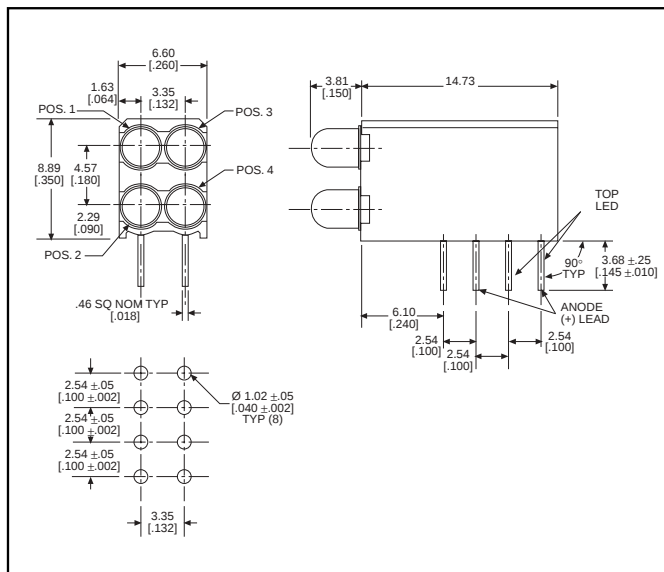


# 3mm LED CBI® Circuit Board Indicator High Density Dual Bi-Level

# Dialight

## 569-010x-xxx



### PART NO.

569-0101-111

569-0102-222

569-0103-333

569-0107-777

569-0108-888

### COLOR\*

Red

Green

Yellow

Orange

Blue<sup>3</sup>

**NEW**

\* LED 1, LED 2, LED 3, LED 4

### Features

- Multiple CBIs form horizontal LED arrays on 3.35mm (0.132") center-lines
- High Contrast, UL 94 V-0 rated, black housing
- Oxygen index: 32%
- Polymer content: PBT, 0.860 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:
  - 569-011x-x00 Narrow Bi-Level

### Custom Combinations

- Contact factory for information on custom color combinations

### Tolerance note: As noted, otherwise:

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

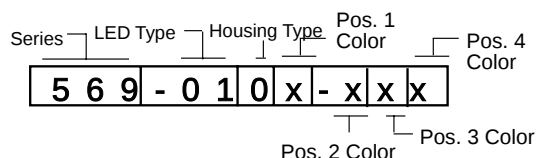
### Typical Operating Characteristics ( $T_A = 25^\circ\text{C}$ )

See LED data sheet for additional information  
See page 4-70 and 4-71 for Reference Only LED Drive Circuit Examples. See page 4-72 for Pin Out

| Part Number  | Color  | Peak Wavelength nm | $I_V$ mcd | $V_F$ Volts | Test Current (mA) | Viewing Angle 2 $\theta_{\%}$ | LED Data sheet | Page # |
|--------------|--------|--------------------|-----------|-------------|-------------------|-------------------------------|----------------|--------|
| 569-0101-111 | Red    | 635                | 10        | 2*          | 10                | 60°                           | 521-9216       | 4-58   |
| 569-0102-222 | Green  | 565                | 12.6      | 2.1*        | 10                | 60°                           | 521-9210       | 4-58   |
| 569-0103-333 | Yellow | 585                | 10        | 2.1*        | 10                | 60°                           | 521-9211       | 4-58   |
| 569-0107-777 | Orange | 600                | 7         | 2.2         | 10                | 60°                           | 521-9498       | 4-58   |
| 569-0108-888 | Blue   | 428                | 12        | 3.5         | 10                | 70°                           | 521-9831       | 4-57   |

\*  $I_F = 20\text{mA}$

### PART NUMBER ORDERING CODE



Color = 0) Blank 1) Red 2) Green 3) Yellow 7) Orange 8) Blue



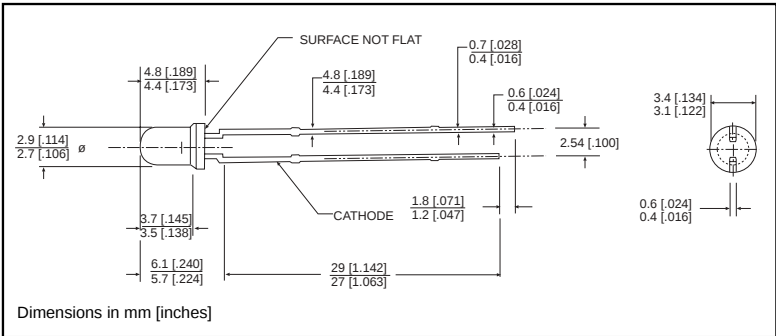
**ATTENTION**  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
SENSITIVE  
DEVICES



3mm Discrete LED  
Tinted, Diffused



521-9831



PART NO.

521-9831

COLOR

Blue<sup>3</sup>

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



3

ATTENTION  
OBSERVE PRECAUTIONS  
FOR HANDLING  
ELECTROSTATIC  
SENSITIVE  
DEVICES

4

ABSOLUTE MAXIMUM RATINGS (T<sub>A</sub>=25°C)

Blue  
-9831

|                            |                                    |
|----------------------------|------------------------------------|
| Power Dissipation (mW)     | 100                                |
| Forward Current (mA)       | 20                                 |
| Derating (mA/°C) From 55°C | .44                                |
| Operating Temperature (°C) | -40/+100                           |
| Storage Temperature (°C)   | -40/+100                           |
| Soldering Temperature      | 260°C, 5 seconds, 1.6 mm from case |

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

OPERATING CHARACTERISTICS (T<sub>A</sub>=25°C)

Blue  
-9831

|                                          |         |     |
|------------------------------------------|---------|-----|
| Luminous Intensity (mcd)                 | Min.    | 6.3 |
| I <sub>F</sub> =10mA                     | Typical | 12  |
| Peak Wavelength (nm)                     | Typical | 428 |
| λ Peak                                   |         |     |
| Viewing Angle (2Θ½)                      | Typical | 70° |
| Forward Voltage (V)                      | Typical | 3.5 |
| I <sub>F</sub> =10mA                     | Max.    | 4.2 |
| Reverse Voltage (V) I <sub>R</sub> =10μA | Min.    | 3   |

Θ½ is the off axis angle at which the luminous intensity is half the axial luminous intensity

# 3mm Discrete LED

## High Efficiency

### Diffused

# Dialight

## 521-9210, -9211, -9216, -9498, -9636



### PART NO. COLOR

521-9210 Green

521-9211 Yellow

521-9216 Red

521-9498 Orange

521-9636 Red



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

| <b>ABSOLUTE MAXIMUM RATINGS</b> ( $T_A=25^{\circ}\text{C}$ )                                        | Green<br><b>-9210</b>                                | Yellow<br><b>-9211</b> | Red<br><b>-9216</b> | Orange<br><b>-9498</b> | Red<br><b>-9636</b> |
|-----------------------------------------------------------------------------------------------------|------------------------------------------------------|------------------------|---------------------|------------------------|---------------------|
| Power Dissipation (mW)                                                                              | 100                                                  | 60                     | 100                 | 135                    | 100                 |
| Forward Current (mA)                                                                                | 30                                                   | 20                     | 30                  | 25                     | 40                  |
| Derating (mA/ $^{\circ}\text{C}$ ) From $50^{\circ}\text{C}$ <sup>1</sup> from $25^{\circ}\text{C}$ | .4                                                   | .25                    | .4                  | .5                     | .5 <sup>1</sup>     |
| 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 body |                        |                     |                        |                     |

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

| <b>OPERATING CHARACTERISTICS</b> ( $T_A=25^{\circ}\text{C}$ ) |                         | Green<br><b>-9210</b> | Yellow<br><b>-9211</b> | Red<br><b>-9216</b> | Orange<br><b>-9498</b> | Red<br><b>-9636</b> |
|---------------------------------------------------------------|-------------------------|-----------------------|------------------------|---------------------|------------------------|---------------------|
| Luminous Intensity (mcd)                                      | Min.                    | 4.7                   | 7.4                    | 7.4                 | 3.4                    | 8.7 <sup>1</sup>    |
|                                                               | Typical                 | 12.6                  | 10                     | 10                  | 7                      | 48 <sup>1</sup>     |
| Peak Wavelength (nm)                                          | Typical                 | 565                   | 585                    | 635                 | 600                    | 660                 |
|                                                               | $\lambda_{\text{Peak}}$ |                       |                        |                     |                        |                     |
| Viewing Angle ( $2\theta^{\circ}$ )                           | Typical                 | 60 $^{\circ}$         | 60 $^{\circ}$          | 60 $^{\circ}$       | 60 $^{\circ}$          | 60 $^{\circ}$       |
| Forward Voltage (V)                                           | Typical                 | 2.1 <sup>1</sup>      | 2.1 <sup>1</sup>       | 2 <sup>1</sup>      | 2.2                    | 1.8 <sup>1</sup>    |
|                                                               | Max.                    | 2.8 <sup>1</sup>      | 2.8 <sup>1</sup>       | 2.8 <sup>1</sup>    | 3                      | 2.4 <sup>1</sup>    |
| Reverse Voltage (V), $I_R=100\mu\text{A}$                     | Max.                    | 5                     | 5                      | 5                   | 5                      | 4                   |

$\theta^{\circ}$  is the off axis angle at which the luminous intensity is half the axial luminous intensity