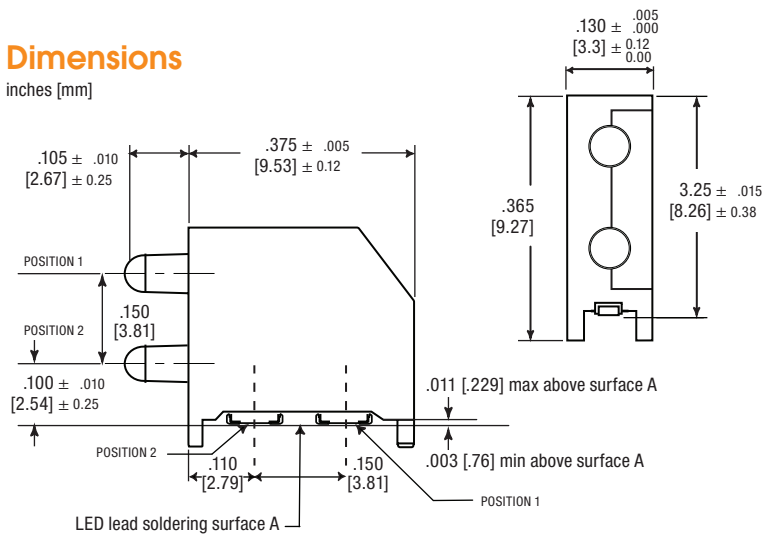
- RoHS and REACH compliant

#### Features & Benefits

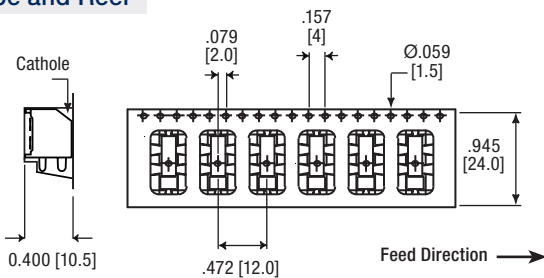
- Compatible with automatic placement equipment.
- Packaged in 16 mm tape, 13" reel (500 pcs/reel) and 10 piece sample strips.
- Compatible with surface mount reflow soldering processes.
- Housing material meets UL-94V-0 flammability ratings.
- Design provides increased indication without increased space
- Helps eliminate mixed technology PC board processing..
- Packaged in moisture barrier bags for dry packaging per IPC/JEDEC J-STD-033, MSL2 for 2 mA, MSL3 for 20 mA

#### Dimensions

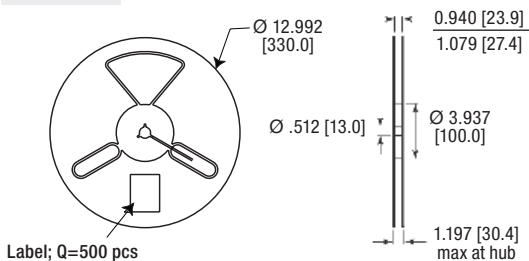
inches [mm]



#### Tape and Reel



#### 13" Reel



#### Part Number Guide

| Part Number Guide |   |   |   |   |                |   |   |   |   | RoHS Compliant   |   |                    |  |  |
|-------------------|---|---|---|---|----------------|---|---|---|---|------------------|---|--------------------|--|--|
| 5                 | 9 | 6 | - | X | X              | X | X | - | 0 | X                | X | F                  |  |  |
|                   |   |   |   |   |                |   |   |   |   | Packaging Option |   |                    |  |  |
|                   |   |   |   |   |                |   |   |   |   | 0                | 2 | 10 pc tape         |  |  |
|                   |   |   |   |   |                |   |   |   |   | 1                | 3 | 13" reel / 500 pcs |  |  |
|                   |   |   |   |   |                |   |   |   |   | Colors           |   |                    |  |  |
|                   |   |   |   |   |                |   |   |   |   | Position 1       |   | Position 2         |  |  |
| ● Red             | 2 | 0 | 2 | 0 | ● Red          |   |   |   |   |                  |   |                    |  |  |
| ● Red             | 2 | 0 | 2 | 3 | ● Yellow-Green |   |   |   |   |                  |   |                    |  |  |
| ● Yellow-Green    | 2 | 3 | 2 | 3 | ● Yellow-Green |   |   |   |   |                  |   |                    |  |  |
| ● Yellow-Green    | 2 | 3 | 2 | 4 | ● Yellow       |   |   |   |   |                  |   |                    |  |  |
| ● Yellow-Green    | 2 | 3 | 2 | 6 | ● Blue         |   |   |   |   |                  |   |                    |  |  |
| ● Yellow          | 2 | 4 | 2 | 0 | ● Red          |   |   |   |   |                  |   |                    |  |  |
| ● Yellow          | 2 | 4 | 2 | 3 | ● Yellow-Green |   |   |   |   |                  |   |                    |  |  |
| ● Yellow          | 2 | 4 | 2 | 4 | ● Yellow       |   |   |   |   |                  |   |                    |  |  |
| ● Yellow          | 2 | 4 | 2 | 9 | ● Green        |   |   |   |   |                  |   |                    |  |  |
| ● Orange          | 2 | 5 | 2 | 5 | ● Orange       |   |   |   |   |                  |   |                    |  |  |
| ● Blue            | 2 | 6 | 2 | 6 | ● Blue         |   |   |   |   |                  |   |                    |  |  |
| ● Green           | 2 | 9 | 2 | 6 | ● Blue         |   |   |   |   |                  |   |                    |  |  |
| ● Green           | 2 | 9 | 2 | 9 | ● Green        |   |   |   |   |                  |   |                    |  |  |
|                   |   |   |   |   |                |   |   |   |   | <b>(20 mA)</b>   |   |                    |  |  |
| ● Red             | 1 | 0 | 1 | 0 | ● Red          |   |   |   |   |                  |   |                    |  |  |
| ● Yellow          | 1 | 4 | 1 | 4 | ● Yellow       |   |   |   |   |                  |   |                    |  |  |
| ● Orange          | 1 | 5 | 1 | 5 | ● Orange       |   |   |   |   |                  |   |                    |  |  |
| ● Ice Blue        | 1 | 6 | 1 | 6 | ● Ice Blue     |   |   |   |   |                  |   |                    |  |  |
| ○ White           | 1 | 8 | 1 | 8 | ○ White        |   |   |   |   |                  |   |                    |  |  |
|                   |   |   |   |   |                |   |   |   |   | <b>(2 mA)</b>    |   |                    |  |  |

Soldering pad layout and reflow profiles shown on reverse >



### Electrical/Optical Characteristics

| Dialight P/N  |                   | Emitted Color  |                | Material       | If = 20mA                |     |                     |     | Viewing Angle (°deg.) | Reverse Current Intensity (µA)<br>(Ir) VR=5V |
|---------------|-------------------|----------------|----------------|----------------|--------------------------|-----|---------------------|-----|-----------------------|--|
| 10-Piece Tape | 13" Reel, 500 pcs | Position 1     | Position 2     |                | Luminous Intensity (mcd) |     | Dominant Wavelength |     |                       |  |
|               |                   |                |                | Typ            |                          | Typ |                     | Typ | Max                   |  |
| 596-2020-002F | 596-2020-013F     | ● Red          | ● Red          | AllInGaP       | 35                       | 35  | 625                 | 625 | 1.8                   | 2.4  |
| 596-2023-002F | 596-2023-013F     | ● Red          | ● Yellow-Green |                | 35                       | 3   | 625                 | 570 | 1.8                   | 2.4  |
| 596-2323-002F | 596-2323-013F     | ● Yellow-Green | ● Yellow-Green |                | 3                        | 3   | 570                 | 570 | 1.8                   | 2.4  |
| 596-2324-002F | 596-2324-013F     | ● Yellow-Green | ● Yellow       |                | 3                        | 20  | 570                 | 590 | 1.8                   | 2.4  |
| 596-2326-002F | 596-2326-013F     | ● Yellow-Green | ● Blue         | AllInGaP/InGaN | 3                        | 20  | 570                 | 470 | 1.8 / 2.8             | 2.4 / 3.3                                    |
| 596-2420-002F | 596-2420-013F     | ● Yellow       | ● Red          | AllInGaP       | 20                       | 35  | 590                 | 630 | 1-8                   | 2-4  |
| 596-2423-002F | 596-2423-013F     | ● Yellow       | ● Yellow-Green |                | 20                       | 3   | 590                 | 570 | 1-8                   | 2.4  |
| 596-2424-002F | 596-2424-013F     | ● Yellow       | ● Yellow       |                | 20                       | 20  | 590                 | 590 | 1-8                   | 2-4  |
| 596-2429-002F | 596-2429-013F     | ● Yellow       | ● Green        | AllInGaP/InGaN | 20                       | 140 | 590                 | 525 | 1.8 / 2.8             | 2.4 / 3.3                                    |
| 596-2525-002F | 596-2525-013F     | ● Orange       | ● Orange       | AllInGaP       | 17                       | 17  | 605                 | 605 | 1-8                   | 2-4  |
| 596-2626-002F | 596-2626-013F     | ● Blue         | ● Blue         | InGaN          | 20                       | 20  | 470                 | 470 | 2.8                   | 3.3  |
| 596-2926-002F | 596-2926-013F     | ● Green        | ● Blue         |                | 140                      | 20  | 525                 | 470 | 2.8                   | 3.3  |
| 596-2929-002F | 596-2929-013F     | ● Green        | ● Green        |                | 140                      | 140 | 525                 | 525 | 2.8                   | 3.3  |

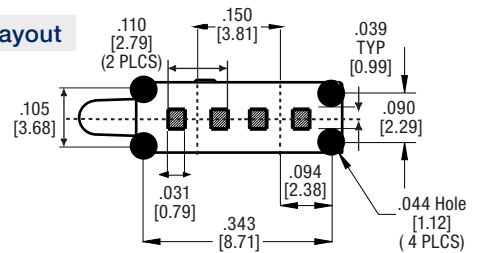
|               |               | 10 If=mA   |            | If = 2 mA |     |                     |     |     |     |     |
|---------------|---------------|------------|------------|-----------|-----|---------------------|-----|-----|-----|-----|
|               |               | Typ (mcd)  |            | Min       | Typ | Max                 | Typ | Max |     |     |
| 596-1010-013F | 596-1010-013F | ● Red      | ● Red      | 26        | 26  | 624                 | 630 | 635 | 1.7 | 2.2 |
| 596-1414-013F | 596-1414-013F | ● Yellow   | ● Yellow   | 5         | 5   | 600                 | 606 | 609 | 1.7 | 2.2 |
| 596-1515-013F | 596-1515-013F | ● Orange   | ● Orange   | 5.5       | 5.5 | 580                 | 587 | 595 | 1.7 | 2.2 |
| 596-1616-013F | 596-1616-013F | ● Ice Blue | ● Ice Blue | 6.5       | 6.5 | Typ<br>x=0.2, y=0.3 |     | 2.5 | 3.1 | 30  |
| 596-1818-013F | 596-1818-013F | ○ White    | ○ White    | 9.3       | 9.3 | x=0.33, y=0.33      |     | 2.5 | 3.1 |     |

### Absolute Maximum Ratings

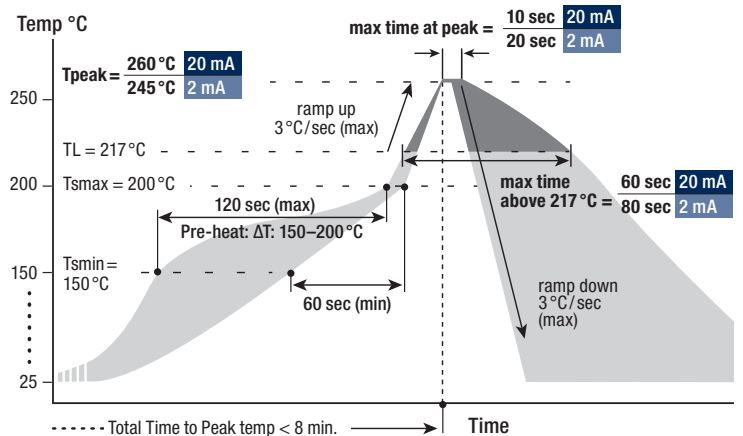
@ Ts=25 °C

|                             | If = 20 mA          |     | If = 2 mA          |     |
|-----------------------------|---------------------|-----|--------------------|-----|
| Power Dissipation (mW)      | ● R, ● Y, ● YG      | 48  |                    |     |
|                             | ● O                 | 60  | -                  |     |
|                             | ● G                 | 70  |                    |     |
| Forward Current (mA)        | all                 | 20  | ● R, ● O, ● Y, ○ W | 20  |
|                             |                     |     | ● IB               | 15  |
| Peak Pulse Fwd Current (mA) | ● R, ● Y, ● YG, ● G | 100 | ● R, ● O, ● Y      | 100 |
|                             | ● O                 | 80  | ● IB               | 150 |
| Reverse Voltage (V)         | all                 | 5   | ● R, ● O, ● Y      | 12  |
|                             |                     |     | ● IB, ○ W          | 5   |
| Operating Temp (°C)         | -40°C to +85°C      |     | -40°C to +100°C    |     |
| Storage Temp (°C)           | -40°C to +100°C     |     |                    |     |
| ESD Volt (HBM)              | >2000               |     |                    |     |

### Soldering Pad Layout



### Reflow Profile



Dialight reserves the right to make changes at any time in order to supply the best product possible. The most current version of this document will always be available at: [www.dialightsignalsandcomponents.com](http://www.dialightsignalsandcomponents.com)

Warranty Statement: Except for the warranty expressly provided for [herein/above/below], Dialight disclaims any and all other warranties, express or implied, including, without limitation, any warranties of merchantability, fitness for a particular purpose, title, and noninfringement.