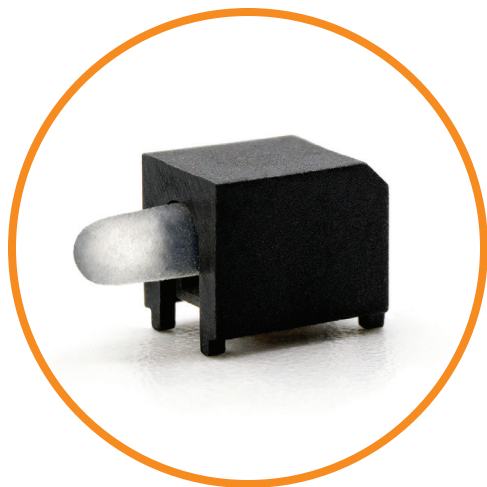




### Certifications & Ratings

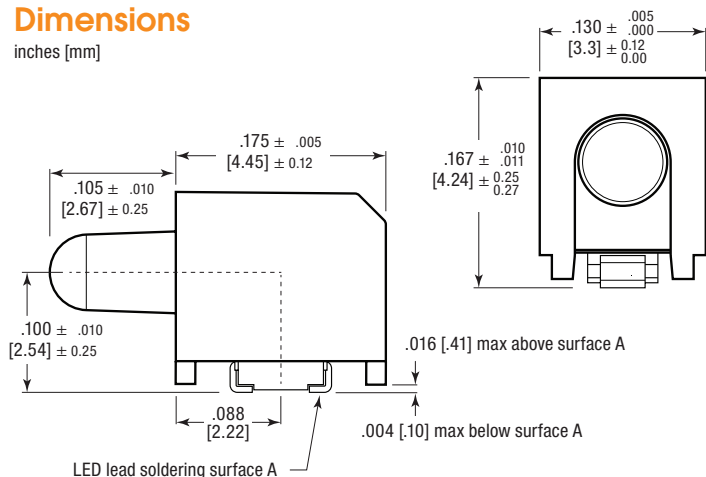
- RoHS and REACH compliant

### Features & Benefits

- Compatible with automatic placement equipment.
- Packaged in 16mm tape, 7" reel (400 pcs/reel) and 13" reel (1600 pcs/reel).
- Compatible with surface mount reflow soldering processes.
- Housing material meets UL-94V-0 flammability ratings.
- Design provides increased indication without increased space.
- Packaged in moisture barrier bags for dry packaging per IPC/JEDEC J-STD-033.
- Helps eliminate mixed technology PC board processing.
- MSL2 for 2mA, MSL3 for 20mA

### Dimensions

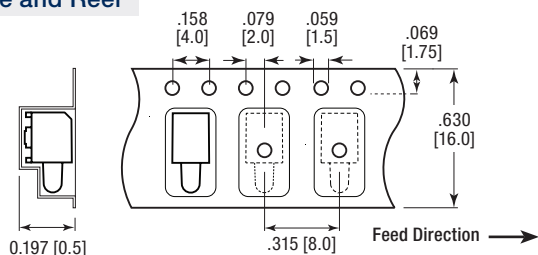
inches [mm]



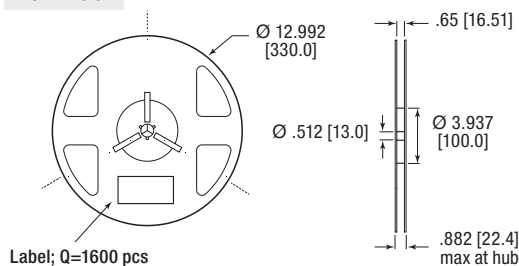
### Part Number Guide

| Part Number Guide |   |   |   |   |         |   |   |                  |   | RoHS Compliant |                     |   |
|-------------------|---|---|---|---|---------|---|---|------------------|---|----------------|---------------------|---|
| 5                 | 9 | 4 | - | 2 | X       | X | X | -                | 0 | X              | X                   | F |
| Color             |   |   |   |   | Current |   |   | Packaging Option |   |                |                     |   |
| Red               |   |   |   | 0 | 0       |   | 1 | 20mA             | 0 | 7              | 7" reel / 400 pcs   |   |
| Orange            |   |   |   | 5 | 0       |   | 1 |                  | 1 | 3              | 13" reel / 1600 pcs |   |
| Yellow            |   |   |   | 4 | 0       |   | 1 |                  |   |                |                     |   |
| Yellow-Green      |   |   |   | 3 | 0       |   | 1 |                  |   |                |                     |   |
| Green             |   |   |   | 9 | 0       |   | 1 |                  |   |                |                     |   |
| Red               |   |   |   | 0 | 0       |   | 4 | 2mA              |   |                |                     |   |
| Orange            |   |   |   | 5 | 0       |   | 4 |                  |   |                |                     |   |
| Yellow            |   |   |   | 4 | 0       |   | 4 |                  |   |                |                     |   |
| Blue              |   |   |   | 6 | 0       |   | 1 | 20mA             |   |                |                     |   |
| White             |   |   |   | 8 | 0       |   | 1 | 20mA             |   |                |                     |   |

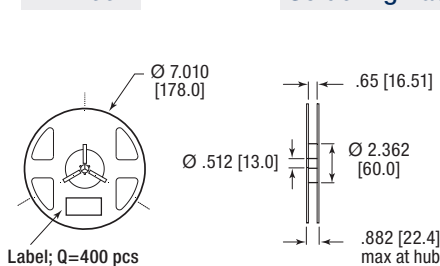
### Tape and Reel



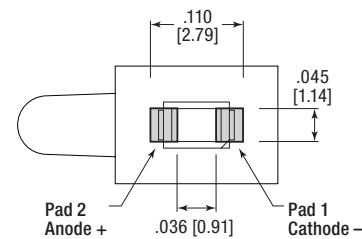
### 13" Reel



### 7" Reel



### Soldering Pad Layout



Reflow profiles shown on reverse >



## Electrical/Optical Characteristics

| Electrical/Optical Characteristics |                               |                |          | Luminous Intensity (mcd) | Dominant Wavelength (nm) |     | Forward Voltage (V) |     | Viewing Angle (°deg.) | Reverse Current Intensity (μA) |     |
|------------------------------------|-------------------------------|----------------|----------|--------------------------|--------------------------|-----|---------------------|-----|-----------------------|--------------------------------|-----|
|                                    |                               | Emitted Color  | Material | If = 20mA                |                          |     |                     |     |                       |                                |     |
| 7" Reel, 400 pcs                   | 13" Reel, 1600 pcs            |                |          | Typ                      | Min                      | Typ | Max                 | Typ |                       |                                | Max |
| <a href="#">594-2001-007F</a>      | <a href="#">594-2001-013F</a> | ● Red          | AlInGaP  | 54                       | —                        | 625 | —                   | 1.8 | 2.4                   | 120                            | 10  |
| <a href="#">594-2501-007F</a>      | <a href="#">594-2501-013F</a> | ● Orange       |          | 38                       | —                        | 605 | —                   | 1.8 | 2.4                   |                                |     |
| <a href="#">594-2401-007F</a>      | <a href="#">594-2401-013F</a> | ● Yellow       |          | 48                       | —                        | 590 | —                   | 1.8 | 2.4                   |                                |     |
| <a href="#">594-2301-007F</a>      | <a href="#">594-2301-013F</a> | ● Yellow-Green |          | 9                        | —                        | 570 | —                   | 1.8 | 2.4                   |                                |     |
| <a href="#">594-2901-007F</a>      | <a href="#">594-2901-013F</a> | ● Green        | InGaN    | 312                      | —                        | 525 | —                   | 2.8 | 3.5                   |                                |     |

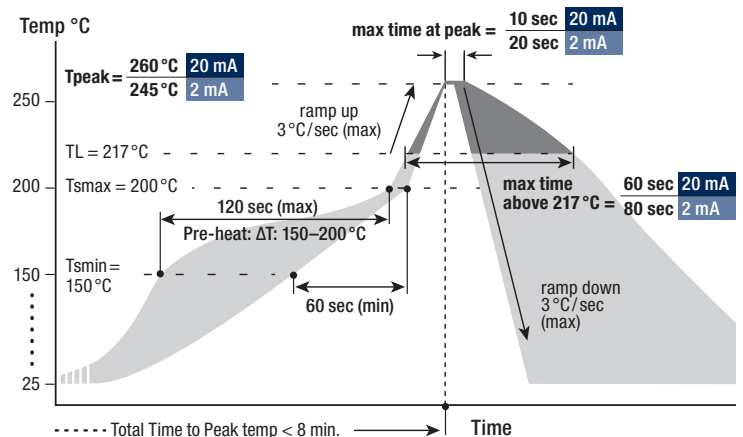
|                                |                                | Emitted Color | Material | If = 2 mA  |                    |     |     |     |     | Viewing Angle (°deg.) | Reverse Current Intensity (μA) |
|--------------------------------|--------------------------------|---------------|----------|------------|--------------------|-----|-----|-----|-----|-----------------------|--------------------------------|
|                                |                                |               |          | Typ        | Min                | Typ | Max | Typ | Max |                       |                                |
| <a href="#">594-2004-007F</a>  | <a href="#">594-2004-013F</a>  | Red           | AlInGaP  | 2          | 624                | 630 | 635 | 1.7 | 2.2 | 120                   | 10                             |
| <a href="#">594-2404-007F</a>  | <a href="#">594-2404-013F</a>  | Orange        |          | 3          | 600                | 606 | 609 | 1.7 | 2.2 |                       |                                |
| <a href="#">594-2504-007F</a>  | <a href="#">594-2504-013F</a>  | Yellow        |          | 2.2        | 580                | 587 | 595 | 1.7 | 2.2 |                       |                                |
|                                |                                | Emitted Color | Material | If = 10 mA |                    |     |     |     |     | Viewing Angle (°deg.) | Reverse Current Intensity (μA) |
|                                |                                |               |          | Typ        | Min                | Typ | Max | Typ | Max |                       |                                |
| <a href="#">594-2601-007F</a>  | <a href="#">594-2601-013F</a>  | Blue          | InGaN    | 50         | 465                | 470 | 475 | 2.5 | 3.1 | 120                   | 10                             |
| <a href="#">594-2801-007NF</a> | <a href="#">594-2801-013NF</a> | White         |          | 100        | x=0.297<br>y=0.292 |     |     | 2.8 | 3.3 |                       |                                |

## Absolute Maximum Ratings

@ Ts = 25 °C

| @ Ts= 25 °C                 | If = 20 mA              |     | If = 2 mA       |     |
|-----------------------------|-------------------------|-----|-----------------|-----|
| Power Dissipation (mW)      | ●R, ●Y, ●YG             | 48  | —               |     |
|                             | ●O                      | 60  |                 |     |
|                             | ○W                      | 62  |                 |     |
|                             | ●G, ●B                  | 70  |                 |     |
| Forward Current (mA)        | all                     | 20  | ●R, ●O, ●Y      | 20  |
| Peak Pulse Fwd Current (mA) | ●R, ●Y, ●YG, ●G, ●B, ○W | 100 | ●R, ●O, ●Y      | 100 |
|                             | ●O                      | 80  |                 |     |
| Reverse Voltage (V)         | all                     | 5   | ●R, ●O, ●Y      | 12  |
| Operating Temp (°C)         | -40°C to +85°C          |     | -40°C to +100°C |     |
| Storage Temp (°C)           | -40°C to +100°C         |     |                 |     |
| Electrostatic Discharge (V) | 2000                    |     |                 |     |

## 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)

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