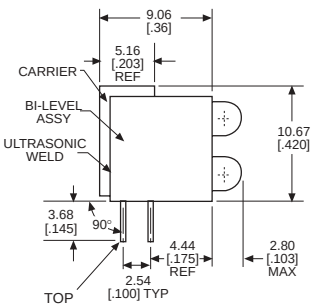
3mm
LED CBI Circuit Board Indicator
Ganged Arrays

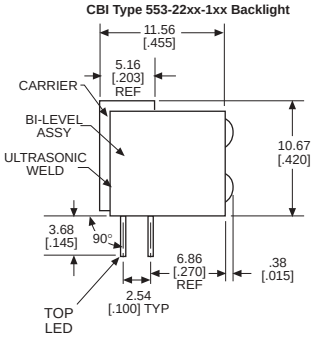
Dialight

553-xxxx-xxx

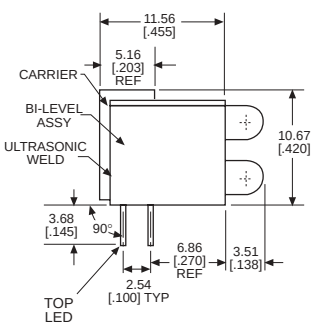
CBI Type 553-xxxx-0xx Standard View STANDARD POLARITY CATHODE ON RIGHT



CBI Type 553-22xx-1xx Backlight STANDARD POLARITY CATHODE ON RIGHT



CBI Type 553-xxxx-2xx DIN Compatible STANDARD POLARITY ANODE ON RIGHT



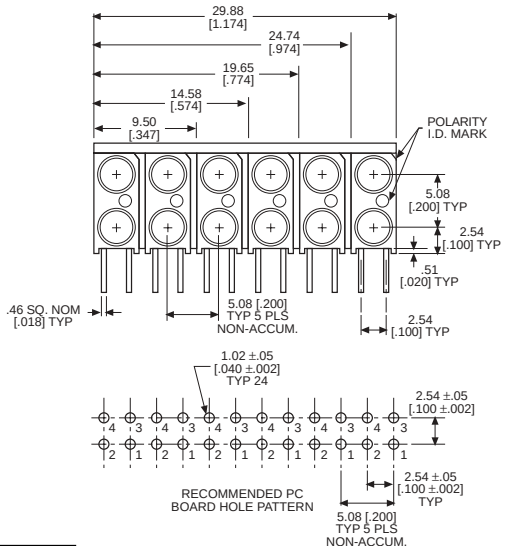
Standard Polarity Shown in Above Drawings

Features

- 2 through 12 LEDs
- Mount on .200 center lines
- Standard View: 553-xxxx-0xx compatible with: 553-xxxx single bi-level
- Backlight: 553-22xx-1xx compatible with: 553-22xx-100 single backlighting bi-level
- DIN Compatible: 553-xxxx-2xx compatible with: 553-xxxx-200 single DIN41494 bi-level
- Reduces insertion labor cost
- Welded angle bracket construction assures rigidity
- Carrier and housing material meets UL 94 V-0

Custom Combinations

- Consult factory for color or LED variations
- Narrow .185 mounting pitches available, consult factory



PART NUMBER ORDERING CODE

LED Type
01 - High Efficiency
02 - Low Current, 2mA
03 - Integral Resistor, 5V
07 - Bi-color
22 - Non-diffused

Top LED Color
Bottom LED Color
CBI Type
0 - Standard View
1 - Backlight
2 - DIN 41494 Compatible
# of Positions 2–6
Series

5 5 3 - x x x x - x x x

Polarity Option

0) Standard Polarity	1) Reverse Polarity
Cathode Right Standard View	Cathode Left Standard View
Cathode Right Backlight	Cathode Left Backlight
Anode Right DIN Compatible	Anode Left DIN Compatible

Colors: 0) Blank 1) Red or Red/Green Bi-Color 2) Green 3) Yellow 4) Yellow/Green Bi-Color 7) Orange 8) Blue[3]

Tolerance note: As noted, otherwise:

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

3

ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
SENSITIVE
DEVICES

Typical Operating Characteristics (T_A = 25°C)

See LED data sheet for additional information

STANDARD VIEW

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 $2\Theta_{½}$	LED Data sheet	Page #
553-0111-0xx	Red	650	10	2	10	45°	521-9427	4-64
553-0122-0xx	Green	563	16	2.1	10	45°	521-9408	4-64
553-0133-0xx	Yellow	585	6.3	2.1	10	45°	521-9428	4-64
553-0177-0xx	Orange	600	7	2.2	10	60°	521-9498	4-58
553-0188-0xx	Blue	428	12	3.5	10	70°	521-9831	4-57
553-0211-0xx	Red	635	1.6	1.7	2	60°	521-9324	4-60
553-0222-0xx	Green	565	1.6	1.9	2	60°	521-9326	4-60
553-0233-0xx	Yellow	585	1.6	1.8	2	60°	521-9325	4-60
553-0311-0xx	Red	635	29	*5†*	*10††*	60°	521-9215	4-59
553-0322-0xx	Green	565	19	*5†*	*10††*	60°	521-9323	4-59
553-0333-0xx	Yellow	585	12.6	*5†*	*10††*	60°	521-9322	4-59
553-0711-0xx	Red/Green	635/565	4.7/10	2/2.1	10	50°	521-9459	4-63
553-0744-0xx	Yellow/Green	585/565	4.3/6.3	2..1*/2.1*	10	80°	521-9478	4-62
553-2211-0xx	Red	635	29	2*	10	45°	521-9432	4-61
553-2222-0xx	Green	565	50	2.1*	10	45°	521-9430	4-61
553-2233-0xx	Yellow	585	20	2.1*	10	45°	521-9431	4-61

BACKLIGHT

Part Number	Color**	Peak Wavelength nm	I_V mcd	V_F Volts*	Test Current (mA)	Viewing Angle $2\Theta_{½}$	LED Data sheet	Page #
553-2211-1xx	Red-Red	635/635	29/29	2/2	10	45°	521-9432	4-61
553-2222-1xx	Green-Green	565/565	50/50	2.1/2.1	10	45°	521-9430	4-61
553-2223-1xx	Green-Yellow	565/585	50/20	2.1/2.1	10	45°	521-9430/-9431	4-61
553-2232-1xx	Yellow-Green	585/565	20/50	2.1/2.1	10	45°	521-9431/-9430	4-61
553-2233-1xx	Yellow-Yellow	585/585	20/20	2.1/2.1	10	45°	521-9431	4-61

DIN COMPATIBLE

Part Number	Color**	Peak Wavelength nm	I_V mcd	V_F Volts	Test Current (mA)	Viewing Angle $2\Theta_{½}$	LED Data sheet	Page #
553-0111-2xx	Red	635	10	2*	10	60°	521-9216	4-58
553-0122-2xx	Green	565	12.6	2.1*	10	60°	521-9210	4-58
553-0133-2xx	Yellow	585	10	2.1*	10	60°	521-9211	4-58
553-0177-2xx	Orange	600	7	2.2	10	60°	521-9498	4-58
553-0188-2xx	Blue	428	12	3.5	10	70°	521-9831	4-57
553-0211-2xx	Red	635	1.6	1.7	2	60°	521-9324	4-60
553-0222-2xx	Green	565	1.6	1.9	2	60°	521-9326	4-60
553-0233-2xx	Yellow	585	1.6	1.8	2	60°	521-9325	4-60
553-0311-2xx	Red	635	29	*5†*	*10††*	60°	521-9215	4-59
553-0322-2xx	Green	565	19	*5†*	*10††*	60°	521-9323	4-59
553-0333-2xx	Yellow	585	12.6	*5†*	*10†*	60°	521-9322	4-59
553-0711-2xx	Red/Green	635/565	4.7/10	2/2.1	10	50°	521-9459	4-63
553-0744-2xx	Yellow/Green	585/565	4.3/6.3	2.1*/2.1*	10	80°	521-9478	4-62
553-2211-2xx	Red	635	29	2*	10	45°	521-9432	4-61
553-2222-2xx	Green	565	50	2.1*	10	45°	521-9430	4-61
553-2233-2xx	Yellow	585	20	2.1*	10	45°	521-9431	4-61

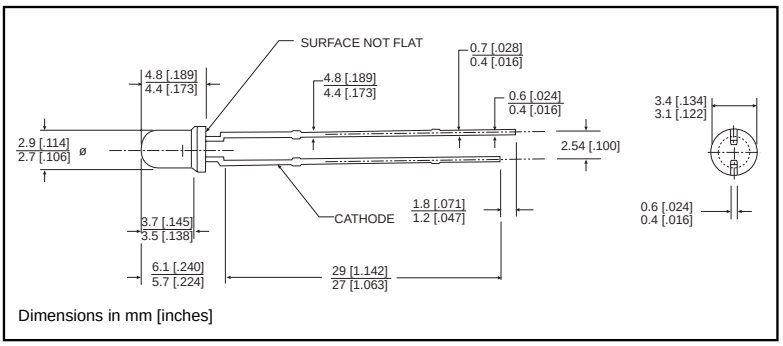
** I_F = 20mA † Test Voltage †† Forward Current mA ** Top-Bottom LED*

3mm Discrete LED
Tinted, Diffused

NEW

Dialight

521-9831



Dimensions in mm [inches]

PART NO.	COLOR
521-9831	Blue [3]

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

[3]



ATTENTION
OBSERVE PRECAUTIONS
FOR HANDLING
ELECTROSTATIC
SENSITIVE
DEVICES

4

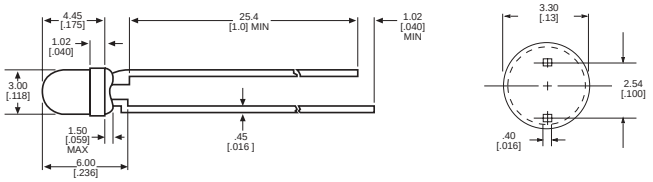
ABSOLUTE MAXIMUM RATINGS (T_A=25°C)	Blue **-9831**
Power Dissipation (mW)	100
Forward Current (mA)	20
Derating (mA/°C) *From 55°C*	.44
Operating Temperature (°C)	-40/+100
Storage Temperature (°C)	-40/+100
Soldering Temperature	260°C, 5 seconds, 1.6 mm from case

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) IR=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 521-9210, -9211, -9216, -9498, -9636



short lead cathode all colors except 521-9636 Red.
For 521-9636 Red, short lead is anode.

Dimensions in mm [inches]

PART NO.	COLOR
521-9210	Green
521-9211	Yellow
521-9216	Red
521-9498	Orange
521-9636	Red

NEW

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

ABSOLUTE MAXIMUM RATINGS (T_A=25°C)	Green **-9210**	Yellow **-9211**	Red **-9216**	Orange **-9498**	Red **-9636**
Power Dissipation (mW)	100	60	100	135	100
Forward Current (mA)	30	20	30	25	40
Derating (mA/°C) *From 50°C* [1] from 25°C	.4	.25	.4	.5	.5[1]
Operating Temperature (°C)	-55/+100	-55/+100	-55/+100	-55/+100	-55/+100
Storage Temperature (°C)	-55/+100	-55/+100	-55/+100	-55/+100	-55/+100
Soldering Temperature	260°C, 5 seconds, 1.6 mm from body				

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

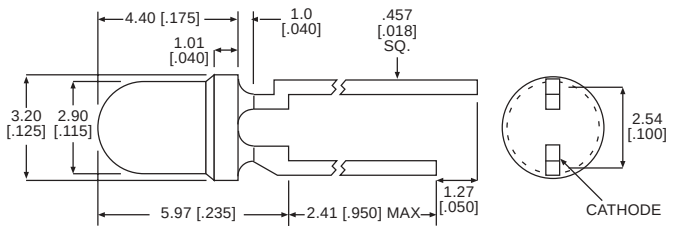
OPERATING CHARACTERISTICS (T_A=25°C)		Green **-9210**	Yellow **-9211**	Red **-9216**	Orange **-9498**	Red **-9636**
Luminous Intensity (mcd)	Min.	4.7	7.4	7.4	3.4	8.7[1]
I_F=10mA [1] I_F=20mA	Typical	12.6	10	10	7	48[1]
Peak Wavelength (nm) λ Peak	Typical	565	585	635	600	660
Viewing Angle (2Θ ½)	Typical	60°	60°	60°	60°	60°
Forward Voltage (V)	Typical	2.1[1]	2.1[1]	2[1]	2.2	1.8[1]
I_F=10mA [1] I_F=20mA	Max.	2.8[1]	2.8[1]	2.8[1]	3	2.4[1]
Reverse Voltage (V), I_R=100µA	Max.	5	5	5	5	4

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

3mm Discrete LED
Integral Resistor, 5V
Diffused

Dialight

521-9215, -9322, -9323



Dimensions in mm [inches]

PART NO.	COLOR
521-9215	Red
521-9322	Yellow
521-9323	Green

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

ABSOLUTE MAXIMUM RATINGS (T_A=25°C)	Red **-9215**	Yellow **-9322**	Green **-9323**
Forward Voltage (V)	7.5	7.5	7.5
Derating (V/°C) *From 50°C*	.086	.086	.071
Operating Temperature (°C)	-40/+85	-40/+85	-20/+85
Storage Temperature (°C)	-55/+100	-55/+100	-55/+100
Soldering Temperature	260°C, 5 seconds, 1.6 mm from case		

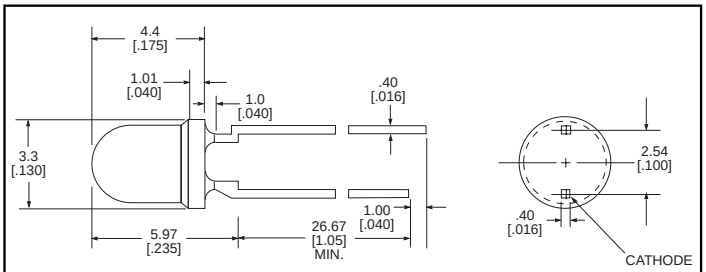
Solder Adherence per MIL-STD-202E, Method 208C

OPERATING CHARACTERISTICS (T_A=25°C)		Red **-9215**	Yellow **-9322**	Green **-9323**
Luminous Intensity (mcd)	Min.	8.7	3.7	5.6
V_F=5V	Typical	29	12.6	19
Peak Wavelength (nm)	Typical	635	585	565
λ Peak				
Viewing Angle (2Θ½)	Typical	60°	60°	60°
Forward Current (mA)	Typical	10	10	10
V_F=5V	Max.	20	20	20
Reverse Voltage (V), I_R=100µA	Min.	5	5	5

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

3mm Discrete LED
Low Current
Diffused

521-9324, -9325, -9326



Dimensions in mm [inches]

PART NO.	COLOR
521-9324	Red
521-9325	Yellow
521-9326	Green

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

ABSOLUTE MAXIMUM RATINGS (T_A=25°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) *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

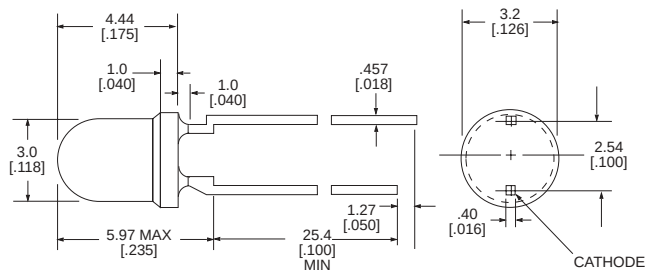
OPERATING CHARACTERISTICS (T_A=25°C)		Red **-9324**	Yellow **-9325**	Green **-9326**
Luminous Intensity (mcd)	Min.	1	1	1
I_F=2mA	Typical	1.6	1.6	1.6
Peak Wavelength (nm) λ Peak	Typical	635	585	565
Viewing Angle (2Θ ½)	Typical	60°	60°	60°
Forward Voltage (V)	Typical	1.7	1.8	1.9
I_F=2mA	Max.	2.2	2.7	2.2
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*

3mm Discrete LED
High Efficiency
Tinted, Non-Diffused

Dialight

521-9430, -9431, -9432



Dimensions in mm [inches]

PART NO.	COLOR
521-9430	Green
521-9431	Yellow
521-9432	Red

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

ABSOLUTE MAXIMUM RATINGS (T_A=25°C)	Green **-9430**	Yellow **-9431**	Red **-9432**
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

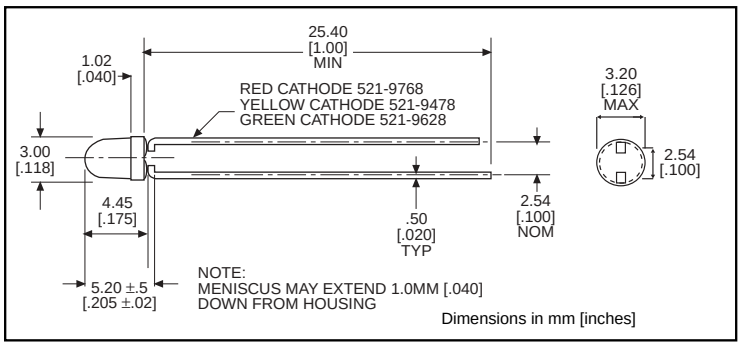
OPERATING CHARACTERISTICS (T_A=25°C)		Green **-9430**	Yellow **-9431**	Red **-9432**
Luminous Intensity (mcd)	Min.	32	10	8.7
I_F=10mA	Typical	50	20	29
Peak Wavelength (nm) λ Peak	Typical	565	585	635
Viewing Angle (2Θ½)	Typical	45°	45°	45°
Forward Voltage (V)	Typical	2.1	2.1	2
I_F=20mA	Max.	2.8	2.8	2.8

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

3mm Discrete LED
Bi-Color
Non-Tinted, Diffused

Dialight

521-9478, -9628, -9768



PART NO.	COLOR
521-9478	Yellow/Green
521-9628	Red/Green
521-9768	Red/Yellow

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

ABSOLUTE MAXIMUM RATINGS (T_A=25°C)	Yellow/Green **-9478**	Red/Green **-9628**	Red/Yellow **-9768**
Power Dissipation (mW)	60/100	140/100	100/60
Forward Current (mA)	20/30	40/30	30/20
Derating (mA/°C) *From 25°C [1] From 50°C*	.25[1]/.40[1]	.5/.4	.4[1]/.25[1]
Peak Current (mA) *Pulse width = 10µs*	80/120	200/120	120/80
Operating Temperature (°C)	-55/+100	-55/+100	-55/+100
Storage Temperature (°C)	-55/+100	-55/+100	-55/+100
Soldering Temperature	260°C, 5 seconds, 1.66 mm from case		

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

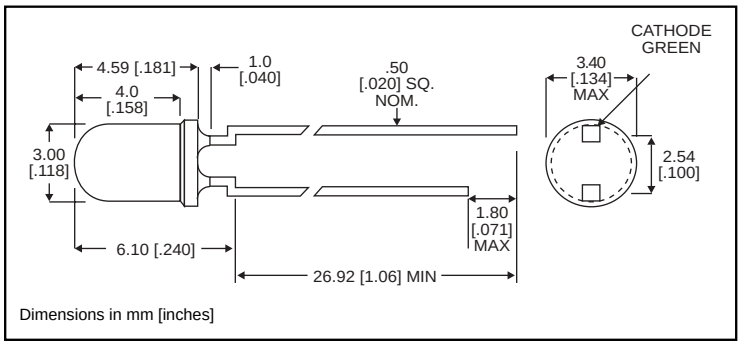
OPERATING CHARACTERISTICS (T_A=25°C)		Yellow/Green **-9478**	Red/Green **-9628**	Red/Yellow **-9768**
Luminous Intensity (mcd)	Min.	2.5/2.5	3.7*/1.1*	1.7*/1.7*
I_F=10mA * I_F=20mA	Typical	4.3/6.3	12.6*/3.7*	5.6*/5.6*
Peak Wavelength (nm) λ Peak	Typical	585/565	660/565	630/585
Viewing Angle (2Θ ½)	Typical	80°	200°	80°
Forward Voltage (V)	Typical	2.1/2.1	1.8/2.1	2/2.1
I_F=20mA	Max.	2.8/2.8	2.4/2.8	2.8/2.8
Reverse Voltage (V) I_R=100ua	Min.	5	5	5

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

3mm Discrete LED
Bi-Color
Non-Tinted, Diffused

Dialight

521-9459



Dimensions in mm [inches]

PART NO.	COLOR
521-9459	Red/Green

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

4

ABSOLUTE MAXIMUM RATINGS (T_A=25°C)	Red/Green **-9459**
Power Dissipation (mW)	140
Forward Current (mA)	45
Derating (mA/°C) *From 25°C*	.6
Peak Current (mA) *Pulse width = 10µs*	1000
Operating Temperature (°C)	-55/+100
Storage Temperature (°C)	-55/+100
Soldering Temperature	260°C, 5 seconds, 1.6 mm from case

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

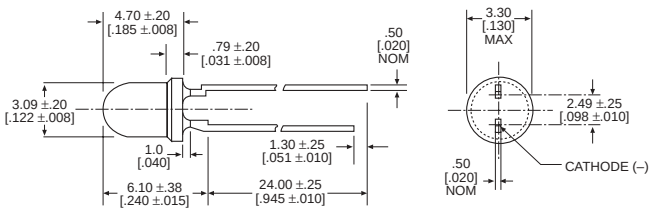
OPERATING CHARACTERISTICS (T_A=25°C)		Red/Green **-9459**
Luminous Intensity (mcd)	Min.	2.5/3.7
I_F=10mA	Typical	4.7/10
Peak Wavelength (nm)	Typical	635/565
λ Peak		
Viewing Angle (2Θ½)	Typical	50°
Forward Voltage (V)	Typical	2/2.1
I_F=10mA	Max.	2.8/2.8

Θ ½ 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



Dimensions in mm [inches]

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
I_F=10mA	Typical	16	10	6.3
Peak Wavelength (nm)	Typical	563	650	585
λ Peak				
Viewing Angle ($2\Theta_{1/2}$)	Typical	45°	45°	45°
Forward Voltage (V)	Typical	2.1	2	2.1
I_F=10mA	Max.	3	3	3
Reverse Voltage (V), I_R=10µA	Min.	3	3	3

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