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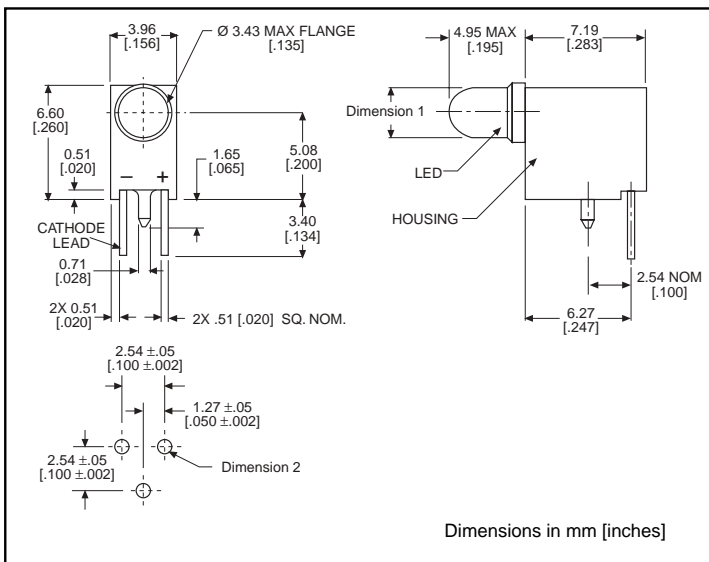
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**3mm
 LED CBI® Circuit Board Indicator
 .200" High LED Centerline, with Pin**



PART NO. COLOR CHART
HIGH EFFICIENCY

551-0211	Green	A
551-0311	Yellow	A
551-0411	Red	A
551-0811	Blue ³	B



LOW CURRENT

551-1111	Red	B
551-1211	Yellow	B
551-1311	Green	B

Features

- Designed to accommodate DIN 41494
- Locating pin provides stability during soldering
- Multiple CBIs form horizontal LED arrays on 3.96mm (0.156") center-lines
- High Contrast, UL 94 V-0 rated, black housing
- Oxygen index: 31.5%
- Polymer content: PBT, 0.227 g
- Available with Red housing
- Available without pin
- 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



	CHART A	CHART B
Dimension 1	3.10 ± 20 [.122 ± .008]	2.92 ± 25 [.115 ± .010]
Dimension 2	2X .51 [.020] SQ. NOM.	2X .46 [.018] SQ. NOM.



Tolerance note: As noted, otherwise:

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

Typical Operating Characteristics (T_A=25°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

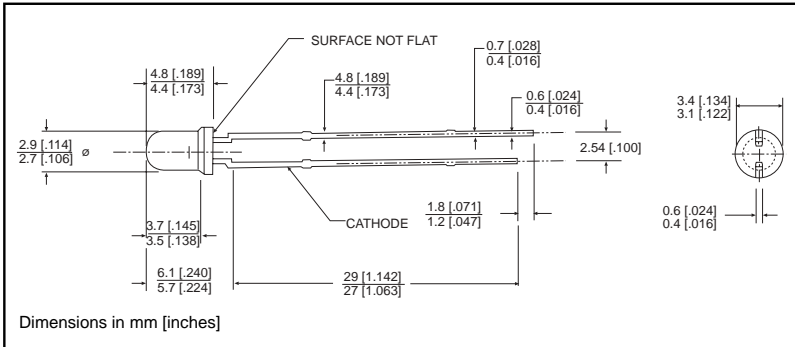
Part Number	Color	Peak Wavelength nm	I _v mcd	V _F Volts	Test Current (mA)	Viewing Angle 2θ%	LED Data sheet	Page #
551-0211	Green	563	16	2.1	10	45°	521-9408	4-64
551-0311	Yellow	585	6.3	2.1	10	45°	521-9428	4-64
551-0411	Red	650	10	2	10	45°	521-9427	4-64
551-0811	Blue	428	12	3.5	10	70°	521-9831	4-57
551-1111	Red	635	1.6	1.7	2	60°	521-9324	4-60
551-1211	Yellow	585	1.6	1.8	2	60°	521-9325	4-60
551-1311	Green	565	1.6	1.9	2	60°	521-9326	4-60



**3mm Discrete LED
Tinted, Diffused**



521-9831



PART NO. 521-9831
COLOR Blue³

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



4

ABSOLUTE MAXIMUM RATINGS (T_A=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_A=25°C)

Blue
-9831

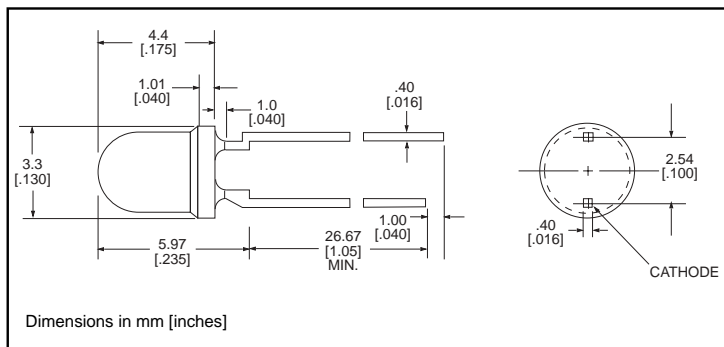
Luminous Intensity (mcd)	Min.	6.3
I _F =10mA	Typical	12
Peak Wavelength (nm)	Typical	428
λ Peak		
Viewing Angle (2θ½)	Typical	70°
Forward Voltage (V)	Typical	3.5
I _F =10mA	Max.	4.2
Reverse Voltage (V) I _R =10µA	Min.	3

θ ½ is the off axis angle at which the luminous intensity is half the axial luminous intensity

3mm Discrete LED
Low Current
Diffused

Dialight

521-9324, -9325, -9326



<u>PART NO.</u>	<u>COLOR</u>
521-9324	Red
521-9325	Yellow
521-9326	Green

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

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

	Red -9324	Yellow -9325	Green -9326
Power Dissipation (mW)	20	20	20
Forward Current (mA)	7	7	7
Derating (mA/°C) From 90°C	.7	.7	.7
Peak Current (mA) <i>Pulse width = 10 μs</i>	500	500	500
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 ($T_A=25^\circ\text{C}$)

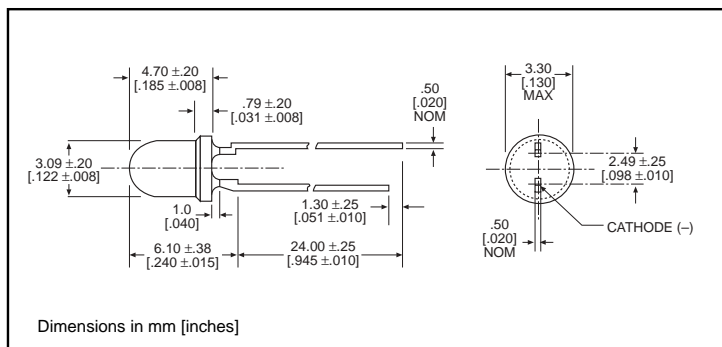
		Red -9324	Yellow -9325	Green -9326
Luminous Intensity (mcd) $I_F=2\text{mA}$	Min.	1	1	1
	Typical	1.6	1.6	1.6
Peak Wavelength (nm) λ_{Peak}	Typical	635	585	565
Viewing Angle ($2\theta^{1/2}$)	Typical	60°	60°	60°
Forward Voltage (V) $I_F=2\text{mA}$	Typical	1.7	1.8	1.9
	Max.	2.2	2.7	2.2
Reverse Voltage (V), $I_R=50\mu\text{A}$	Min.	5	5	5

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

3mm Discrete LED
High Efficiency
Diffused

Dialight

521-94xx



TYPE	COLOR
521-9408	Green
521-9427	Red
521-9428	Yellow

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

ABSOLUTE MAXIMUM RATINGS (T_A=25°C)

	Green -9408	Red -9427	Yellow -9428
Power Dissipation (mW)	75	60	60
Forward Current (mA)	25	20	20
Derating (mA/°C) From 50°C	.5	.5	.5
Peak Current (mA)	60	60	60
Operating Temperature (°C)	-25/+85	-25/+85	-25/+85
Storage Temperature (°C)	-30/+100	-30/+100	-30/+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°C)

		Green -9408	Red -9427	Yellow -9428
Luminous Intensity (mcd)	Min.	5.6	3.6	2.2
	Typical	16	10	6.3
Peak Wavelength (nm)	Typical	563	650	585
Viewing Angle (2Θ ^{1/2})	Typical	45°	45°	45°
Forward Voltage (V)	Typical	2.1	2	2.1
	Max.	3	3	3
Reverse Voltage (V), I _R =10μA	Min.	3	3	3

Θ^{1/2} is the off axis angle at which the luminous intensity is half the axial luminous intensity