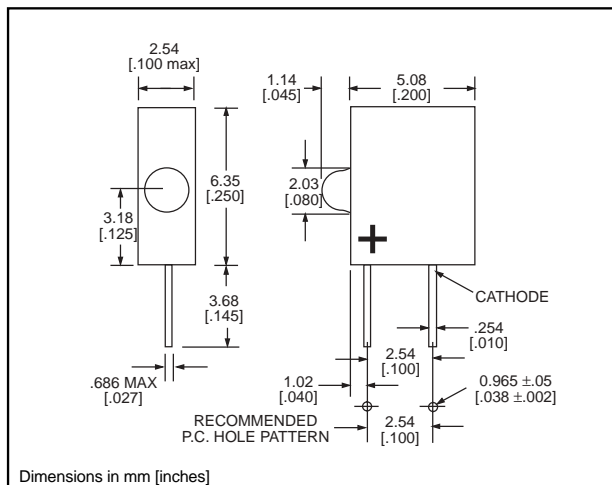


2mm  
LED CBI® Circuit Board Indicator  
Single

**Dialight**

555-2xxx



PART NO.

COLOR

GENERAL PURPOSE

|          |        |
|----------|--------|
| 555-2001 | Red    |
| 555-2301 | Green  |
| 555-2401 | Yellow |

INTEGRAL RESISTOR, VARIOUS VOLTAGES

|          |            |
|----------|------------|
| 555-2003 | Red, 5V    |
| 555-2007 | Red, 5V    |
| 555-2008 | Red, 24V   |
| 555-2009 | Red, 5V    |
| 555-2303 | Green, 5V  |
| 555-2403 | Yellow, 5V |

**Features**

- Multiple CBIs form horizontal LED arrays on 2.54mm (0.100") center-lines
- High Contrast, UL 94 V-0 rated, black housing
- Oxygen index: 31.5%
- Polymer content: PBT, 0.079 g
- Housing stand-offs facilitate PCB cleaning
- Solderability per MIL-STD-202F, method 208F
- LEDs are safe for direct viewing per IEC 825-1, EN-60825-1
- Compatible with: 555-4xxx Quad Block

**Tolerance note: As noted, otherwise:**

- LED Protrusion: ±0.04 mm [±0.016]
- CBI Housing: ±0.02mm[±0.008]

## Typical Operating Characteristics (T<sub>A</sub> = 25°C)

See LED data sheet for additional information

### GENERAL PURPOSE

See Page 3-17 and 3-18 for Reference Only LED Drive Circuit Examples

See Page 3-19 for Pin Out

| Part Number | Color  | Peak Wavelength nm | I <sub>v</sub> mcd | V <sub>F</sub> Volts | Test Current (mA) | Viewing Angle 2Θ <sub>1/2</sub> | LED Data sheet | Page # |
|-------------|--------|--------------------|--------------------|----------------------|-------------------|---------------------------------|----------------|--------|
| 555-2001    | Red    | 650                | 1.2                | 1.6                  | 20                | 40°                             | 2ND-9412       | 3-14   |
| 555-2301    | Green  | 565                | 1                  | 2.4                  | 20                | 40°                             | 2ND-9414       | 3-14   |
| 555-2401    | Yellow | 583                | 2                  | 2.2                  | 20                | 40°                             | 2ND-9416       | 3-14   |

## INTEGRAL RESISTOR, VARIOUS VOLTAGES

| Part Number | Color  | Peak Wavelength nm | I <sub>v</sub> mcd | I <sub>F</sub> mA | Test Voltage | Viewing Angle 2Θ <sub>1/2</sub> | LED Data sheet | Page # |
|-------------|--------|--------------------|--------------------|-------------------|--------------|---------------------------------|----------------|--------|
| 555-2003    | Red    | 650                | 1.9                | 6                 | 5            | 40°                             | 2RD-9614       | 3-15   |
| 555-2007    | Red    | 650                | .9                 | 3                 | 5            | 40°                             | 2RD-9613       | 3-15   |
| 555-2008    | Red    | 650                | .9                 | 3                 | 24           | 40°                             | 2RD-9623       | 3-16   |
| 555-2009    | Red    | 650                | .6                 | 1                 | 5            | 40°                             | 2RD-9618       | 3-15   |
| 555-2303    | Green  | 565                | 2.5                | 4.7               | 5            | 40°                             | 2RD-9615       | 3-15   |
| 555-2403    | Yellow | 583                | 2.1                | 4.7               | 5            | 40°                             | 2RD-9616       | 3-15   |

3



2mm  
General Purpose  
Diffused

**Dialight**

2ND-xxxx

**\* NOT A VALID PART  
NUMBER. THIS SHEET IS FOR  
REFERENCE ONLY.**

| <u>TYPE</u> | <u>COLOR</u> |
|-------------|--------------|
| 2ND-9412*   | Red          |
| 2ND-9414*   | Green        |
| 2ND-9416*   | Yellow       |

| <b>ABSOLUTE MAXIMUM RATINGS</b> ( $T_A=25^\circ\text{C}$ )           | Red<br><b>-9412</b>                                | Green<br><b>-9414</b> | Yellow<br><b>-9416</b> |
|--|--|-----------------------|------------------------|
| Power Dissipation (mW)   | 80   | 80                    | 80                     |
| Derating (mW/ $^\circ\text{C}$ ) From $25^\circ\text{C}$             | 1.1  | 1.1                   | 1.1                    |
| Forward Current (mA)   | 40   | 25                    | 25                     |
| Peak Current (mA)<br><i>Pulse width = 1 <math>\mu\text{s}</math></i> | 250  | 250                   | 250                    |
| Operating Temperature ( $^\circ\text{C}$ )                           | -55/+100   | -55/+100              | -55/+100               |
| Storage Temperature ( $^\circ\text{C}$ )                             | -55/+100   | -55/+100              | -55/+100               |
| Soldering Temperature  | 260 $^\circ\text{C}$ , 5 seconds, 1.6 mm from case |                       |                        |

| <b>OPERATING CHARACTERISTICS</b> ( $T_A=25^\circ\text{C}$ ) |         | Red<br><b>-9412</b> | Green<br><b>-9414</b> | Yellow<br><b>-9416</b> |
|---|---------|---------------------|-----------------------|------------------------|
| Luminous Intensity (mcd)<br>$I_F=20\text{mA}$               | Min.    | 1                   | .5                    | .6                     |
|   | Typical | 1.2                 | 1                     | 2                      |
| Peak Wavelength (nm)<br>$\lambda_{\text{Peak}}$             | Typical | 650                 | 565                   | 583                    |
| Viewing Angle ( $2\theta_{1/2}$ )                           | Typical | 40 $^\circ$         | 40 $^\circ$           | 40 $^\circ$            |
| Forward Voltage (V)<br>$I_F=20\text{mA}$                    | Typical | 1.6                 | 2.4                   | 2.2                    |
|   | Max.    | 2                   | 3                     | 3                      |
| Reverse Voltage (V), $I_R=10\mu\text{A}$                    | Min.    | 3                   | 3                     | 3                      |

$\theta_{1/2}$  is the off axis angle at which the luminous intensity is half the axial luminous intensity

2mm  
Integral Resistor, 5 Volts  
Diffused



2RD-9613 thru 2RD-9618

**\* NOT A VALID PART NUMBER. THIS SHEET IS FOR REFERENCE ONLY.**

| TYPE      | COLOR  |
|-----------|--------|
| 2RD-9613* | Red    |
| 2RD-9614* | Red    |
| 2RD-9615* | Green  |
| 2RD-9616* | Yellow |
| 2RD-9618* | Red    |

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| <b>ABSOLUTE MAXIMUM RATINGS</b> ( $T_A=25^\circ\text{C}$ ) | Red<br><b>-9613</b>                                | Red<br><b>-9614</b> | Green<br><b>-9615</b> | Yellow<br><b>-9616</b> | Red<br><b>-9618</b> |
|--|--|---------------------|-----------------------|------------------------|---------------------|
| Forward Voltage (V)  | 6  | 6                   | 6                     | 6                      | 6                   |
| Operating Temperature ( $^\circ\text{C}$ )                 | -55/+100   | -55/+100            | -55/+100              | -55/+100               | -55/+100            |
| Storage Temperature ( $^\circ\text{C}$ )                   | -55/+100   | -55/+100            | -55/+100              | -55/+100               | -55/+100            |
| Soldering Temperature                                      | 260 $^\circ\text{C}$ , 5 seconds, 1.6 mm from case |                     |                       |                        |                     |

| <b>OPERATING CHARACTERISTICS</b> ( $T_A=25^\circ\text{C}$ ) | -       | Red<br><b>9613</b> | Red<br><b>-9614</b> | Green<br><b>-9615</b> | Yellow<br><b>-9616</b> | Red<br><b>-9618</b> |
|---|---------|--------------------|---------------------|-----------------------|------------------------|---------------------|
| Luminous Intensity (mcd)                                    | Min.    | .4                 | .8                  | .8                    | 1.3                    | .3                  |
|   | Typical | .9                 | 1.9                 | 2.5                   | 2.1                    | .6                  |
| Peak Wavelength (nm)  | Typical | 650                | 650                 | 565                   | 583                    | 650                 |
| $\lambda$ Peak  |         |                    |                     |                       |                        |                     |
| Viewing Angle ( $2\theta_{1/2}$ )                           | Typical | 40 $^\circ$        | 40 $^\circ$         | 40 $^\circ$           | 40 $^\circ$            | 40 $^\circ$         |
| Forward Current (mA)  | Typical | 3                  | 6                   | 4.7                   | 4.7                    | 1                   |
|   | Max.    | 4                  | 8                   | 6.7                   | 6.7                    | 2.6                 |
| Reverse Voltage (V), $I_R=100\mu\text{A}$                   | Min.    | 6                  | 6                   | 6                     | 6                      | 6                   |

2mm

Integral Resistor, Various Voltages

Diffused



2RD-9619 thru 2RD-9623

\* NOT A VALID PART NUMBER. THIS SHEET IS FOR REFERENCE ONLY.

| TYPE      | COLOR     |
|-----------|-----------|
| 2RD-9619* | Red, 14V  |
| 2RD-9620* | Red, 3.6V |
| 2RD-9621* | Red, 10V  |
| 2RD-9622* | Red, 15V  |
| 2RD-9623* | Red, 24V  |

| ABSOLUTE MAXIMUM RATINGS (T <sub>A</sub> =25°C) | Red 14V                            | Red 3.6V | Red 10V  | Red 15V  | Red 24V  |
|---|------------------------------------|----------|----------|----------|----------|
|   | -9619                              | -9620    | -9621    | -9622    | -9623    |
| Forward Voltage (V)                             | 14                                 | 3.6      | 10       | 15       | 24       |
| Operating Temperature (°C)                      | -55/+100                           | -55/+100 | -55/+100 | -55/+100 | -55/+100 |
| Storage Temperature (°C)                        | -55/+100                           | -55/+100 | -55/+100 | -55/+100 | -55/+100 |
| Soldering Temperature                           | 260°C, 5 seconds, 1.6 mm from case |          |          |          |          |

| OPERATING CHARACTERISTICS (T <sub>A</sub> =25°C) |         | Red 14V | Red 3.6V | Red 10V | Red 15V | Red 24V |
|--|---------|---------|----------|---------|---------|---------|
|  |         | -9619   | -9620    | -9621   | -9622   | -9623   |
| Luminous Intensity (mcd)                         | Min.    | 1.3     | 2.6      | 1.8     | .3      | .4      |
|  | Typical | 3.1     | 6.2      | 4.2     | .9      | .9      |
| Peak Wavelength (nm)                             | Typical | 650     | 650      | 650     | 650     | 650     |
| Viewing Angle (2θ <sub>1/2</sub> )               | Typical | 40°     | 40°      | 40°     | 40°     | 40°     |
| Forward Current (mA)                             | Typical | 10      | 20       | 14      | 3       | 3       |
|  | Max.    | 15      | 25       | 18      | 3.8     | 3.8     |
| Reverse Voltage (V), I <sub>R</sub> =100µA       | Typical | 15      | 4.6      | 11      | 16      | 25      |