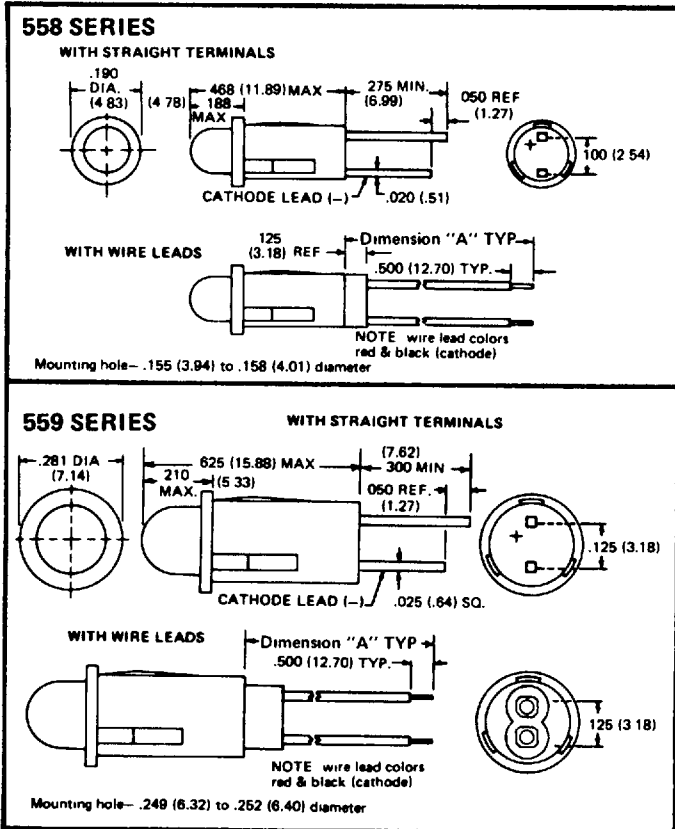


Snap-in LED Indicators

.156" and .250" mounting hole

558 & 559 series



558 Series: Mount in .156" hole
559 Series: Mount in .250" hole

Features

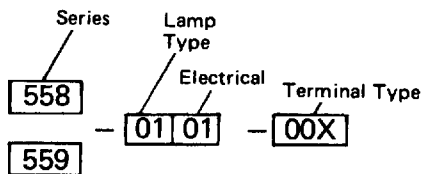
- Snap-in mounting requires no additional hardware
- Available with Red, Green or Yellow LEDs, with and without integral current limiting resistors
- Compact design allows high density packaging:
558 Series mounts on 0.2" centers
559 Series mounts on 0.3" centers
- Straight terminals suitable for wire-wrapping and/or soldering, or wire leads
- Designed for quick positive insertion in panels from .031" through .062"
- Black housing enhances contrast ratio
- Polarity identified
- High Brightness LEDs
- Wide Angle visibility
- Low power requirements-10-20 mA
- Solid State reliability
- IC compatible
- Vibration and shock resistant

Applications

- Computers
- Process controllers
- Instrumentation
- Point of sale
- Communications equipment
- Medical equipment
- Home entertainment equipment
- Vending machines

() Metric dimension in mm.

Ordering Information



Lamp type (LED color)

Standard Efficiency	
01	Red diffused
02	Green diffused
03	Yellow diffused

High Efficiency*	
21	Red diffused
22	Green diffused
23	Yellow diffused

* 559 only

Electrical

01	Requires external resistor
02	5V, 15mA (01, 02, 03 lamp only)
03	12V, 15mA (01 lamp only-559 only)

Terminal type

001 Straight Terminals	
Dimension "A" wire leads	
003	6.000 (152.40) Typ.
004	8.000 (203.20) Typ.
005	10.000 (254.00) Typ.
006	12.000 (304.80) Typ.
007	14.000 (355.60) Typ.

For latest product information on 558 and 559 Series, please see the Dialight LED PMI Catalog.

Dialight reserves the right to make changes at anytime in order to improve design and to supply the best product possible.

Standard Efficiency snap-in LED indicators 558 and 559 Series

Operating Characteristics – 558 and 559 Series without Integral Resistor

Symbol	Characteristics	RED			GREEN			YELLOW			Units	TEST CONDITIONS			
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.		RED	GREEN	YELLOW	
I _v	Luminous Intensity: 558 Series	.3	2.4		.8	2.0		1.0	2.5		mcd	I _F	20mA	20mA	10mA
	559 Series	.8	1.5		1.6	3.2		1.6	3.2				10mA		20mA
λ _{pk}	Wavelength: 558 Series	665			560			580			nm				
	559 Series	700													
V _F	Forward Voltage: 558 Series	1.6	2.0		2.4	3.0		2.2	3.0		V	I _F	20mA	20mA	10mA
	559 Series	1.9	2.4										5mA		20mA
B _V R	Reverse breakdown voltage	3.0			5.0			3.0			V	I _R	100μA* 10μA	10μA	10μA

*558-0101-XXX

Maximum Ratings – 558 and 559 Series without Integral Resistor

Characteristics	RED				GREEN		YELLOW		Units	TEST CONDITIONS
	558 Series		559 Series		Min.	Max.	Min.	Max.		
	Min.	Max.	Min.	Max.						
Power Dissipation		100		70		120		120	mW	derate from 25° C 1.62 mW/° C
Forward DC Current		50		30		30		558 20 559 30	mA	
Peak Forward Current		1				1		1	A	1μs pulse 300pps
Peak Reverse Voltage		5				5		5	V	
Operating temperature	-55	+100	-25	+80	-55	+100	-55	+100	°C	
Storage temperature			-30	+85					°C	
Lead Soldering temperature		260				260		260	°C	

Operating Characteristics – 558 and 559 Series WITH INTEGRAL RESISTOR (5V and 12V*)

Symbol	Characteristics	RED			GREEN			YELLOW			Units	TEST CONDITIONS		
		Min.	Typ.	Max.	Min.	Typ.	Max.	Min.	Typ.	Max.		Red	Gr., Yel.	
I _v	Luminous Intensity 558 series	.3	.8		.5	2.0		.5	2.0		mcd	V _F	5.0V	5.0V
	559-0X02	.8			.8	2.0		.8	2.0		mcd	V _F	5.0V	5.0V
	559-0103	.8									mcd	V _F	12.0V	
λ _{pk}	Wavelength	665			565			580			nm			
I _F	Forward Current		15	20		15	20		15	20	mA	V _F	5.0V	5.0V
			12	20							mA	V _F	12.0V	
B _V R	Reverse Breakdown Voltage	3			3			3			V	I _R	10μA	10μA

Maximum Ratings – 558 and 559 Series WITH INTEGRAL RESISTOR (5V and 12V*)

Characteristics	RED		YELLOW		GREEN		Units	Test Conditions	
	Min.	Max.	Min.	Max.	Min.	Max.			
DC Forward Voltage	558 & 559-0202, -0302		7.5		7.5		7.5	V	Derate to 5V at 100° C
	559-0102, -0103		14						Derate to 12V at 70° C
Reverse Voltage		7.0		7.0		7.0			
Operating & Storage temperature	(5V)	-55	+100					°C	
	(12V)	-55	+70					°C	
Lead Soldering Temp.		230		230		230	°C	Maximum 7 Seconds	

*12V available in RED only.

High Efficiency Snap-in LED Indicators 559 series

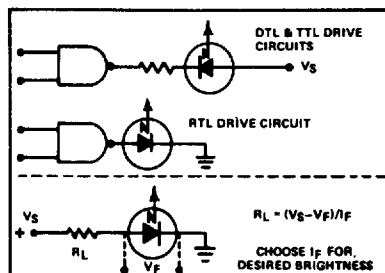
Absolute Maximum Ratings

Parameter	Red	Yellow	Green	Units
Power Dissipation (derate linearly from 25° C at 1.14mW/° C)	105	105	105	mW
Average Forward Current	35	35	35	mA
Peak Operating Forward Current (1μsec pulse width, 3% duty cycle)	1	1	1	A
Operating and Storage Temperature Range	-50° C to +100° C			
Lead Solder Temperature (1/16 inch from case)	230° C for 7 seconds			

Operating Characteristics at T_A = 25° C

Symbol	Parameter	Description	Min.	Typ.	Max.	Units	Test Conditions
V _F	Forward Voltage	Red & Yellow		2.2	3.0	V	I _F = 10mA
		Green		2.2	3.0	V	I _F = 20mA
BV _R	Reverse Voltage	All	5.0			V	I _R = 100μA
λ _{pk}	Peak Wavelength	Red		635		nm	Measurement at Peak
		Yellow		585		nm	Measurement at Peak
		Green		565		nm	Measurement at Peak
I _V	Luminous Intensity	Red	3.0	4.0		mcd	I _F = 10mA
		Yellow	2.2	3.0		mcd	I _F = 10mA
		Green	2.2	3.0		mcd	I _F = 20mA
τ _S	Rise and Fall Time	Red & Yellow		90		ns	
		Green		200		ns	
C	Capacitance	All		45		pF	V _F = 0, f = 1MHz

Typical Drive Circuits



Typical Resistor Values

DC Voltage	Current @ 10 mA	Current @ 20 mA
	R _L	R _L
3.6	150 Ω	75 Ω
5	330 Ω	150 Ω
6	390 Ω	180 Ω
10	820 Ω	390 Ω
14	1200 Ω	620 Ω
28	2700 Ω	1300 Ω