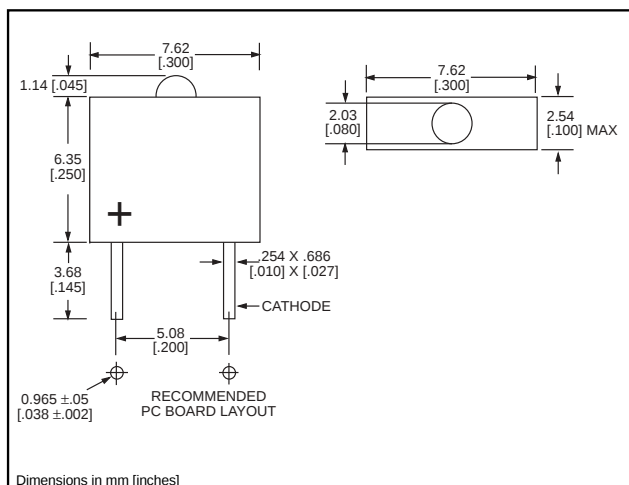


## LED CBI® Circuit Board Indicator

### Single, Top View

# Dialight

**555-3xxx**



## PART NO.

## GENERAL PURPOSE

555-3001

555-3301

555-3401

**COLOR**

Red

Green

Yellow

## INTEGRAL RESISTOR, VARIOUS VOLTAGES

555-3003

Red, 5V

555-3006

Red, 14V

555-3007

Red, 5V

555-3008

Red. 24V

555-3009

Red. 5V

555-3303

Green. 5V

555-3403

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, 0.090 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: 555-5xxx Quad Block

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

- LED Protrusion:  $\pm 0.04$  mm [ $\pm 0.016$ ]
- CBI Housing:  $\pm 0.02$  mm [ $\pm 0.008$ ]

## 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 # |
|-------------|--------|--------------------|--------------------|----------------------|-------------------|---------------------------------|----------------|--------|
| 555-3001    | Red    | 650                | 1.2                | 1.6                  | 20                | 40°                             | 2ND-9412       | 3-14   |
| 555-3301    | Green  | 565                | 1                  | 2.4                  | 20                | 40°                             | 2ND-9414       | 3-14   |
| 555-3401    | 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 # |
|-------------|--------|--------------------|--------------------|-------------------|--------------|---------------------------------|----------------|--------|
| 555-3003    | Red    | 650                | 1.9                | 6                 | 5            | 40°                             | 2RD-9614       | 3-15   |
| 555-3006    | Red    | 650                | 3.1                | 10                | 14           | 40°                             | 2RD-9619       | 3-16   |
| 555-3007    | Red    | 650                | .9                 | 3                 | 5            | 40°                             | 2RD-9613       | 3-15   |
| 555-3008    | Red    | 650                | .9                 | 3                 | 24           | 40°                             | 2RD-9623       | 3-16   |
| 555-3009    | Red    | 650                | .6                 | 1                 | 5            | 40°                             | 2RD-9618       | 3-15   |
| 555-3303    | Green  | 565                | 2.5                | 4.7               | 5            | 40°                             | 2RD-9615       | 3-15   |
| 555-3403    | Yellow | 583                | 2.1                | 4.7               | 5            | 40°                             | 2RD-9616       | 3-15   |

2mm  
General Purpose  
Diffused

**Dialight**

2ND-XXXX

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

TYPE

2ND-9412\*  
2ND-9414\*  
2ND-9416\*

COLOR

Red  
Green  
Yellow

**ABSOLUTE MAXIMUM RATINGS** ( $T_A=25^\circ\text{C}$ )

|                                                                      | Red<br>-9412                                       | Green<br>-9414 | Yellow<br>-9416 |
|----------------------------------------------------------------------|----------------------------------------------------|----------------|-----------------|
| 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 |                |                 |

**OPERATING CHARACTERISTICS** ( $T_A=25^\circ\text{C}$ )

|                                          |         | Red<br>-9412 | Green<br>-9414 | Yellow<br>-9416 |
|------------------------------------------|---------|--------------|----------------|-----------------|
| Luminous Intensity (mcd)                 | Min.    | 1            | .5             | .6              |
| $I_F=20\text{mA}$                        | Typical | 1.2          | 1              | 2               |
| Peak Wavelength (nm)                     | Typical | 650          | 565            | 583             |
| $\lambda_{\text{Peak}}$                  |         |              |                |                 |
| Viewing Angle ( $2\theta_{1/2}$ )        | Typical | 40 $^\circ$  | 40 $^\circ$    | 40 $^\circ$     |
| Forward Voltage (V)                      | Typical | 1.6          | 2.4            | 2.2             |
| $I_F=20\text{mA}$                        | 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

**Dialight**

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    |

3

| <b>ABSOLUTE MAXIMUM RATINGS</b> ( $T_A=25^{\circ}\text{C}$ ) | Red<br>-9613                                         | Red<br>-9614 | Green<br>-9615 | Yellow<br>-9616 | Red<br>-9618 |
|--------------------------------------------------------------|------------------------------------------------------|--------------|----------------|-----------------|--------------|
| 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>9613   | Red<br>-9614  | Green<br>-9615 | Yellow<br>-9616 | Red<br>-9618  |
|---------------------------------------------------------------|---------|---|---------------|---------------|----------------|-----------------|---------------|
| 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           |
| $\lambda_{\text{Peak}}$                                       |         |   |               |               |                |                 |               |
| 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

**Dialight**

2RD-9619 thru 2RD-9623

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

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

**ABSOLUTE MAXIMUM RATINGS** ( $T_A=25^{\circ}\text{C}$ )

|                                              | Red 14V<br><b>-9619</b>                              | Red 3.6V<br><b>-9620</b> | Red 10V<br><b>-9621</b> | Red 15V<br><b>-9622</b> | Red 24V<br><b>-9623</b> |
|----------------------------------------------|------------------------------------------------------|--------------------------|-------------------------|-------------------------|-------------------------|
| Forward Voltage (V)                          | 14                                                   | 3.6                      | 10                      | 15                      | 24                      |
| 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 |                          |                         |                         |                         |

**OPERATING CHARACTERISTICS** ( $T_A=25^{\circ}\text{C}$ )

|                                           |         | Red 14V<br><b>-9619</b> | Red 3.6V<br><b>-9620</b> | Red 10V<br><b>-9621</b> | Red 15V<br><b>-9622</b> | Red 24V<br><b>-9623</b> |
|-------------------------------------------|---------|-------------------------|--------------------------|-------------------------|-------------------------|-------------------------|
| Luminous Intensity (mcd)                  | Min.    | 1.3                     | 2.6                      | 1.8                     | .3                      | .4                      |
| $V_F$ =Forward Voltage                    | Typical | 3.1                     | 6.2                      | 4.2                     | .9                      | .9                      |
| Peak Wavelength (nm)                      | Typical | 650                     | 650                      | 650                     | 650                     | 650                     |
| $\lambda$ Peak                            |         |                         |                          |                         |                         |                         |
| Viewing Angle ( $2\theta_{1/2}$ )         | Typical | 40 $^{\circ}$           | 40 $^{\circ}$            | 40 $^{\circ}$           | 40 $^{\circ}$           | 40 $^{\circ}$           |
| Forward Current (mA)                      | Typical | 10                      | 20                       | 14                      | 3                       | 3                       |
| $V_F$ =Forward Voltage                    | Max.    | 15                      | 25                       | 18                      | 3.8                     | 3.8                     |
| Reverse Voltage (V), $I_R=100\mu\text{A}$ | Typical | 15                      | 4.6                      | 11                      | 16                      | 25                      |