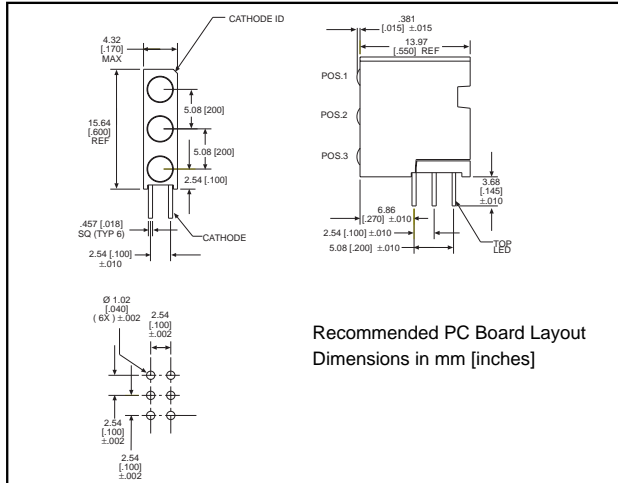


# 3mm LED CBI® Circuit Board Indicator Tri-Level For Backlighting

# Dialight

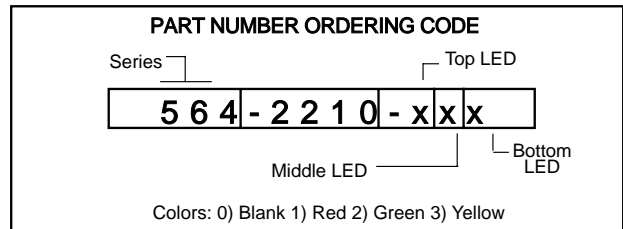
564-2210-xxx



**PART NO.**  
HIGH EFFICIENCY, TINTED,  
NON DIFFUSED  
564-2210-111  
564-2210-222  
564-2210-333

**COLOR\***  
  
Red  
Green  
Yellow

\* Top-Middle-Bottom LED



## Features

- Extended housing and narrow viewing angle LEDs reduce light bleed
- Multiple CBIs form horizontal LED arrays on 4.45mm (0.175") center-lines.
- High Contrast, UL 94 V-0 rated, black housing
- Oxygen index: 32%
- Polymer content: PBT, 0.078 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:
  - 551-xx02 Single
  - 553-22xx-100 Bi-Level
  - 568-221x-xxx Quad-Level

## 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 @ TA=25°C

See LED data sheet for additional information  
See Pages 4-73 and 4-74 for LED Drive Circuit Examples  
See Page 4-72 for Pin Out

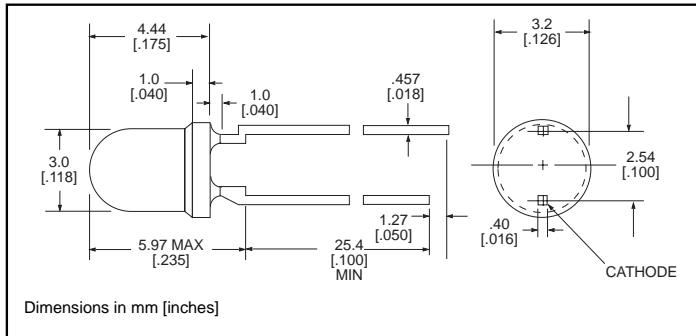
Part Number	Color	Peak Wavelength nm	I <sub>v</sub> mcd	V <sub>f</sub> Volts	Test Current (mA)	Viewing Angle 2Θ <sub>1/2</sub>	LED Data sheet	Page #
564-2210-111	Red	635	29	2	10	45°	521-9432	4-61
564-2210-222	Green	565	50	2.1	10	45°	521-9430	4-61
564-2210-333	Yellow	585	20	2.1	10	45°	521-9431	4-61

\* I<sub>F</sub> = 20mA

**3mm Discrete LED**  
**High Efficiency**  
**Tinted, Non-Diffused**

**Dialight**

**521-9430, -9431, -9432**



**PART NO.**

**COLOR**

521-9430  
 521-9431  
 521-9432

Green  
 Yellow  
 Red

**MOUNTING CLIP: 515-0006**  
 located on page 4-65

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

	Green <b>-9430</b>	Yellow <b>-9431</b>	Red <b>-9432</b>
Power Dissipation (mW)	100	60	100
Forward Current (mA)	30	20	30
Derating (mA/°C) From 50°C	.4	.25	.4
Peak Current (mA) Pulse width = 100µs	120	80	120
Operating Temperature (°C)	-55/+100	-55/+100	-55/+100
Storage Temperature (°C)	-55/+100	-55/+100	-55/+100
Soldering Temperature	260°C, 5 seconds, 1.6 mm from case		

Solder Adherence per MIL-STD-202E, Method 208C

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

		Green <b>-9430</b>	Yellow <b>-9431</b>	Red <b>-9432</b>
Luminous Intensity (mcd) $I_F=10\text{mA}$	Min.	32	10	8.7
	Typical	50	20	29
Peak Wavelength (nm) $\lambda$ Peak	Typical	565	585	635
Viewing Angle ( $2\theta_{1/2}$ )	Typical	45°	45°	45°
Forward Voltage (V) $I_F=20\text{mA}$	Typical	2.1	2.1	2
	Max.	2.8	2.8	2.8

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

**4**