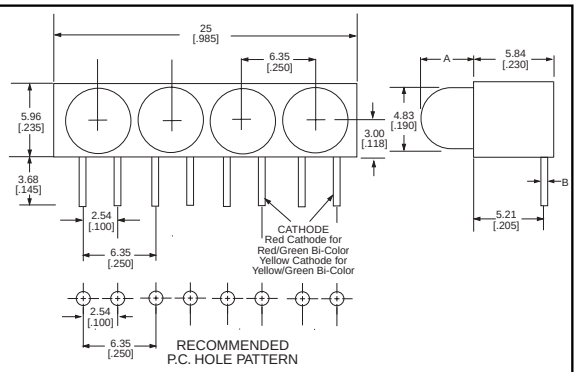
5mm
LED CBI® Circuit Board Indicator
Square Back Housing, Quad Block

Dialight

550-xx05-004



Dimension A: 3.43 [.135] for -0205 to -0405, 5.0 [.197] for all others
Dimension B: .635 [.025] for -0505 to -0705, .508 [.020] for all others
Hole Diameter: 1.22 [.048] for .635 [.025] leads, 1.02 [.040] for all others

Dimensions in mm [inches]

Standard Polarity shown in drawing: Cathode right

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, 0.755 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-xx05 Single Block
  550-xx05-003 Tri Block

Custom Combinations

- Contact factory for information on custom color combinations

Tolerance note: As noted, otherwise:

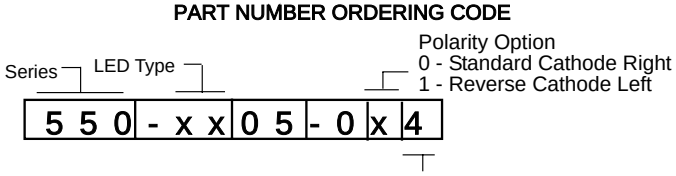
- LED Protrusion: ±0.04 mm [±0.016]
- CBI Housing: ±0.02mm[±0.008]

PART NO.	COLOR*
GENERAL PURPOSE	
550-0205-004	Green
550-0305-004	Yellow
550-0405-004	Red
INTEGRAL RESISTOR	
550-0505-004	Red, 5V
550-0705-004	Green, 5V
550-0805-004	Yellow, 5V
LOW CURRENT	
550-1105-004	Red
550-1205-004	Yellow
550-1305-004	Green
HIGH EFFICIENCY	
550-2205-004	Green
550-2305-004	Yellow
550-2405-004	Red
550-2505-004	Orange
BI-COLOR	
550-3005-004	Red/Green
550-3105-004	Yellow/Green NEW
SUPER BRIGHT, DIFFUSED	
550-5105-004	Red
550-5205-004	Green
550-5305-004	Yellow
SUPER BRIGHT, WATER CLEAR (Non-tinted, Non-diffused)	
550-5505-004	Red
550-5605-004	Green
550-5705-004	Yellow

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

Reverse Polarity (Cathode Left) option available.
See Part Number Ordering Code.

PART NUMBER ORDERING CODE



Typical Operating Characteristics (T_A=25°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 6-58 for Pin Out

Part Number	Color	Peak Wavelength nm	Iv mcd	V_F Volts	Test Current (mA)	Viewing Angle 2$\Theta_{½}$	LED Data sheet	Page #
550-0205-004	Green	565	12.3	2.1	20	60°	5ND-9674	6-51
550-0305-004	Yellow	585	12.3	2.1	20	60°	5ND-9673	6-51
550-0405-004	Red	635	12.3	2	20	60°	5ND-9672	6-51

INTEGRAL RESISTOR

Part Number	Color	Peak Wavelength nm	Iv mcd	Test Voltage	Forward Current (mA)	Viewing Angle 2$\Theta_{½}$	LED Data sheet	Page #
550-0505-004	Red	655	2	5	13	60°	5RD-9422	6-52
550-0705-004	Green	565	8	5	12	60°	5RD-9423	6-52
550-0805-004	Yellow	583	8	5	10	60°	521-9284	6-41

LOW CURRENT

Part Number	Color	Peak Wavelength nm	Iv mcd	V_F Volts	Test Current (mA)	Viewing Angle 2$\Theta_{½}$	LED Data sheet	Page #
550-1105-004	Red	635	2	1.8	2	50°	521-9320	6-42
550-1205-004	Yellow	583	1.8	1.9	2	50°	521-9321	6-42
550-1305-004	Green	565	1.8	1.8	2	50°	521-9327	6-42

HIGH EFFICIENCY

Part Number	Color	Peak Wavelength nm	Iv mcd	V_F Volts	Test Current (mA)	Viewing Angle 2$\Theta_{½}$	LED Data sheet	Page #
550-2205-004	Green	563	10	2.1	10	65°	5HD-9270-5	6-49
550-2305-004	Yellow	585	6.3	2.1	10	50°	5HD-9271-5	6-49
550-2405-004	Red	650	7	2.2	10	50°	5HD-9269	6-49
550-2505-004	Orange	600	7	1.9	10	60°	521-9704	6-43

BI-COLOR

Part Number	Color	Peak Wavelength nm	Iv mcd	V_F Volts	Test Current (mA)	Viewing Angle 2$\Theta_{½}$	LED Data sheet	Page #
550-3005-004	Red/Green	660/565	90/40	1.8/2.1	20	60°	521-9651	6-46
550-3105-004	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	Iv mcd	V_F Volts	Test Current (mA)	Viewing Angle 2$\Theta_{½}$	LED Data sheet	Page #
550-5105-004	Red	650	34	2.1	20	50°	5SD-9441	6-53
550-5205-004	Green	563	34	2.2	20	50°	5SD-9456	6-53
550-5305-004	Yellow	585	34	2.2	20	50°	5SD-9455	6-53

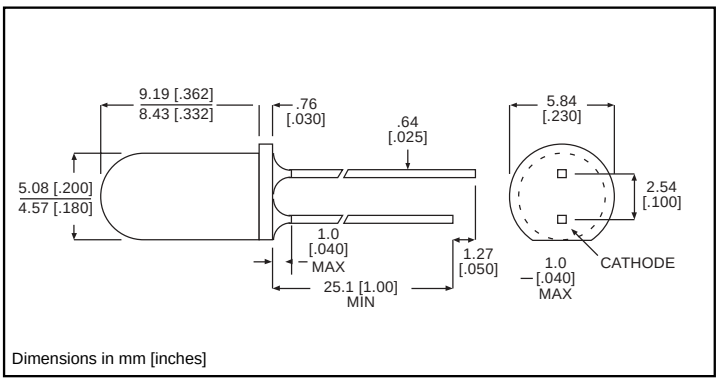
SUPER BRIGHT, WATER CLEAR (NON-TINTED, NON-DIFFUSED)

Part Number	Color	Peak Wavelength nm	Iv mcd	V_F Volts	Test Current (mA)	Viewing Angle 2$\Theta_{½}$	LED Data sheet	Page #
550-5505-004	Red	635	125	2.2	20	24°	521-9464	6-47
550-5605-004	Green	565	120	2.3	20	24°	521-9465	6-47
550-5705-004	Yellow	583	140	2.2	20	24°	521-9466	6-47

5mm Discrete LED
Integral Resistor, 5 Volts
Diffused

Dialight

521-9183, -9284



Dimensions in mm [inches]

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°C)	Red **-9183**	Yellow **-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°C)		Red **-9183**	Yellow **-9284**
Luminous Intensity (mcd)	Min.	2	2
V_F = 5V	Typical	8	8
Peak Wavelength (nm)	Typical	635	583
λ Peak			
Viewing Angle (2Θ ½)	Typical	60°	60°
Forward Current (I)	Typical	10	10
V_F = 5V	Max	15	15
Reverse Voltage (V), I_R=100µA	Min.	5	5

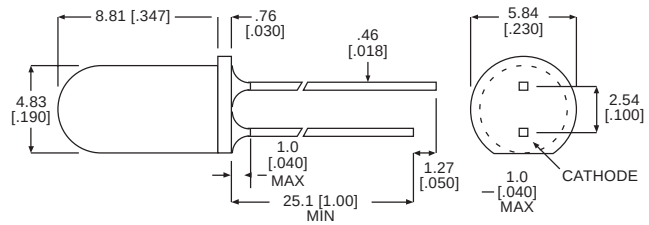
Θ ½ *is the off axis angle at which the luminous intensity is half the axial luminous intensity*

6

5mm Discrete LED
Low Current, 2mA
Diffused

Dialight

521-9320, -9321, -9327



Dimensions in mm [inches]

PART NO.	COLOR
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 Dssipation (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		

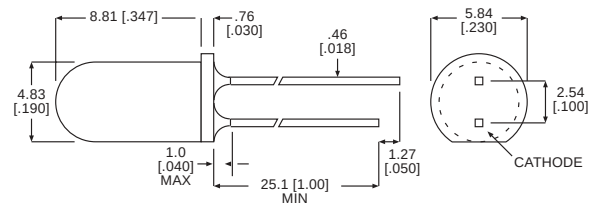
Solder Adherence per MIL-STD-202E, Method 208C

OPERATING CHARACTERISTICS (TA=25°C)		Red **-9320**	Yellow **-9321**	Green **-9327**
Luminous Intensity (mcd)	Min.	1.2	1.2	1.2
I_F=2mA	Typical	2	1.8	1.8
Peak Wavelength (nm) λ Peak	Typical	635	583	565
Viewing Angle ($2\Theta_{1/2}$)	Typical	50°	50°	50°
Forward Voltage (V)	Typical	1.8	1.9	1.8
I_F=2mA	Max.	2.2	2.7	2.2
Reverse Voltage (V), I_R=50µA	Min.	5	5	5

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

5mm Discrete LED
High Efficiency
Diffused

521-9246, -9248, -9250, -9704



Dimensions in mm [inches]

PART NO.	COLOR
521-9246	Red
521-9248	Yellow
521-9250	Green
521-9704	Orange

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

ABSOLUTE MAXIMUM RATINGS (T_A=25°C)	Red **-9246**	Yellow **-9248**	Green **-9250**	Orange **-9704**
Power Dissipation (mW)	135	85	135	135
Derating (mW/°C) *From 25°C 1. (mA/°C) From 50°C*	1.8	1.6	1.8	.5[1]
Forward Current (mA)	25	20	25	30
Peak Current (mA) *Pulse width = 10µs*	500	500	500	500
Operating Temperature (°C)	-55/+100	-55/+100	-20/+100	-55/+100
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)		Red **-9246**	Yellow **-9248**	Green **-9250**	Orange **-9704**
Luminous Intensity (mcd)	Min.	4	4	4.2	4
I_F=10mA	Typical	7	8	5.2	7
Peak Wavelength (nm) λ Peak	Typical	635	583	565	600
Viewing Angle (2Θ ½)	Typical	60°	60°	60°	60°
Forward Voltage (V)	Typical	2.2	2.2	2.3	1.9
I_F=10mA	Max.	3	3	3	2.4
Reverse Voltage (V), I_R=100µA	Min.	5	5	5	5

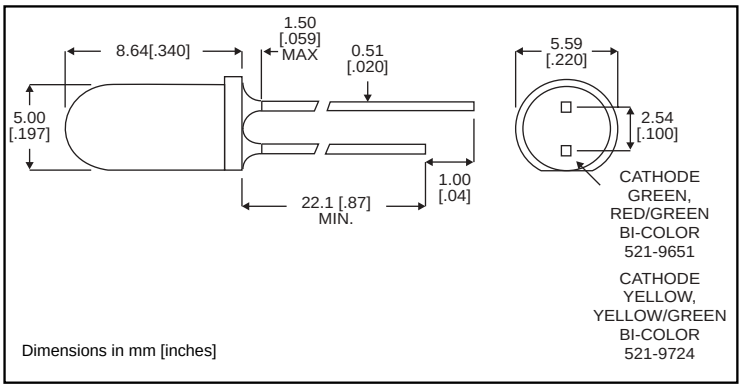
Θ ½ *is the off axis angle at which the luminous intensity is half the axial luminous intensity*

6

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

Dialight

521-9651, -9724



Dimensions in mm [inches]

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°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) *Pulse width = 100 µs*	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

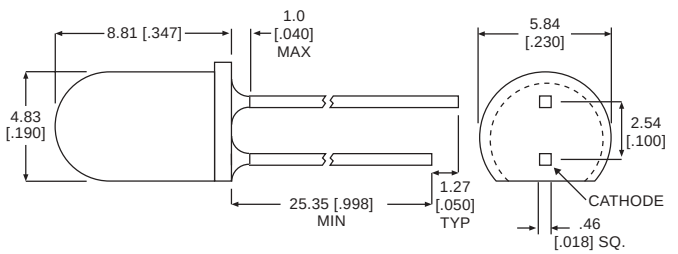
OPERATING CHARACTERISTICS (T_A=25°C)		Red/Green **-9651**	Yellow/Green **-9724**
Luminous Intensity (mcd)	Min.	29/12.6	2.5/2.5
I_F=20mA	Typical	90/40	8.7/8.7
Peak Wavelength (nm) λ Peak	Typical	660/565	585/565
Viewing Angle ($2\Theta_{1/2}$)	Typical	60°	50°
Forward Voltage (V)	Typical	1.8/2.1	2.1/2.1
I_F=20mA	Max.	2.4/2.8	2.8/2.8

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

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

Dialight

521-9464,-9465,-9466



Dimensions in mm [inches]

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°C)	Red **-9464**	Green **-9465**	Yellow **-9466**
Power Dissipation (mW)	135	135	85
Derating (mW/°C) *From 25°C 1. From 50 °C*	1.8	1.8	1.6[1]
Forward Current (mA)	30	30	20
Peak Current (mA) *Pulse width = 10 µs*	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°C)		Red **-9464**	Green **-9465**	Yellow **-9466**
Luminous Intensity (mcd)	Min.	80	80	80
I_F=20mA	Typical	125	120	140
Peak Wavelength (nm) λ Peak	Typical	635	565	583
Viewing Angle (2Θ ½)	Typical	24°	24°	24°
Forward Voltage (V)	Typical	2.2	2.3	2.2
I_F=20mA	Max.	3	3	3
Reverse Voltage (V), I_R=100µA	Min.	5	5	5

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

6

5mm
High Efficiency
Diffused

Dialight

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)	60	140	75	200	60
Derating (mW/°C) *From 50°C 1. From 40°C*	.66[1]		.66[1]		.66[1]
Forward Current (mA)	20	40	25	60	20
Derating (mA/°C) *From 25°C*		.6		.8	
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

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
I_F=10mA	Typical	7	32	10	10	6.3
Peak Wavelength (nm) λ Peak	Typical	650	565	563	590	585
Viewing Angle (2Θ ½)	Typical	50°	50°	65°	70°	50°
Forward Voltage (V)	Typical	2.2	2*	2.1	2.4*	2.1
I_F=10mA, *I_F=20mA	Max.	2.5	2.6*	3	3*	3
Reverse Voltage (V), I_R=100µA *I_R=10µA	Min.	5	5*	3*	5*	3

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

6

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°C)	Red **-9672**	Yellow **-9673**	Green **-9674**
Power Dissipation (mW)	80	60	100
Forward Current (mA)	40	20	30
Derating (mA/°C) *From 25°C*	.5	.25	.4
Peak Current (mA) *Pulse width = 10 µs*	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°C)		Red **-9672**	Yellow **-9673**	Green **-9674**
Luminous Intensity (mcd)	Min.	3.5	3.5	3.5
I_F=20mA	Typical	12.3	12.3	12.3
Peak Wavelength (nm)	Typical	635	585	565
λ Peak				
Viewing Angle ($2\Theta_{1/2}$)	Typical	60°	60°	60°
Forward Voltage (V)	Typical	2	2.1	2.1
I_F=20mA	Max.	2.8	2.8	2.8
Reverse Voltage (V), I_R=100µA	Min.	5	5	5

$\Theta_{1/2}$ *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 REFERENCE ONLY.**

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
V_F=5V, *V_F=12V	Typical	4*	4*	2	8
Peak Wavelength (nm) λ Peak	Typical	565	583	655	565
Viewing Angle (2Θ ½)	Typical	60°	60°	60°	60°
Forward Current (mA), V_F=5V	Typical	13*	13*	13	12
*V_F=12V	Max.	20*	20*	20	15
Reverse Voltage (V), I_R=100µA	Typical	5	5	5	5

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

5mm
Super Bright LED
Diffused

Dialight

5SD-xxxx

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

TYPE	COLOR
*5SD-9441	Red
*5SD-9455	Yellow
*5SD-9456	Green

ABSOLUTE MAXIMUM RATINGS (T_A=25°C)	Red **-9441**	Yellow **-9455**	Green **-9456**
Power Dissipation (mW)	75	75	75
Forward Current (mA)	25	25	25
Derating (mA/°C) *From 50°C*	.66*	.5	.5
*(mW/°C) *From 40°C*			
Peak Current (mA) *Pulse width = 1 ms*	60	60	60
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 **-9441**	Yellow **-9455**	Green **-9456**
Luminous Intensity (mcd)	Min.	17	17	17
I_F=20mA	Typical	34	34	34
Peak Wavelength (nm) λ Peak	Typical	650	585	563
Viewing Angle ($2\Theta_{1/2}$)	Typical	50°	50°	50°
Forward Voltage (V)	Typical	2.1	2.2	2.2
I_F=20mA	Max.	2.55	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*

6