



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

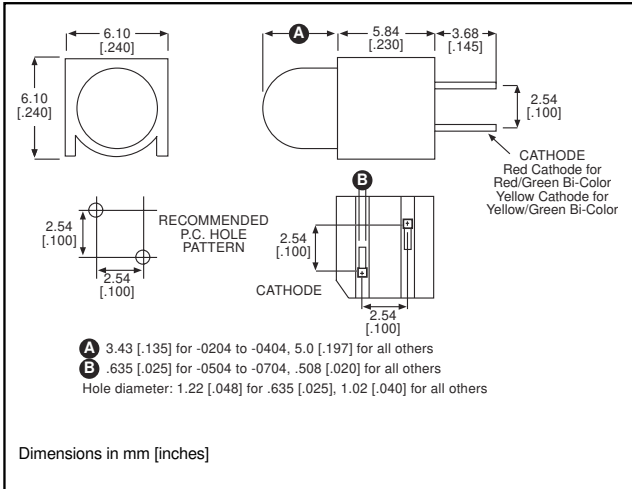


5mm

LED CBI® Circuit Board Indicator
Top View, Single

Dialight

550-xx04



Standard Polarity shown in drawing: Cathode same side as notch

Features

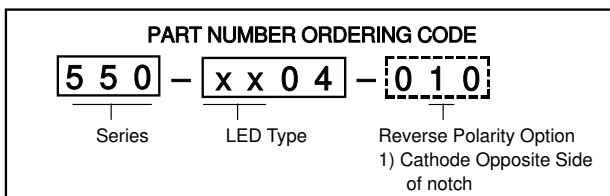
- Multiple CBIs form horizontal LED arrays on 6.35mm (0.250") center-lines.
- High Contrast, UL 94 V-0 rated, black housing
- Oxygen index: 32%
- Polymer content: PBT, 0.160 g
- Housing stand-offs facilitate PCB cleaning
- Solderability per MIL-STD-202F, method 208F
- LEDs are safe for direct viewing per IEC 825-1, EN-60825-1
- Compatible with:
550-xx04-004 quad block

Custom

- For custom LEDs contact factory.

Tolerance note: As noted, otherwise:

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



-010 Ordering Code Suffix required ONLY for Reverse Polarity Option

PART NO.

COLOR

GENERAL PURPOSE

- 550-0204 Green
- 550-0304 Yellow
- 550-0404 Red

INTEGRAL RESISTOR

- 550-0504 Red, 5V
- 550-0704 Green, 5V
- 550-0804 Yellow, 5V

LOW CURRENT

- 550-1104 Red
- 550-1204 Yellow
- 550-1304 Green

HIGH EFFICIENCY

- 550-2204 Green
- 550-2304 Yellow
- 550-2404 Red
- 550-2504 Orange

BI-COLOR

- 550-3004 Red/Green
- 550-3104 Yellow/Green

NEW

SUPER BRIGHT, DIFFUSED

- 550-5104 Red
- 550-5204 Green
- 550-5304 Yellow

SUPER BRIGHT, WATER CLEAR (Non-tinted, Non-diffused)

- 550-5504 Red
- 550-5604 Green
- 550-5704 Yellow

To order any of the 550-xx04 part numbers with Reverse Polarity (Cathode opposite side of notch), please add -010 to the part numbers shown above.

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

See LED data sheet for additional information

GENERAL PURPOSE See page 6-55 and 6-56 for Reference Only LED Drive Circuit Examples. See page 6-57 for Pin Out

Part Number	Color	Peak Wavelength nm	I_V mcd	V_F Volts	Test Current (mA)	Viewing Angle $2\theta_{1/2}$	LED Data sheet	Page #
550-0204	Green	565	12.3	2.1	20	60°	5ND-9674	6-51
550-0304	Yellow	585	12.3	2.1	20	60°	5ND-9673	6-51
550-0404	Red	635	12.3	2	20	60°	5ND-9672	6-51

INTEGRAL RESISTOR

Part Number	Color	Peak Wavelength nm	I_V mcd	Test Voltage	Forward Current (mA)	Viewing Angle $2\theta_{1/2}$	LED Data sheet	Page #
550-0504	Red	655	2	5	13	60°	5RD-9422	6-52
550-0704	Green	565	8	5	12	60°	5RD-9423	6-52
550-0804	Yellow	583	8	5	10	60°	521-9284	6-41

LOW CURRENT

Part Number	Color	Peak Wavelength nm	I_V mcd	V_F Volts	Test Current (mA)	Viewing Angle $2\theta_{1/2}$	LED Data sheet	Page #
550-1104	Red	635	2	1.8	2	50°	521-9320	6-42
550-1204	Yellow	583	1.8	1.9	2	50°	521-9321	6-42
550-1304	Green	565	1.8	1.8	2	50°	521-9327	6-42

HIGH EFFICIENCY

Part Number	Color	Peak Wavelength nm	I_V mcd	V_F Volts	Test Current (mA)	Viewing Angle $2\theta_{1/2}$	LED Data sheet	Page #
550-2204	Green	563	10	2.1	10	65°	5HD-9270-5	6-49
550-2304	Yellow	585	6.3	2.1	10	50°	5HD-9271-5	6-49
550-2404	Red	650	7	2.2	10	50°	5HD-9269	6-49
550-2504	Orange	600	7	1.9	10	60°	521-9704	6-43

BI-COLOR

Part Number	Color	Peak Wavelength nm	I_V mcd	V_F Volts	Test Current (mA)	Viewing Angle $2\theta_{1/2}$	LED Data sheet	Page #
550-3004	Red/Green	660/565	90/40	1.8/2.1	20	60°	521-9651	6-46
550-3104	Yellow/Green	585/565	8.7/8.7	2.1/2.1	20	50°	521-9724	6-46

SUPER BRIGHT, DIFFUSED

Part Number	Color	Peak Wavelength nm	I_V mcd	V_F Volts	Test Current (mA)	Viewing Angle $2\theta_{1/2}$	LED Data sheet	Page #
550-5104	Red	650	34	2.1	20	50°	5SD-9441	6-53
550-5204	Green	563	34	2.2	20	50°	5SD-9456	6-53
550-5304	Yellow	585	34	2.2	20	50°	5SD-9455	6-53

SUPER BRIGHT, WATER CLEAR (NON-TINTED, NON-DIFFUSED)

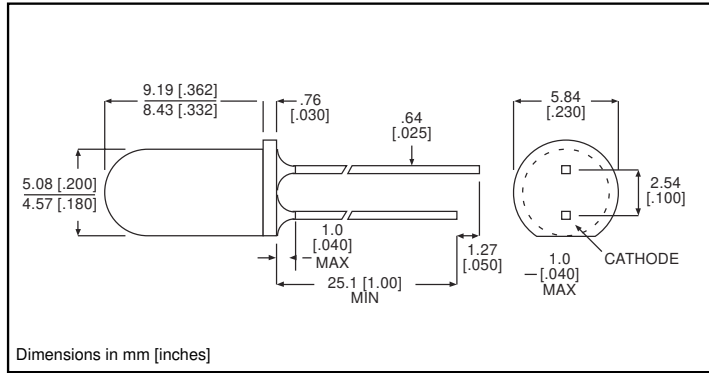
Part Number	Color	Peak Wavelength nm	I_V mcd	V_F Volts	Test Current (mA)	Viewing Angle $2\theta_{1/2}$	LED Data sheet	Page #
550-5504	Red	635	125	2.2	20	24°	521-9464	6-47
550-5604	Green	565	120	2.3	20	24°	521-9465	6-47
550-5704	Yellow	583	140	2.2	20	24°	521-9466	6-47



5mm Discrete LED Integral Resistor, 5 Volts Diffused

Dialight

521-9183, -9284



PART NO.	LED COLOR
521-9183	Red
521-9284	Yellow

MOUNTING CLIP: 515-0004
located on page 6-48

ABSOLUTE MAXIMUM RATINGS ($T_A=25^\circ\text{C}$)	Red	Yellow
	-9183	-9284
Forward Voltage (V)	7.5	7.5
Derating (V/°C) From 50°C	.071	.071
Operating Temperature (°C)	-40/+85	-40/+85
Storage Temperature (°C)	-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	Yellow
		-9183	-9284
Luminous Intensity (mcd)	Min.	2	2
	Typical	8	8
Peak Wavelength (nm)	Typical	635	583
Viewing Angle ($2\theta^{1/2}$)	Typical	60°	60°
Forward Current (I)	Typical	10	10
	Max	15	15
Reverse Voltage (V), $I_R=100\mu\text{A}$	Min.	5	5

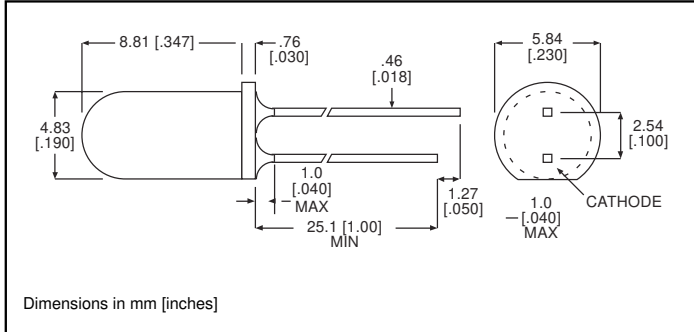
$\theta^{1/2}$ is the off axis angle at which the luminous intensity is half the axial luminous intensity

6

5mm Discrete LED
Low Current, 2mA
Diffused

Dialight

521-9320, -9321, -9327



<u>PART NO.</u>	<u>COLOR</u>
521-9320	Red
521-9321	Yellow
521-9327	Green

MOUNTING CLIP: 515-0004
 located on page 6-48

ABSOLUTE MAXIMUM RATINGS (TA=25°C)

	Red -9320	Yellow -9321	Green -9327
Power Dissipation (mW)	27	36	24
Derating (mA/°C) From 92°C	1	1	1
Forward Current (mA)	7	7	7
Peak Current (mA) Pulse width = 10 μs	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 (TA=25°C)

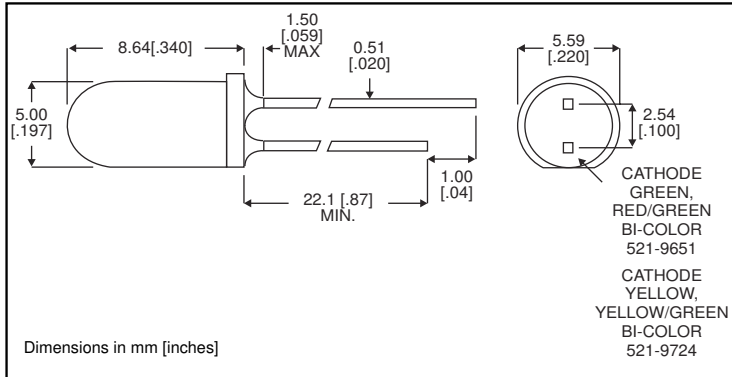
		Red -9320	Yellow -9321	Green -9327
Luminous Intensity (mcd)	Min.	1.2	1.2	1.2
	Typical	2	1.8	1.8
Peak Wavelength (nm) λ Peak	Typical	635	583	565
Viewing Angle (2θ ½)	Typical	50°	50°	50°
Forward Voltage (V)	Typical	1.8	1.9	1.8
	Max.	2.2	2.7	2.2
Reverse Voltage (V), I _R =50μA	Min.	5	5	5

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

**5mm Discrete LED
Bi-Color
Non-Tinted, Diffused**

Dialight

521-9651, -9724



PART NO.	LED COLOR
521-9651	Red/Green
521-9724	Yellow/Green

MOUNTING CLIP: 515-0005
located on page 6-48

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

	Red/Green -9651	Yellow/Green -9724
Power Dissipation (mW)	100/100	60/100
Forward Current (mA)	40/30	20/30
Derating (mA/°C) From 50°C	.5/.4	.25/.40
Peak Current (mA) <i>Pulse width = 100 μs</i>	200/120	80/120
Operating Temperature (°C)	-55/+100	-55/+100
Storage Temperature (°C)	-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 ($T_A=25^\circ\text{C}$)

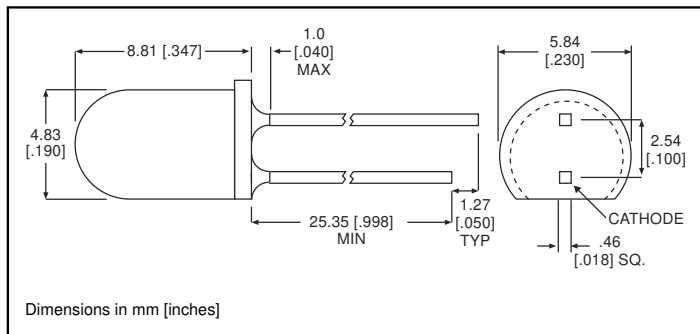
		Red/Green -9651	Yellow/Green -9724
Luminous Intensity (mcd)	Min.	29/12.6	2.5/2.5
	Typical	90/40	8.7/8.7
Peak Wavelength (nm) λ_{Peak}	Typical	660/565	585/565
Viewing Angle ($2\theta^{\circ}$)	Typical	60°	50°
Forward Voltage (V)	Typical	1.8/2.1	2.1/2.1
	Max.	2.4/2.8	2.8/2.8

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

5mm Discrete LED
Super Bright, Water Clear
Non-Tinted, Non-Diffused

Dialight

521-9464,-9465,-9466



PART NO. **COLOR**

521-9464	Red
521-9465	Green
521-9466	Yellow

MOUNTING CLIP: 515-0004
 located on page 6-48

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

	Red -9464	Green -9465	Yellow -9466
Power Dissipation (mW)	135	135	85
Derating (mW/°C) <i>From 25°C 1. From 50 °C</i>	1.8	1.8	1.6 ¹
Forward Current (mA)	30	30	20
Peak Current (mA) <i>Pulse width = 10 μs</i>	500	500	500
Operating Temperature (°C)	-55/+100	-20/+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 -9464	Green -9465	Yellow -9466
Luminous Intensity (mcd)	Min.	80	80	80
	Typical	125	120	140
Peak Wavelength (nm)	Typical	635	565	583
Viewing Angle ($2\theta^{1/2}$)	Typical	24°	24°	24°
Forward Voltage (V)	Typical	2.2	2.3	2.2
	Max.	3	3	3
Reverse Voltage (V), $I_R=100\mu\text{A}$	Min.	5	5	5

¹ θ is the off axis angle at which the luminous intensity is half the axial luminous intensity

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5mm
High Efficiency
Diffused



5HD-xxxx

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

TYPE	COLOR
*5HD-9269	Red
*5HD-9270-2	Green
*5HD-9270-5	Green
*5HD-9271-2	Yellow
*5HD-9271-5	Yellow

ABSOLUTE MAXIMUM RATINGS

(T _A =25°C)	Red -9269	Green -9270-2	Green -9270-5	Yellow -9271-2	Yellow -9271-5
Power Dissipation (mW) Derating (mW/°C) From 50°C 1. From 40°C	60 .66 ¹	140	75 .66 ¹	200	60 .66 ¹
Forward Current (mA) Derating (mA/°C) From 25°C	20	40 .6	25	60 .8	20
Peak Current (mA) Pulse width = 1μs	60	500	60	1000	60
Operating Temperature (°C)	-25/+85	-55/+100	-25/+85	-55/+100	-25/+85
Storage Temperature (°C)	-30/+100	-55/+100	-30/+100	-55/+100	-30/+100
Soldering Temperature	260°C, 5 seconds, 1.6 mm from case				

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

6

OPERATING CHARACTERISTICS

(T _A =25°C)		Red -9269	Green -9270-2	Green -9270-5	Yellow -9271-2	Yellow -9271-5
Luminous Intensity (mcd)	Min.	2.2	4	3.6	4	2.2
	Typical	7	32	10	10	6.3
Peak Wavelength (nm)	Typical	650	565	563	590	585
	λ Peak					
Viewing Angle (2Θ °)	Typical	50°	50°	65°	70°	50°
Forward Voltage (V)	Typical	2.2	2*	2.1	2.4*	2.1
	Max.	2.5	2.6*	3	3*	3
Reverse Voltage (V),	Min.	5	5*	3*	5*	3
	I _R =100μA *I _R =10μA					

Θ ° is the off axis angle at which the luminous intensity is half the axial luminous intensity

5mm
General Purpose
Diffused

Dialight

5ND-xxxx

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

TYPE

COLOR

*5ND-9672

Red

*5ND-9673

Yellow

*5ND-9674

Green

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

	Red -9672	Yellow -9673	Green -9674
Power Dissipation (mW)	80	60	100
Forward Current (mA)	40	20	30
Derating (mA/°C) <i>From 25°C</i>	.5	.25	.4
Peak Current (mA) <i>Pulse width = 10 μs</i>	200	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 ($T_A=25^\circ\text{C}$)

		Red -9672	Yellow -9673	Green -9674
Luminous Intensity (mcd) $I_F=20\text{mA}$	Min.	3.5	3.5	3.5
	Typical	12.3	12.3	12.3
Peak Wavelength (nm) λ_{Peak}	Typical	635	585	565
Viewing Angle ($2\theta^{1/2}$)	Typical	60°	60°	60°
Forward Voltage (V) $I_F=20\text{mA}$	Typical	2	2.1	2.1
	Max.	2.8	2.8	2.8
Reverse Voltage (V), $I_R=100\mu\text{A}$	Min.	5	5	5

θ^1 is the off axis angle at which the luminous intensity is half the axial luminous intensity

6

5mm
Integral Resistor
Diffused

Dialight
5RD-xxxx

*** NOT A VALID PART
NUMBER. THIS SHEET IS FOR
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TYPE	COLOR	VOLTS
*5RD-9378	Green	12
*5RD-9379	Yellow	12
*5RD-9422	Red	5
*5RD-9423	Green	5

ABSOLUTE MAXIMUM RATINGS

(T _A =25°C)	Green 12V -9378	Yellow 12V -9379	Red 5V -9422	Green 5V -9423
Forward Voltage (V) *(T _A =70°C)	15*	15	7.5	7.5
Operating Temperature (°C)	-20/+85	-40/+85	-40/+85	-20/+85
Storage Temperature (°C)	-55/+100	-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°C)		Green 12V -9378	Yellow 12V -9379	Red 5V -9422	Green 5V -9423
Luminous Intensity (mcd)	Min.	1.5*	1.5*	1	2
	Typical	4*	4*	2	8
Peak Wavelength (nm)	Typical	565	583	655	565
Viewing Angle (2θ *)	Typical	60°	60°	60°	60°
Forward Current (mA), V _F =5V *V _F =12V	Typical	13*	13*	13	12
	Max.	20*	20*	20	15
Reverse Voltage (V), I _R =100μA	Typical	5	5	5	5

θ¹ is the off axis angle at which the luminous intensity is half the axial luminous intensity