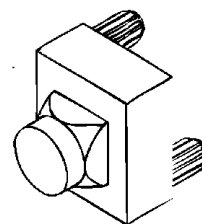
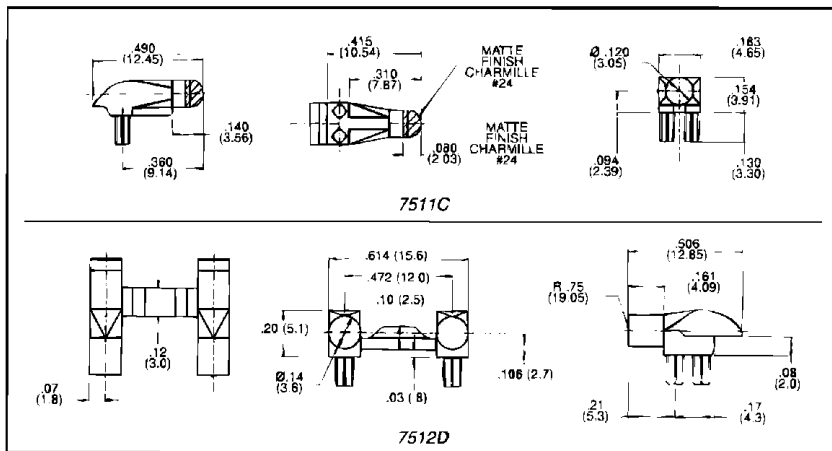




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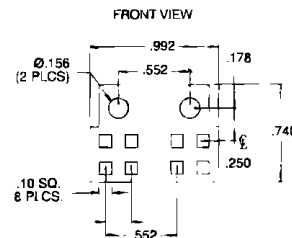
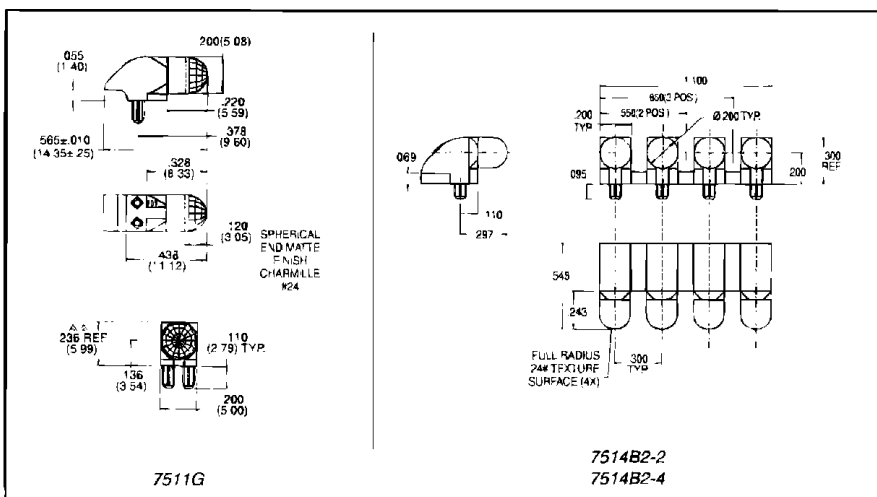
P I L O T L I G H T S & I N D I C A T O R S



ISOMETRIC VIEW
FOR REFERENCE ONLY
SCALE 4 : 1

- Precision engineered with **ray tracing** for bright, optically precise even indication and attractive appearance
- ESD protection from circuitry for exceptional reliability
- High contrast and wide viewing angle for greater visibility
- Available in a variety of colors for added contrast and aesthetics
- Parts inserted after reflow to permit LED pad inspection before assembly
- Low profile for height constrained applications
- Large lens provides high visibility
- All dimensions in inches (mm)
- 7511C features 3mm dome and is designed for use with 7012X Bright*Chips™ SMT LEDs

MODEL	OUTPUT COLOR
7511C5	GREEN
7511C1	RED
7511C7	YELLOW
7511C2	CLEAR
7512D1	RED
7512D2	CLEAR
7512D5	GREEN
7512D7	YELLOW

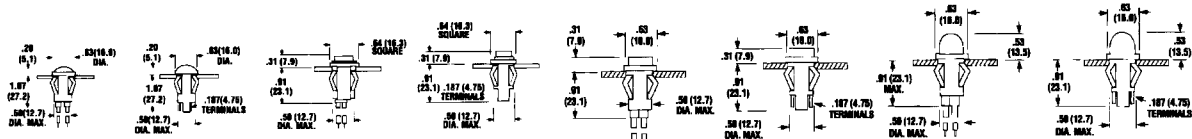


- Precision engineered with **ray tracing** for bright, optically precise even indication and attractive appearance
- ESC protection from circuitry for exceptional reliability
- High contrast and wide viewing angle for greater visibility
- Available in a variety of colors for added contrast and aesthetics
- Parts inserted after reflow to permit LED pad inspection before assembly
- Compliance to UL94V-0
- Low profile for height constrained applications
- Large lens provides high visibility
- All dimensions in inches (mm)
- 7511H2 designed for use with 7012X SMT LED

MODEL	OUTPUT COLOR
7511G2	DIFFUSED TRANSLUCENT
7511G1	CLEAR RED TINT
7511G5	CLEAR GREEN TINT
7511G7	CLEAR YELLOW



SERIES 1000 NEON LAMPS



Series 1030D Series 1030QD Series 1050N Series 1050QN Series 1050C Series 1050QC Series 1050A Series 1050QA

UL file no. 20325. CSA file no. 13346. White nylon housing will snap-fit into a .500-.505" diameter hole in panels .020-.100" thick. Bezel: Stainless steel.

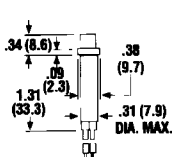
Mfr. No.	Color	VAC
Pilot Lamps with Low-Profile Lenses		
1030D1†	Red	105-125
1030D3†	Amber	105-125
1030D4†	White	105-125
1032D5†*	Green	105-125
1030QD1‡	Red	105-125
1030QD3‡	Amber	105-125
1030QD4‡	White	105-125
1032QD5‡*	Green	105-125
1031D1†	Red	208-250
1031D3†	Amber	208-250
1033D5†	Green	208-250
1031QD1‡	Red	208-250
1031QD3‡	Amber	208-250
1033QD5‡	Green	208-250
Pilot Lamps with Square Lenses		
1050N1†	Red	105-125
1050N3†	Amber	105-125
1050N4†	White	105-125
1052N5†*	Green	105-125
1050QN1‡	Red	105-125
1050QN3‡	Amber	105-125
1050QN4‡	White	105-125
1052QN5‡*	Green	105-125
Pilot Lamps with High-Hat Lenses		
1050C1†	Red	105-125
1050C2†	Clear	105-125
1050C3†	Amber	105-125

Mfr. No.	Color	VAC
1050C4†	White	105-125
1052C5†	Green	105-125
1050QC1‡	Red	105-125
1050QC2‡	Clear	105-125
1050QC3‡	Amber	105-125
1050QC4‡	White	105-125
1052QC5‡*	Green	105-125
1051C1†	Red	208-250
1051C3†	Amber	208-250
1053C5†	Green	208-250
1051QC1‡	Red	208-250
1051QC3‡	Amber	208-250
1053QC5‡	Green	208-250

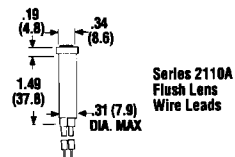
Pilot Lamps with Dome Lenses		
1050A1†	Red	105-125
1050A3†	Amber	105-125
1050A4†	White	105-125
1052A5†*	Green	105-125
1050QA1‡	Red	105-125
1050QA2‡	Clear	105-125
1050QA3‡	Amber	105-125
1052QA5‡*	Green	105-125
1051A1†	Red	208-250
1051A3†	Amber	208-250
1053A5†	Green	208-250
1051QA1‡	Red	208-250
1051QA3‡	Amber	208-250
1053QA5‡	Green	208-250

† With wire leads 4.4-4.8" long, stripped .43-.57". ‡ With .187"-.020" tinned brass terminals. * Incorporates G2B lamp and resistor.

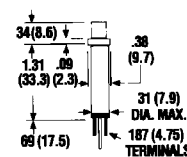
SERIES 2150, 2110 GLO-DOT MINIATURE NEON PILOT LIGHTS



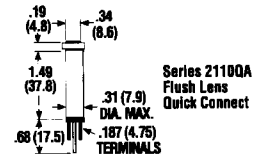
Series 2150A
High Hat
Wire Leads



Series 2110A
Flush Lens
Wire Leads



Series 2150QA
High Hat
Quick Connect



Series 2110QA
Flush Lens
Quick Connect

These miniature neon pilot lights are engineered for long service and reliability. Rugged, they are unaffected by shock and vibration. Available in two lens shapes, flush and high-hat. Mounting hole is .31" minimum diam-

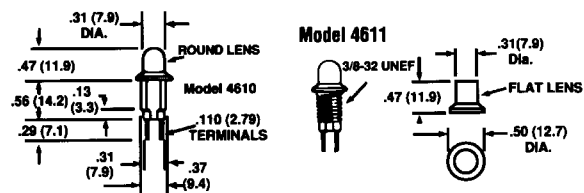
eter. **Average operating life:** 25,000 hours. UL recognized and CSA approved. Supplied with push-on speed nut (SN1287). Supplied with 4.4-4.8" wire terminals, stripped 1/2" or .187"-.020" tinned brass terminals.

Mfr. No.	Color	VAC
2150A1	Red	105-125
2150A3	Amber	105-125
2150A4	White	105-125
2150A2	Clear	105-125
2152A5*	Green	105-125
2110A1	Red	105-125
2110A3	Amber	105-125
2110A4	White	105-125
2110A2	Clear	105-125
2112A5*	Green	105-125
2150QA1	Red	105-125
2150QA3	Amber	105-125
2150QA4	White	105-125
2152QA5*	Green	105-125
2110QA1	Red	105-125
2110QA3	Amber	105-125
2110QA4	White	105-125
2110QA2	Clear	105-125
2112QA5*	Green	105-125
2151A1	Red	208-250
2151A2	Clear	208-250

Mfr. No.	Color	VAC
2151A3	Amber	208-250
2151A4	White	208-250
2153A5*	Green	208-250
2153A6†	Blue	208-250
2111A1	Red	208-250
2111A2	Clear	208-250
2111A3	Amber	208-250
2111A4	White	208-250
2113A5*	Green	208-250
2113A6†	Blue	208-250
2151QA1	Red	208-250
2151QA3	Amber	208-250
2151QA4	White	208-250
2153QA5*	Green	208-250
2111QA1	Red	208-250
2111QA2	Clear	208-250
2111QA3	Amber	208-250
2111QA4	White	208-250
2113QA5*	Green	208-250

* Incorporates G2B lamp and resistor. † Incorporates T2B lamp and resistor.

TINY-MITE INDICATOR LIGHT ASSEMBLIES



Ordering Information: Complete assembly consists of socket, lens and lamp. Each sold separately. **Mounting:** No. 4610 (without thread) supplied with push-on speednut - can be keyed to prevent rotation. No. 4611 (threaded) supplied with zinc finish hex nut and internal tooth lockwasher. **Lens:** Polycarbonate. **Bezel:** Polished stainless steel. **Socket:** Black nylon.

SOCKETS

Mfr. No.	Description
4610	Unthreaded
4611	Threaded

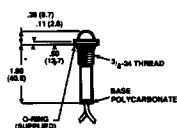
SUB-MINIATURE WEDGE-BASE LAMPS

Mfr. No.	Design Voltage	Amps	Candle Power (Approx.)	Rated Life Hours
56	5.0	.115	.15	20,000
84	6.3	.040	.03	20,000
86	6.3	.200	.40	20,000
18	14.0	.040	.13	5,000
73	14.0	.080	.30	15,000
85	28.0	.040	.30	7,000
17	28.0	.060	.65	5,000

LENSES

Mfr. No.		Color
Round Lens	Flat Lens	
4621	4631	Red
4623	4633	Amber
4625	4635	Green
4626	4636	Blue
4627	4637	Yellow

OIL-TIGHT SERIES 6000



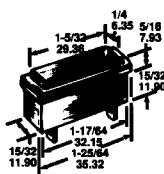
- Fully gasketed construction
- Meets NEMA specification ICS1-110.60
- Neon models come with built-in current limiting resistor. LED models come with built-in current limiting resistor and a rectifier diode.

Mounting: Supplied with internal tooth lockwasher and hex nut; requires .36" min. dia. hole. **Wire Leads:** No. 22 AWG (105°C), 4.4-4.8" long stripped .43-.47". **Lens:** Polycarbonate. **Bezel:** Stainless steel. **Gaskets:** Buna-N. **Housing:** Black nylon.

Mfr. No.	Volts	Color
Solid State Lamps		
6091M1-12V	12	Red
6091M5-12V	12	Green
6091M7-12V	12	Yellow
6091M1-24V	24	Red
6091M5-24V	24	Green
6091M7-24V	24	Yellow
Neon Lamps		
6010M1	125	Red
6010M3	125	Amber
6012M5	125	Green*
6011M1	250	Red
6011M3	250	Amber
6013M5	250	Green*

* Incorporates G2B lamp and resistor.

RECTANGULAR NEON PILOT LIGHTS

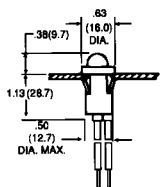


Series 2300 will snap-fit into .032-.100" thick panels without a speednut and into other thicknesses with a speednut. Mounting hole: 1.276-1.281"x.395-.400".

Mfr. No.	Color	VAC
2330QD1*	Red	120
2330QD3*	Amber	120
2332QD5*†	Green	120
2330D1†	Red	120
2330D3†	Amber	120
2332D5†‡	Green	120

* With .250" tinned brass terminals. † With 4.4-4.8" long wire leads, stripped .43-.57". Speed nuts sold separately. ‡ Incorporates G2B lamp with resistor.

INCANDESCENT AND SOLID STATE INDICATORS

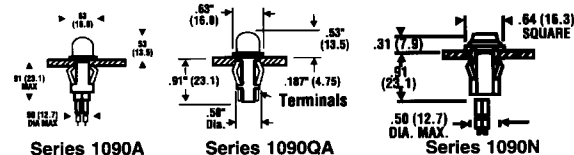


Series 1091M

Series 1091M is solid state, complete with built-in current limiting resistor and rectifier diode. For solid state lens colors, insert 1-Red, 5-Green, 7-Yellow, for "x" in the stock number.

Solid State Indicators

Mfr. No.	Volts
1091M*-12V	12
1091M*-24V	24
1091M*-125VAC	105-125VAC

**Series 1090A**

Series 1090QA

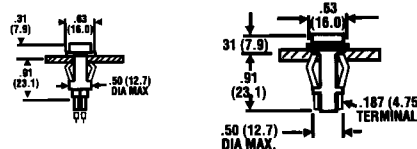
Series 1090N

Series 1090 are incandescent and are available in 6, 12, or 28 volt types. For incandescent lens colors, insert 1-Red, 5-Green, 7-Yellow, 4-White, for "w" in the stock number.

Mfr. No.	Volts
Incandescent Indicators with Dome Lenses	
1090A*-12V	12
1090A*-28V	28
1090QA*-12V	12
1090QA*-28V	28

Incandescent Indicators with Square Lenses

1090N*-12V	12
1090N*-28V	28



Series 1090C

Series 1090C Series 1090QC
Incandescent Indicators with High-Hat Lenses

Mfr. No.	Volts
1090C*-12V	12
1090C*-28V	28
1090QC*12V	12
1090QC*28V	28

* 125 VAC supplied with 6" white wire, stripped 1/2" with external 3.9K 1/2 watt resistor attached to one lead, covered with shrink tubing insulation.

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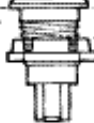
PILOTS & INDICATORS



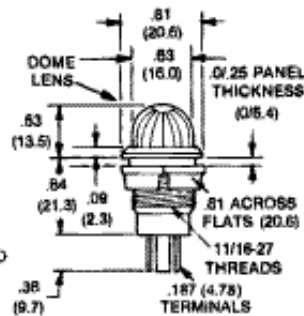
UL FILE# E20325
CSA FILE# LR13346

FLAT LENS

.53
(13.5)



.25-.34(6.4-8.6)
THICK PANEL WHEN
HEX. NUT IS REVERSED
AS SHOWN.

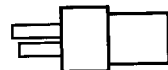


All dimensions are in inches (MM).

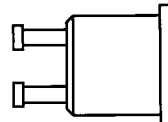
Part Number

Lens Color	Dome	Flat
Red	2811	2851
Clear	2812	2852
Amber	2813	2853
White	2814	2854
Green	2815	2855
Blue	2816	2856
Yellow	2817	2857

BI PIN SOCKETS

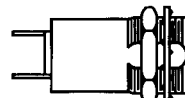


Mfr. No. CM21-1 — Bi Pin Socket for use with T-¾ and T-1 Bi Pin Lamps

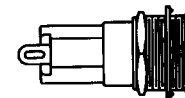


Mfr. No. CM21-2 — Bi Pin Socket for use with T-1¾ Bi Pin Lamps

5100, 5200 SERIES RELAMPABLE INDICATORS



5100 Series



5200 Series

Select from 5100 series standard and 5200 series deluxe indicators from table below. Standard indicators must be assembled. Order lamps and lenses separately below. UL recognized, CSA certified.

Mfr. No.	Max. Volts	Max. Amps	Terminals
5100 SERIES INDICATORS			
5100-822	120	0.170	Solder lugs
5100-832	125	1.800	Solder lugs
5100-842	250	1.800	Solder lugs
5100-823	120	0.170	Screw lugs
5100-824	120	0.170	Quick connect 0.250" lugs
5100-834	125	1.800	Quick connect 0.250" lugs
5100-844	250	1.800	Quick connect 0.250" lugs

5200 SERIES STANDARD T-3¼ INDICATORS

5200-222	120	0.170	Solder lugs
5200-232	125	1.800	Solder lugs
5200-242	250	1.800	Solder lugs

5100, 5200 SERIES POLYCARBONATE LENSES

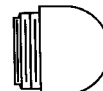


Fig. 1

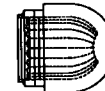
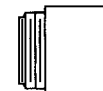


Fig. 2



TFig. 3

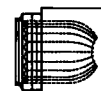
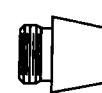
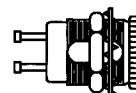


Fig. 4

Use only transparent or fluted lens with neon lamps, ordered separately. When ordering, add first letter of color choice to the end of the Mfr. no. * (R=Red, A=Amber, G=Green, C=Clear) † (R=Red, Y=Yellow, G=Green, W=White)

Mfr. No.	Figure
25P-306*	1
25P-307†	1
25P-326*	2
25P-606*	3
25P-607†	3
25P-626*	4

GEMLITE INDICATOR

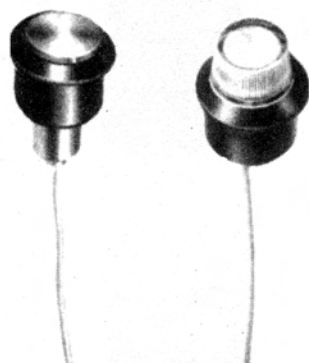


Mfr. No. 5160-458 (Base Only) — Reliable indicators used in military and commercial applications where size and lamp replacement are prime considerations. 0.218" panel thickness. Accepts T-1 sub-midget flange lamp. Order lamp separately. Mounts in 0.3125" diameter hole.

TRANSLUCENT CYLINDRICAL LENS

Mfr. No. 160A-604* — For Gemlite base, ordered separately above. Available in red, yellow, green and white. When ordering, add first letter of color choice to the end of the type number. * (R=Red, Y=Yellow, G=Green, W=White).

Models 100/101



MODEL 100 MODEL 101

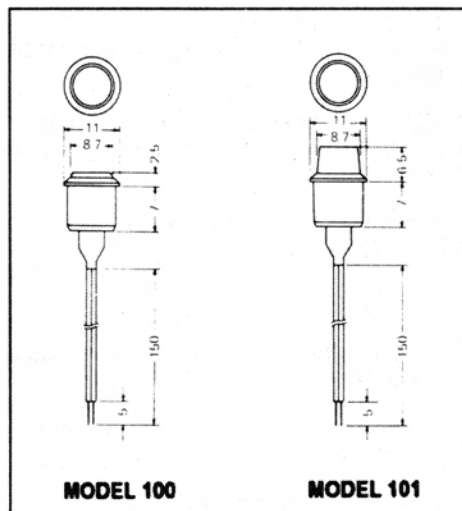
Models 100/101 Indicator Light assemblies are a modular concept that provides low cost and great versatility. These lights mount by means of a rubber bushing snapped into a 9mm diameter panel cutout, without nuts or washers. A variety of light sources, Incandescent, Neon, Green Glow and LED's, fit into the bushing and a complete color selection of lens assemblies are slipped in from the top.

The 100/101 models offer a great advantage in that the lens assembly may be mounted independently from the light source and mated in the final assembly stage. Lens colors or light sources may be interchanged at any time.

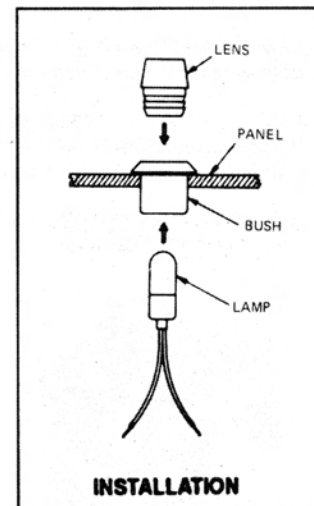
HOW TO ORDER

LIGHT LENS LENS
SOURCE STYLE COLOR

EXAMPLE: F606-100-R



Panel Hole: 9.0mm



LIGHT SOURCE

Lamp No.	Type	Voltage	Max. Current mA	Avg. Life Hours	Lead Colors
F606	Incandescent	5-8.3V	50	20,000	White/White
F614	Incandescent	12-14V	80	30,000	Red/White
F628	Incandescent	24-28V	40	30,000	Brown/White
G5115	Green Glow	100-120VAC	1.5	10,000	Green/Green
G5240	Green Glow	220-240VAC	1.5	10,000	Blue/Blue
L617GL	Green LED	1.9 TYP	10	---	Red - Anode
L617RL	Red LED	2.0 TYP	10	---	Black - Cathode
L617YL	Yellow LED	1.9 TYP	10	---	
N5115	Neon	100-120VAC	1.5	10,000	Gray/Gray
N5240	Neon	220-240VAC	1.5	10,000	Blue/Blue

6" wire leads are standard on the above light sources, other lead lengths are available on special order.

LENS/BUSHING ASSEMBLY

100 Series - Flush Style		101 Series - Top Hat Style	
100-B	Blue	101-B	Blue
100-C	Clear	101-C	Clear
100-G	Green	101-G	Green
100-R	Red	101-R	Red
100-W	White	101-W	White
100-Y	Yellow	101-Y	Yellow

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P I L O T L I G H T S & I N D I C A T O R S