

Fig. 1

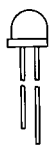


Fig. 2

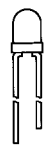


Fig. 3

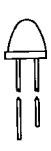


Fig. 4



Fig. 5



Fig. 6



Fig. 7



Fig. 8



Fig. 9

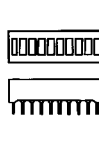


Fig. 10

Lamps use low power for IC compatibility, cool operation and long life expectancy. Shock-proof, solid lens, epoxy construction. Intense light sources available—up to 3000 mcd luminosity. Leads are silver plated, eliminating soldering problems. Viewing angles (the angle between points where the light intensity falls to 50% of peak value) are available to 180°. Order panel mount grommets (at bottom of page) separately.

Mfr. No.	Emitted Color	Lens Type/Color	View Angle	Typical mcd/mA	Fig.
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T-3/4 AXIAL LAMPS

CMD50B	Red	N.D. Clear	80	3.0/20	1
CMD53B	Yellow	N.D. Yellow	80	6.0/20	1
CMD54B	Red	N.D. Red	80	3.5/20	1
CMD64B	H.E. Grn	N.D. Grn	80	8.0/20	1

T-1 LAMPS (.050" LEAD SPACING)

CMD5074C	Red	N.D. Red	70	2.5/20	5
CMD5075C	Red	Diff. Red	90	1.5/20	5
CMD5077C	Red	Diff. Red	110	1.7/20	2
CMD5374C	Yellow	Diff. Yel	90	9.0/20	5
CMD5474C	H.E. Grn	Diff. Grn	90	9.0/20	5
CMD5774C	H.E. Red	Diff. Red	90	9.0/20	5
CMD5777C	H.E. Red	Diff. Red	180	7.0/20	2

T-1 SUPER BRITE LAMPS

CMD31101UG	Green	Diff. Grn	60	50/20	3
CMD31101UR/B	Red	Diff. Red	60	90/20	3
CMD31101UR/C	Red	Diff. Red	60	100/20	3
CMD31101UR/D	Red	Diff. Red	60	150/20	3
CMD31101UR/E	Red	Diff. Red	60	250/20	3
CMD31104UG	Green	N.D. Clr	30	200/20	3
CMD31104UR/B	Red	N.D. Clr	30	360/20	3
CMD31104UR/C	Red	N.D. Clr	30	500/20	3
CMD31104UR/D	Red	N.D. Clr	30	700/20	3
CMD31104UR/E	Red	N.D. Clr	30	1000/20	3

T-1 RESISTORED LAMPS

CMD31121HR-5V	H.E. Red	Diff. Red	60	25.0/5.0	3
CMD31121GR-5V	H.E. Grn	Diff. Grn	60	16.0/5.0	3
CMD31121YR-5V	Yellow	Diff. Yel	60	16.0/5.0	3
CMD31131HR-12V	H.E. Red	Diff. Red	60	25.0/12.0	3
CMD31131GR-12V	H.E. Grn	Diff. Grn	60	16.0/12.0	3
CMD31131YR-12V	Yellow	Diff. Yel	60	16.0/12.0	3

T-100 LAMPS

CMD54643	H.E. Grn	Diff. Grn	90	5.0/20	3
CMD57640	H.E. Red	Diff. Red	90	2.0/10	3
HLMP1300	H.E. Red	Diff. Red	90	2.0/10	3
HLMP1340	H.E. Red	N.D. P.T.	45	60.0/20	3

RECTANGULAR LAMPS

CMD54123	H.E. Grn	Diff. Grn	100	4.0/20	7
CMD57123	H.E. Red	Diff. Red	100	4.0/20	7
HLMP0300	H.E. Red	Diff. Red	100	2.5/20	7
HLMP0301	H.E. Red	Diff. Red	100	5.0/20	7
HLMP0401	Yellow	Diff. Yel	100	5.0/20	7
HLMP0503	H.E. Grn	Diff. Grn	100	3.0/20	7
CMD53124A	Yellow	Diff. Yel	100	6.0/20	8
CMD54124A	H.E. Grn	Diff. Grn	100	6.0/20	8
CMD57124A	H.E. Red	Diff. Red	100	6.0/20	8

LEDs

CMD204UWC	White	Clear	40	1.0/—	
CMD333UWC	White	Clear	20	2.3/—	
CMD333UWW	—	—	—	—	
CMD264UWC	Blue	Blue	45	100/20	
CMD333URD	Red	Red	40	400/20	
CMD333UGC	Green	Clear	24	800/20	
CMD333HRC-6	Red	Clear	24	600/20	
CMD333URC-1	Red	Clear	24	1200/20	
CMD333URC-2	Red	Clear	24	2000/20	
4304H1	Red	Red	65	6.3/20	
4304H3	Amber	Amber	60	20/10	
4304H5	Green	Green	75	10/10	
4304H7	Yellow	Yellow	65	6.3/10	
4305H1	Red	Red	30	68/20	
4305H5	Green	Green	20	100/20	
4305H7	Yellow	Yellow	30	160/20	

Mfr. No.	Emitted Color	Lens Type/Color	View Angle	Typical mcd/mA	Fig.
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T-1 1/4 LAMPS

CMD5752	H.E. Red	N.D. Red	28	100.0/20	6
CMD5053	Red	Diff. Red	80	0.5/20	5
CMD5055	Red	Diff. Red	150	0.1/20	5
CMD5153	H.E. Red	Diff. Amb	65	15.0/20	5
CMD5353	Yellow	Diff. Yel	65	15.0/20	5
CMD5354A	Yellow	Diff. Yel	24	25.0/20	5
CMD5453	H.E. Grn	Diff. Grn	75	20.0/20	5
CMD5753	H.E. Red	Diff. Red	65	10.0/20	5
CMD5754A	H.E. Red	Diff. Red	24	25.0/20	5
CMD64531	H.E. Grn	Diff. Grn	75	20.0/20	6
FLV110	Red	Diff. Red	70	3.0/20	6
HLMP3300	H.E. Red	Diff. Red	65	3.5/10	6
HLMP3301	H.E. Red	Diff. Red	65	7.0/10	6
HLMP3315	H.E. Red	N.D. Red	35	18.0/10	6
HLMP3316	H.E. Red	N.D. Red	35	35.0/10	6
HLMP3750	H.E. Red	N.D. P.T.	24	150.0/20	6
HLMP3850	Yellow	N.D. P.T.	24	150.0/20	6
HLMP3950	H.E. Grn	N.D. P.T.	24	150.0/20	6
HLMP4700	H.E. Red	Diff. Red	35	2.0/2	6
HLMP4719	Yellow	Diff. Yel	35	2.0/2	6
CMD3750	H.E. Red	N.D. P.T.	24	150.0/20	6
CMD5054A-1	Red	Diff. Red	24	1.0/10	6
CMD5152	H.E. Red	N.D. Amb	28	100.0/20	6
CMD5352	Yellow	N.D. Yel	28	90.0/20	6
CMD5452	H.E. Grn	N.D. Grn	35	25.0/20	6
CMD50154	Red	Diff. Red	50	1.5/10	4
CMD54154	H.E. Grn	Diff. Grn	50	12.0/10	4

T-1 1/4 RESISTORED LAMPS

CMD41121HR-5V	H.E. Red	Diff. Red	60	40.0/5.0	6
CMD41121GR-5V	H.E. Grn	Diff. Grn	60	16.0/5.0	6
CMD41121YR-5V	Yellow	Diff. Yel	60	16.0/5.0	6
CMD41131HR-12V	H.E. Red	Diff. Red	60	40.0/12.0	6
CMD41131GR-12V	H.E. Grn	Diff. Grn	60	16.0/12.0	6
CMD41131YR-12V	Yellow	Diff. Yel	60	16.0/12.0	6

T-1 1/4 SUPER BRITE LAMPS

CMD41101UG	Green	Diff. Grn	60	60/20	6
CMD41101UR/B	Red	Diff. Red	60	100/20	6
CMD41101UR/C	Red	Diff. Red	60	200/20	6
CMD41101UR/D	Red	Diff. Red	60	300/20	6
CMD41101UR/E	Red	Diff. Red	60	500/20	6
CMD41101UR/F	Red	Diff. Red	60	700/20	6
CMD41101UR/G	Red	Diff. Red	60	1000/20	6
CMD41104UG	Green	N.D. Clr	30	300/20	6
CMD41104UR/A	Red	N.D. Clr	30	400/20	6
CMD41104UR/B	Red	N.D. Clr	30	500/20	6
CMD41104UR/C	Red	N.D. Clr	30	1000/20	6
CMD41104UR/D	Red	N.D. Clr	30	2000/20	6
CMD41104UR/E	Red	N.D. Clr	30	3000/20	6

LIGHT BARS/BAR GRAPHS

CMD57173	H.E. Red	Diff. Red	120	10.0/20	9
HLMP2685	H.E. Red	Diff. Wht	120	80.0/20	9
CMD57164	H.E. Red	Diff. Red	120	1.8/10	10
CMD54164	H.E. Grn	Diff. Wht	120	1.8/10	10

Diff.=Diffused; N.D.=Non-Diffused; P.T.=Pale Tint

T1 3/4 (5mm) RESISTORED LEDs

CMD333ID/HV5	H.E. Red	Red	35	15/—	
CMD333GD/HV5	Green	Green	35	15/—	
CMD333YD/HV5	Yellow	Yellow	35	11/—	
CMD333GD/HV5	H.E. Red	Red	35	15/—	
CMD333GD/HV5	Green	Green	35	13.5/—	
CMD333GD/HV5	Yellow	Yellow	35	11/—	

T1 3/4 (5mm) SUPER BRITE BI-COLOR LEDs

CMD336VRVWG	H.E. Red	White	54	12/20	
CMD336VRVYW	Green	White	54	16/20	
CMD336VYVWG	Yellow	White	54	12/20	
CMD336VYVYG	Green	White	54	10.5/20	
CMD336VYVYG	Yellow	White	54	10.5/20	
CMD336VYVYG	Green	Clear	50	16/20	
CMD336VYVYG	Red	Clear	50	6/10	
CMD336VYVYG	Green	Clear	50	6/10	



STATUSPAK® CIRCUIT BOARD INDICATORS

Printed Circuit Board assembly has been made faster and easier than ever before with the StatusPak™ Circuit Board Indicators. These unique, gangable, right angle and vertical indicators allow you to mount from one to twelve positions in one easy step. Diff.=Diffused/ N.D.=Non-Diffused

T-1 StatusPak™ Circuit Board Indicators

Mfr. No.	Emitted Color	Lens Type /Color	View Angle	Typical mcd/mA	Fig.
CMC01R	H.E. Red	Clear	30°	60/20	1
CMC01Y	Yellow	Clear	30°	60/20	1
CMC01G	H.E. Grn	Clear	30°	60/20	1
CMC01S	H.E. Red	N.D. Red	30°	25/20	1
CMC01Z	Yellow	N.D. Yel	30°	25/20	1
CMC01H	H.E. Grn	N.C. Grn	30°	25/20	1
CMW01R	H.E. Red	Diff. Red	130°	20/20	1
CMW01Y	Yellow	Diff. Yel	120°	12.5/20	1
CMW01G	H.E. Grn	Diff. Grn	120°	12.5/20	1
CMW01O	H.E. Red	Diff. Org	120°	20/20	1
CMW01S	H.E. Red	Diff. Red	120°	2.0/2	1
CMW01Z	Yellow	Diff. Yel	120°	2.0/2	1
CMW01H	H.E. Grn	Diff. Grn	120°	2.0/2	1

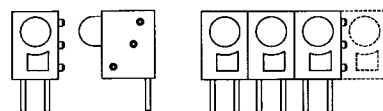


Fig. 1

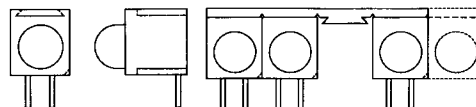


Fig. 2

T-1 1/4 StatusPak™ Circuit Board Indicators

Mfr. No.	Emitted Color	Lens Type /Color	View Angle	Typical mcd/mA	Fig.
CMI01R	H.E. Red	Diff. Red	105°	8.0/20	2
CMI01S	Red	Diff. Red	120°	3.2/20	2
CMI01G	H.E. Grn	Diff. Grn	105°	8.0/20	2
CMI01Y	Yellow	Diff. Yel	105°	8.0/20	2

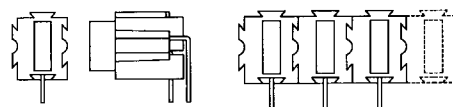


Fig. 3

Rectangular StatusPak™ Circuit Board Indicators

Mfr. No.	Emitted Color	Lens Type /Color	View Angle	Typical mcd/mA	Fig.
CMV01R	H.E. Red	Diff. Red	110°	12.5/10	3
CMV01Y	Yellow	Diff. Yel	110°	8.0/10	3
CMV01G	H.E. Grn	Diff. Grn	110°	8.0/10	3
CMR01R	H.E. Red	Diff. Red	110°	12.5/10	4
CMR01Y	Yellow	Diff. Yel	110°	8.0/10	4
CMR01G	H.E. Grn	Diff. Grn	110°	8.0/10	4
CMS01R	H.E. Red	Diff. Red	110°	12.5/10	5
CMS01Y	Yellow	Diff. Yel	110°	8.0/10	5
CMS01G	H.E. Grn	Diff. Grn	110°	8.0/10	5

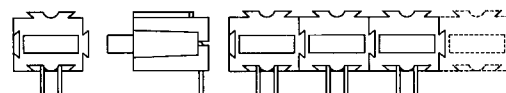


Fig. 4

5306 Series T-1 3/4 Right Angle LED Assembly

5306H1	Red	—	—	6.3/10	
5306H3	Amber	—	—	10.0/10	
5306H5	Green	—	—	10.0/10	
5306H7	Yellow	—	—	6.3/10	
5306H1LC	Red	—	—	2.3/2.0	
5306H5LC	Green	—	—	2.3/2.0	
5306H7LC	Yellow	—	—	2.1/2.0	
5306H1-5V	Red	—	—	8/10	
5306H3-5V	Amber	—	—	8/10	
5306H5-5V	Green	—	—	8/12	

5307 Series T-1 3/4 Right Angle LED Assembly

5307H1	Red	—	—	6.3/10	
5307H3	Amber	—	—	10.0/10	
5307H5	Green	—	—	10.0/10	
5307H7	Yellow	—	—	6.3/10	
5307H1LC	Red	—	—	2.3/2.0	
5307H5LC	Green	—	—	2.3/2.0	
5307H7LC	Yellow	—	—	2.1/2.0	
5307H1-5V	Red	—	—	8/10	
5307H3-5V	Amber	—	—	8/10	
5307H5-5V	Green	—	—	8/12	

5338 Series T-1 3/4 Right Angle LED Assembly

5338H1	Red	—	—	6.3/10	
5338H3	Amber	—	—	10.0/10	
5338H5	Green	—	—	10.0/10	
5338H7	Yellow	—	—	10.0/10	

5681 Series T-1 (3mm) 2 High Gangable

5681G1	Red	—	—	10/10	
5681G3	Amber	—	—	7/10	
5681G5	Green	—	—	16/10	
5681G7	Yellow	—	—	6.3/10	

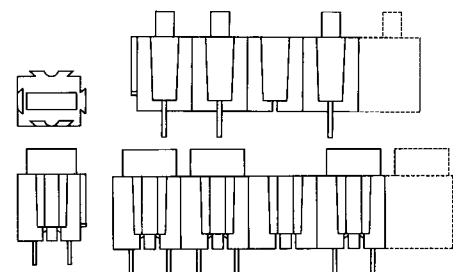
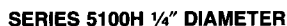


Fig. 5

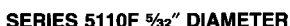


SERIES 5300E, 5300H, 5302H AND 5308H



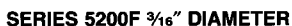
Super brite-30mcd, low current available—only 2mA needed. Black nylon housing will snap-in .249-.254" diameter hole in panels .031-.062" thick. Leads are 24 AWG, 6" long.

Mfr. No.	Color	Forward Volt at mA
5100H1	Red	2.0 at 20
5100H5	Green	2.2 at 20
5100H7	Yellow	2.1 at 20
5102H1-5V	Red	5.0 at 10
5102H3-5V	Amber	5.0 at 10
5102H5-5V	Green	5.0 at 12
5102H1-12V	Red	12.0 at 13
5102H3-12V	Amber	12.0 at 13
5102H5-12V	Green	12.0 at 13



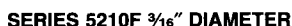
Super brite, T-1 LED, 20mcd diffused lens. Low current available—only 2mA needed. Black nylon housing snap-fits .155-.158" diameter hole in panels .031-.062" thick. Leads 26 AWG, 6" long, stripped 1/2".

Mfr. No.	Color	Forward Volt at mA
5110F1	Red	2.0 at 10
5110F5	Green	2.2 at 20
5110F7	Yellow	2.1 at 20
5110F1-5V	Red	5.0 at 13
5110F3-5V	Amber	5.0 at 10
5110F5-5V	Green	5.0 at 12
5110F1-12V	Red	12.0 at 13
5110F3-12V	Amber	12.0 at 10
5110F5-12V	Green	12.0 at 12



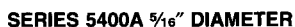
Quick push-in panel mounting. T-1 "Super Brite" LED assemblies will snap into .187-.192" diameter holes in panels .020-.097" thick. Wide angle visibility and high-intensity light output.

Mfr. No.	Color	Forward Volt at mA
5200F1	Red	2.0 at 10
5200F5	Green	2.2 at 20
5200F7	Yellow	2.1 at 20



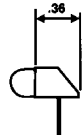
A wire version of the 5200F (above). This series gives protection against static discharge. Leads are 26 AWG, 4.4-4.8" long, stripped .18-.32".

Mfr. No.	Color	Forward Volt at mA
5210F1	Red	2.0 at 10
5210F5	Green	2.2 at 10
5210F7	Yellow	2.1 at 20



Two piece unit consisting of lens and LED housing assembly. Allows pre-wiring into circuit and testing before installation. 24 AWG wire leads 4.4-4.8" long, stripped .43-.57". Natural nylon housing, polycarbonate lens, red lead positive. To install, insert lens into panel, press firmly to snap LED assembly into rear of lens.

Mfr. No.	Color	Forward Volt at mA
5400A1	Red	2.0 at 20
5400A5	Green	2.1 at 20
5400A7	Yellow	2.0 at 20



- Easy to mount
- High contrast ratio
- Includes board standoff to prevent flux entrapment—permits easy washing
- TTL compatible—Requires no external current limiting resistors (Series 5302H* -5V only).
- Housing: Black nylon UL94V-0

Mfr. No.	Color	Forward Volt at mA	Typ. mcd.
5300E1	Red	1.7 at 20	3.0
5300H1	Red	2.0 at 20	30.0
5300H5	Green	2.2 at 20	30.0
5300H7	Yellow	2.1 at 20	25.0
5302H1-5V	Red	5.0 at 10	5.0
5302H3-5V	Amber	5.0 at 10	7.0
5302H5-5V	Green	5.0 at 20	10.0
5300H1LC*	Red	1.8 at 2	2.0
5300H5LC*	Green	1.8 at 2	2.5
5300H7LC*	Yellow	1.9 at 2	2.0
5308H1	Red	3.0 at 35	120.0
5308H5	Green	2.2 at 20	120.0
5308H7	Yellow	2.1 at 20	120.0
5300H1/5	Red/Grn	2.2 at 10	6.0
5300H5/1	Grn/Red	2.2 at 10	6.0
5302H1-12V	Red	12.0 at 12	4.0
5302H3-12V	Amber	12.0 at 12	4.0
5302H5-12V	Green	12.0 at 12	4.0

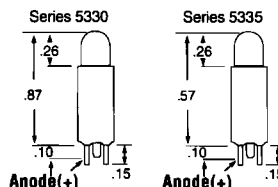
*LC = Low current, high efficiency.



- T-1 Size
- Press-in mounting for accurate location on printed circuit board
- High intensity light output
- Housing: Black nylon.

Mfr. No.	Color	Forward Volt at mA	Typ. mcd.
5310F1	Red	2.0 at 10	6.0
5310F5	Green	2.2 at 20	12.0
5310F7	Yellow	2.1 at 20	20.0

SERIES 5330H AND 5335H CIRCUIT BOARD INDICATORS

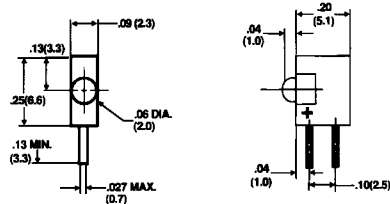


- T-1 3/4 size wide viewing angle (Series 5330H) or intense beam (Series 5331H) LEDs
- Easy, press-in mounting for precise positioning on PC board
- Includes board stand-off to prevent flux entrapment, permits easy washing
- Height matches popular size rocker and toggle switches
- Use Series 5330H and 5335H to fit panel hole openings
- Use Series 5331H to line up behind panel overlays
- Housing: Black nylon UL94V-0

Mfr. No.	Color	Forward Volt at mA	Typ. mcd.
5330H1	Red	2.0 at 20	30.0
5330H5	Green	2.2 at 20	20.0
5330H3	Amber	2.0 at 20	30.0
5330H7	Yellow	2.0 at 20	25.0
5330H1LC†	Red	1.8 at 2	2.0
5330H5LC†	Green	1.8 at 2	2.5
5330H7LC†	Yellow	1.9 at 2	2.0
5330H1-5V*	Red	5.0 at 10	6.0
5330H3-5V*	Amber	5.0 at 10	7.0
5330H5-5V*	Green	5.0 at 10	10.0
5335H1	Red	2.0 at 20	30.0
5335H5	Green	2.2 at 20	30.0
5335H1LC†	Red	1.8 at 2	2.0
5335H5LC†	Green	1.8 at 2	2.5
5335H1-5V*	Red	5.0 at 10	6.0
5335H5-5V*	Green	5.0 at 10	7.0

*Built-in Resistor. †LC = Low current, high efficiency.

SERIES 5350T LEDs

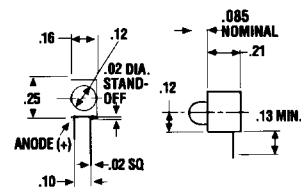


- Small size enables these to be stacked on 0.100" center.
- High-Intensity light output.
- Ideal for use where LEDs must align with opening in a cover panel
- Housing: Black Nylon UL94V-0
- Sub-Miniature 2.0mm LED right angle mounted simplify PC board mounting—Saves assembly time and costs
- Low current styles—only 2 mA to 3.5 mA
- Built-in resistor chip; operates at 5 volts without external resistor

Mfr. No.	Color	Forward Volt at mA
5350T1	Red	2.2 at 10
5350T5	Green	2.3 at 10
5350T7	Yellow	2.2 at 10
5352T1-5V	Red	5.0 at 9.6
5352T3-5V	Amber	5.0 at 10
5352T5-5V	Green	5.0 at 10
5350T1LC*	Red	1.8 at 2
5350T5LC*	Green	1.8 at 2
5350T7LC*	Yellow	1.9 at 2
5352T1-5VLC*	Red	5.0 at 3.5
5352T3-5VLC*	Amber	5.0 at 3.5
5352T5-5VLC*	Green	5.0 at 3.5

* Low current, high efficiency.

SERIES 5600F, 5602F MINIATURE CIRCUIT BOARD INDICATOR LED T-1 BLOCK ASSEMBLIES



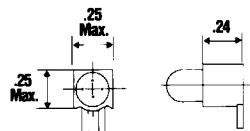
- Easy to mount
- Includes board stand-off to prevent flux entrapment, permits easy washing
- T-1 Size high intensity LED
- Housing: Black Nylon UL94V-0

Mr. No.	Color	Forward Volt at mA	Typ. mcd.
5600F1	Red	2.0 at 10	6.0
5600F5	Green	2.2 at 20	12.0
5600F7	Yellow	2.1 at 20	20.0
5600F3	Amber	2.0 at 10	5.0
5600F1LC†	Red	1.8 at 2	1.8
5600F5LC†	Green	1.8 at 1	1.8
5600F7LC†	Yellow	1.9 at 2	1.6
5602F1-5V*	Red	5.0 at 10	8.0
5602F3-5V*	Amber	5.0 at 10	8.0
5602F5-5V*	Green	5.0 at 12	8.0

*Resistor built-in 5 volts. † Low current, high efficiency.

SERIES 5670H, 5680F CIRCUIT BOARD INDICATOR SUPER BRITE LED ASSEMBLIES

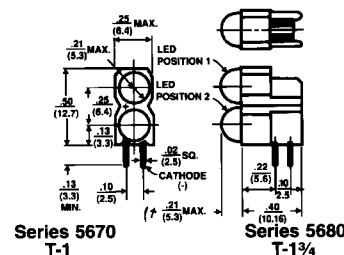
SERIES 5380E, 5380H CIRCUIT BOARD INDICATORS



- T-1¼Size
- Easy Mounting
- Includes board stand-off to prevent flux entrapment, permits easy washing
- Needs minimum space
- Housing: Black nylon UL94V-0

Mfr. No.	Color	Forward Volt at mA	Typ. mcd.
5380E1	Red	1.7 at 20	3.0
5380H1†	Red	2.0 at 20	30.0
5380H5†	Green	2.2 at 20	30.0
5380H7	Yellow	2.1 at 20	25.0
5380H1LC†	Red	1.8 at 2	2.0
5380H5LC†	Green	1.8 at 2	2.5
5380H7LC†	Yellow	1.9 at 2	2.0
5380H1-5V*	Red	5.0 at 10	5.5
5380H3-5V*	Amber	5.0 at 10	7.0
5380H5-5V*	Green	5.0 at 12	10.0
5380H1-12V*	Red	12.0 at 12	4.0
5380H3-12V*	Amber	12.0 at 12	4.0
5380H5-12V*	Green	12.0 at 12	4.0

* Built-in resistor. † Super Brite 30 mcd. ‡ Low current, high efficiency.



- Dual Mounted
- Allows two LEDs in the same board area required for a single LED
- High contrast ratio, high intensity light output.
- Includes board stand-off to prevent flux entrapment, permits easy washing

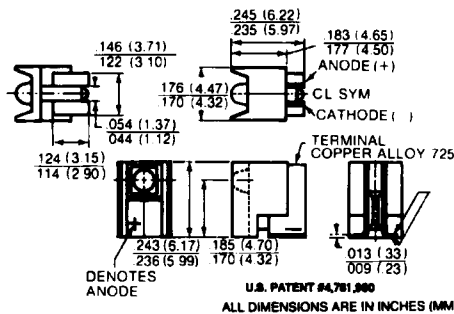
Mfr. No.	Color	Forward Volt at mA	Typ. mcd.
5670H1;1*	Red/Red	2.0 at 20	30
5670H5;5*	Grn/Grn	2.0 at 20	20
5670H7;7	Yel/Yel	2.1 at 20	25
5670H3;3	Amb/Amb	2.0 at 20	20
5680F1;1	Red/Red	2.0 at 10	6
5680F5;5	Grn/Grn	2.2 at 20	12
5680F7;7	Yel/Yel	2.1 at 20	20
5680F3;3	Amb/Amb	2.0 at 10	5

*Super Brite 30mcd.

Note: IDI can also supply the user who may have a special requirement, call Relay Specialties for various color/elec. specs.



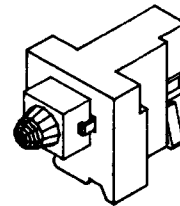
SERIES 6200T SUB-MINIATURE 1.65 MM RIGHT
ANGLE BLOCK ASSEMBLY



Designated the model 6200 series, these devices position LEDs for easy visibility, particularly in applications where boards are mounted in parallel close to one another. 6200 series surface mount LEDs are available in red, amber, green, and yellow colors, in standard and low-current versions, and in both standard and low-current 5 volt resistor-included versions. 6200 series LEDs are designed and packaged to meet the requirements of automated surface mount production lines. These devices will withstand processing temperatures of either IR or vapor-phase reflow, and are compatible with most common fluxes and cleaning agents. **Housing:**Black Polyphenylene Sulfide, UL 94V-0.

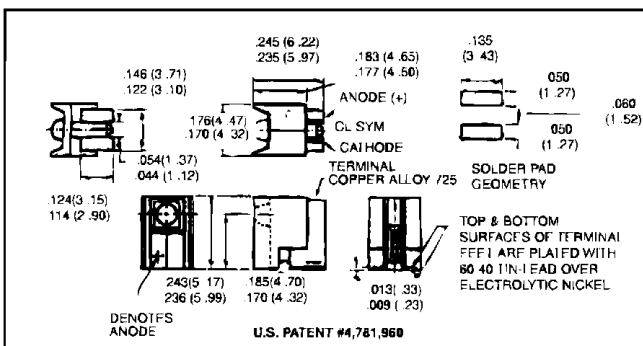
Mfr. No.	Color	Typical Intensity	Rated Current	Forward Voltage Typ.
6200T1	Red	5.0mcd	10.0 mA	2.2
6200T3	Amber	5.0mcd	10.0 mA	2.0
6200T5	Green	4.0mcd	10.0 mA	2.3
6200T7	Yellow	3.8mcd	10.0 mA	2.2

SERIES 6255T SURFACE MOUNT
CIRCUIT BOARD INDICATOR



Full surface mount reflow compatibility. Wide view angle and super brite output. Direct optics, no bends or losses. Ideal drop-in replacement for Dialight 591 Series Prism. Black housing provides high contrast. UL 94V-0 rated housing.

Mfr. No.	Color	Typical Intensity	Current mA
6255T1	Red	5.0mcd	10
6255T3	Amber	5.0mcd	10
6255T5	Green	4.0mcd	10
6255T7	Yellow	3.8mcd	10
6255T1LC	Red	0.5mcd	2
6255T5LC	Green	1.2mcd	2
6255T7LC	Yellow	0.5mcd	2



- Tape and reel packaged for high-speed pick-and-place installation
- Packaged 1000 pieces per reel
- Convection and vapor-phase reflow compatible
- Compact form enables high density placement
- Ideal for backlighting applications
- Wide angle viewing
- Direct-view optics provide smooth uniform appearance
- High output
- Low current (2 mA)
- Built-in resistor for 5V and 5V low-current
- 100K+ hour MTBF
- Easy post-reflow solder joint inspection
- No adhesives
- UL94 V-0 rated housing of black polyphenylene sulfide

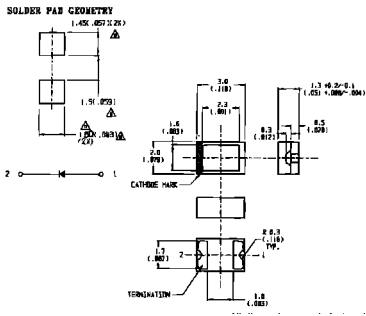
ELECTRO-OPTICAL CHARACTERISTICS AND RATINGS

Part Number	Emitted Color	Lens Color	Luminous Intensity		Forward Voltage			Peak Wavelength (nm)
			Typ. mcd	mA	Type.	Max	mA	
6200T1	Red	Red	5.0	10	2.2	3.0	10	635
6200T3	Amber	Amber	5.0	10	2.0	3.0	10	603
6200T5	Green	Green	4.0	10	2.3	3.0	10	565
6200T7	Yellow	Yellow	3.8	10	2.2	3.0	10	585
6200T1LC	Red	Red	.5	2	1.8	2.2	2	635
6200T5LC	Green	Green	1.2	2	1.8	2.2	2	565
6200T7LC	Yellow	Yellow	.5	2	1.9	2.7	2	583
6202T1-5V	Red	Red	5.0	9.6	5.0	6.0	9.6	635
6202T3-5V	Amber	Amber	5.0	10	5.0	6.0	10	585
6202T5-5V	Green	Green	5.0	10	5.0	6.0	10	583
6202T1-5VLC	Red	Red	2.0	3.5	5.0	6.0	3.5	635
6202T3-5VLC	Amber	Amber	4.0	3.5	5.0	6.0	3.5	565
6202T5-5VLC	Green	Green	2.0	3.5	5.0	6.0	3.5	583



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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

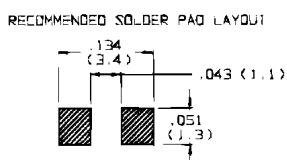
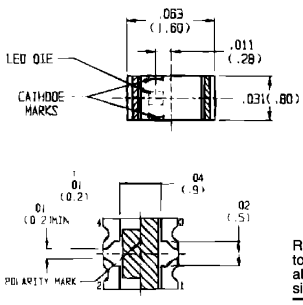
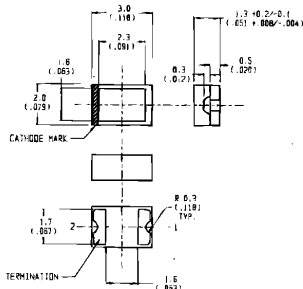
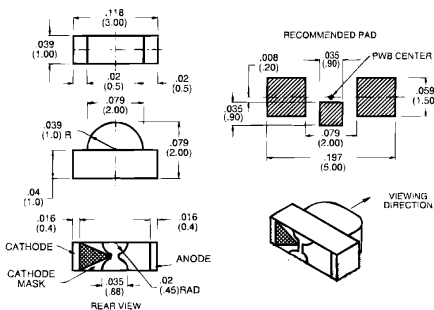


Part Number	Emitted Color	Lens Color	Package Type	Luminous Intensity			Forward Voltage			Peak Wavelength (nm)	View Angle Degrees
				Min. mcd	Typ. mcd	mA	Type.	Max	mA		
CMD11-21VGC/TR8	Green	Clear	Single	3.0	7.5	20	2.1	2.8	20	570	20°
CMD11-21VYC/TR8	Yellow	Clear	Single	3.0	6.0	20	2.0	2.8	20	585	20°
CMD11-21VRC/TR8	Red	Clear	Single	3.5	6.0	20	2.0	2.8	20	640	20°
CMD11-21SRC/TR8	Red	Clear	Single	6.0	17.0	20	1.7	2.4	20	660	20°
CMD11-21UBC/TR8	Blue	Clear	Single	CONTACT FACTORY							
CMD11-21RVGC/8	Red	Clear	Dual	6.0	17.0	20	1.7	2.4	20	660	20°
	Green	Clear	Dual	3.0	7.5	20	2.1	2.8	20	570	20°

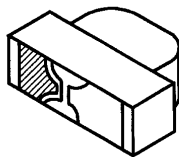
Part Number	Emitted Color	Lens Color	Package Type	Luminous Intensity			Forward Voltage			Peak Wavelength (nm)	View Angle Degrees
				Min. mcd	Typ. mcd	mA	Type.	Max	mA		
CMD12-21SRC/TR8	Red	Clear	Single	6.2	12.4	20	1.7	2.4	20	660	120°
CMD12-21VRC/TR8	H.E. Red	Clear	Single	3.0	5.0	20	2.0	2.8	20	640	120°
CMD12-21VYC/TR8	Yellow	Clear	Single	1.5	3.0	20	2.0	2.8	20	585	120°
CMD12-21VGC/TR8	Green	Clear	Single	4.4	8.8	20	2.1	2.8	20	570	120°
CMD12-21UBC/TR8	Green	Clear	Single	9.0	14.9	20	2.1	2.8	20	570	120°

Part Number	Emitted Color	Lens Color	Package Type	Luminous Intensity			Forward Voltage			Peak Wavelength (nm)	View Angle (degrees)
				Min. mcd	Typ. mcd	mA	Type.	Max	mA		
7016X13	Amber	Clear	Single	2.2	6.3	20	2.0	2.8	30	610	110°
7016X1	Red	Clear	Single	2.2	6.3	20	2.0	2.8	30	650	110°
7016X3	Yellow	Clear	Single	2.2	6.3	20	2.1	2.8	30	585	110°
7016X5	Green	Clear	Single	5.6	16.0	20	2.2	2.8	30	563	110°
7016X11	Red	Clear	Single	5.6	16.0	20	1.75	2.5	30	660	110°

Part Number	Emitted Color	Lens Color	Package Type	Luminous Intensity			Forward Voltage			Peak Wavelength (nm)	View Angle Degrees
				Min. mcd	Typ. mcd	mA	Type.	Max	mA		
7016X1/5	Red/Green	Clear	Single	7.0	11.7	20	1.7	2.3	20	660	120°
7016X5/7	Green/Yellow	Clear	Single	4.5	6.4	20	2.1	2.8	20	560	120°



SERIES CMD115 RIGHT ANGLE SURFACE MOUNT LEDs



Right angle surface mount LED lamps are designed to be compatible with today's state-of-the-art surface mount technology. Packaged on 8mm tape allowing for easy automated placement. All have clear lenses. Compact size only 3.0mm x 1.0mm x 2.0mm.

Mfr. No.	Color	Typical Intensity	Typical Current
CMD11504UR	Red	13.2mcd	20mA
CMD11504A	Orange	3.2mcd	20mA
CMD11504Y	Yellow	3.2mcd	20mA
CMD11504PY	Pure Yellow	10.4mcd	20mA
CMD11504G	Green	16.0mcd	20mA
CMD11504PG	Pure Green	2.6mcd	20mA

Part Number	7016X1/5	7016X5/7
Output Color	Red/Green	Green/Yellow
Diffused/Non-Diffused	Non-Diffused	Non-Diffused
Package Tint	Clear	Clear
Rated Current (mA)	20/20	20/20
Forward Voltage Typ. (V)	1.75/2.2	2.2/2.2
Forward Voltage Max. (V)	2.5/2.8	2.8/2.8
Reverse Current Max. (V=-4 V)	100	100
Min. Luminous Intensity (mcd)	9.0	9.0
Max. Luminous Intensity (mcd)	16.0/20	20/16
Peak Wavelength (nm)	660/570	570/580
Power Dissipation Max. (mW)	60	60
Continuous Forward Current Max. (mA)	30/25	25
Peak Forward Current Max. (mA)	75/60	60
Viewing Angle (degrees)	110	110
Operating Temperature (°C)	-25/+80	-25/+80
Storage Temperature (°C)	-30/+85	-30/+85



Part Number	7020X1	7020X3	7020X5	7020X7	7020X15	7020X21	7020X23	7020X33
Output Color	Red	Orange	Green	Yellow	Green	Red	Orange	Yellow
Diffused/Non-Diffused	Diffused	Diffused	Diffused	Diffused	Diffused	Diffused	Diffused	Diffused
Package Color	Clear	Clear	Clear	Clear	Clear	Clear	Clear	Clear
Rated Current (mA)	20	20	20	20	20	20	20	20
Forward Voltage Typ. (V)	1.7	2.2	2.1	2.2	2.1	1.9	1.9	1.9
Forward Voltage Max. (V)	2.3	2.8	2.8	2.8	2.8	2.4	2.4	2.4
Luminous Intensity Min. (mcd)	7.6	2.2	7.0	2.2	1.6	16.0	16.0	16.0
Luminous Intensity Typ. (mcd)	11.7	3.7	6.4	3.7	2.7	50.0	65.0	65.0
Luminous Intensity Max. (mcd)	-	-	-	-	-	-	-	-
Peak Wavelength (nm)	660	605	560	580	555	630	609	592
Viewing Angle (degrees)	75	75	75	75	75	75	75	75
Power Dissipation (mW)	57.5	70	70	70	70	81	81	81
Operating Temperature (°C)	-30 to +85	-30 to +85	-30 to +85	-30 to +85	-30 to +85	-40 to +85	-40 to +85	-40 to +85
Storage Temperature (°C)	-40 to +100	-40 to +100	-40 to +100	-40 to +100	-40 to +100	-40 to +100	-40 to +100	-40 to +100
Peak Forward Current Max. (mA)	60	60	60	60	60	100	100	100
Reverse Voltage (IR=100µA) (V)	4	4	4	4	4	5	5	5
Lead Solder Time @ 260°C (seconds)	5	5	5	5	5	5	5	5

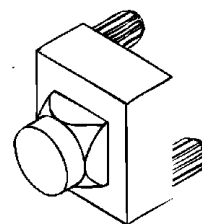
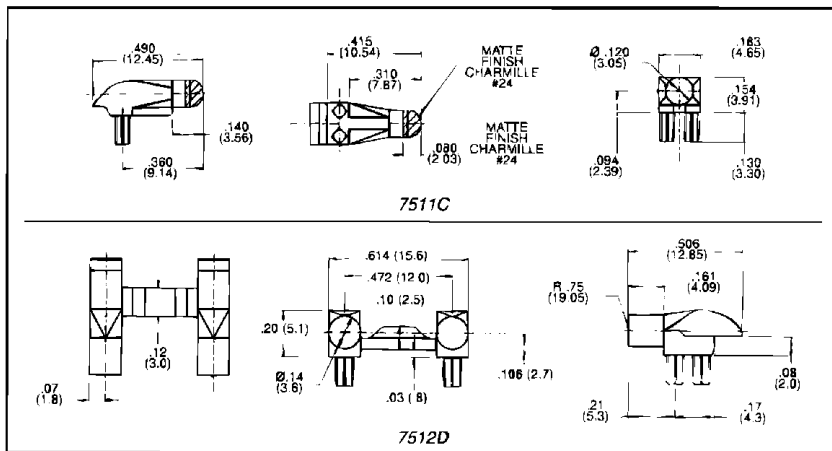
Part Number	Emitted Color	Lens Color	Package Type	Luminous Intensity			Forward Voltage			Peak Wavelength (nm)	View Angle Degrees
				Min. mcd	Typ. mcd	mA	Type.	Max	mA		
CMD67-22VRVC/TR8	H.E. Red	Clear	Dual	6.0	10.0	20	2.0	2.8	20	640	120°
	Green	Clear	Dual	15.0	25.0	20	2.1	2.8	20	570	120°
CMD67-22SRUGC/TR8	Super Red	Clear	Dual	25.0	40.0	20	1.7	2.4	20	660	120°
	Green	Clear	Dual	15.0	25.0	20	2.1	2.8	20	565	120°

Part Number	7017X21	7017X23	7017X3	7017X15	7017X13	7017X5	7017X1	7017X7	7017X33
Output Color	Red	Orange	Orange	Green	Yellow	Green	Red	Yellow	Yellow
Diffused/Non-Diffused	Diffused	Diffused	Diffused	Diffused	Diffused	Diffused	Diffused	Diffused	Diffused
Package Color	White	White	Clear	Clear	Clear	Clear	Clear	Clear	White
Power Dissipation (mW)	81	81	70	70	70	70	57.5	70	81
Forward Current (mA)	30	30	25	25	25	25	25	25	30
Peak Forward Current (mA)	100	100	60	60	60	60	60	60	100
Reverse Voltage (V)	5	5	4	4	4	4	4	4	5
Operating Temperature (°C)	-40 to +85	-30 to +85	-30 to +85	-30 to +85	-30 to +85	-30 to +85	-30 to +85	-30 to +85	-40 to +85
Storage Temperature (°C)	-40 to +100	-40 to +100	-40 to +100	-40 to +100	-40 to +100	-40 to +100	-40 to +100	-40 to +100	-40 to +100
Forward Voltage Typ. (IF=20mA)	1.9	1.9	2.2	2.1	2.2	2.1	1.7	2.1	1.9
Forward Voltage Max. (IF=20mA)	2.4	2.4	2.8	2.8	2.8	2.8	2.3	2.8	2.4
Reverse Current Typ. (VR=4V)	-	-	-	-	-	-	-	-	-
Reverse Current Max. (VR=4V)	100	100	100	100	100	100	100	100	100
Luminous Intensity Min. (IF=20 mA)	16	16	2.0	1.4	2.0	3.8	7.0	7.0	16
Luminous Intensity Typ. (IF=20 mA)	50	65	3.4	2.4	3.4	6.4	11.7	11.7	65
Peak Wavelength (IF=20 mA)	630	609	605	555	580	560	660	570	592
Special Line Half Width (IF=20 mA)	15	15	30	30	30	30	30	30	15
Viewing Angle (degrees)	70	70	70	70	70	70	70	70	70



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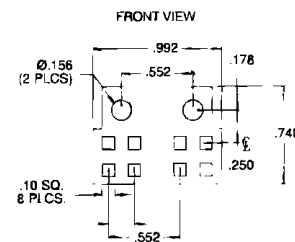
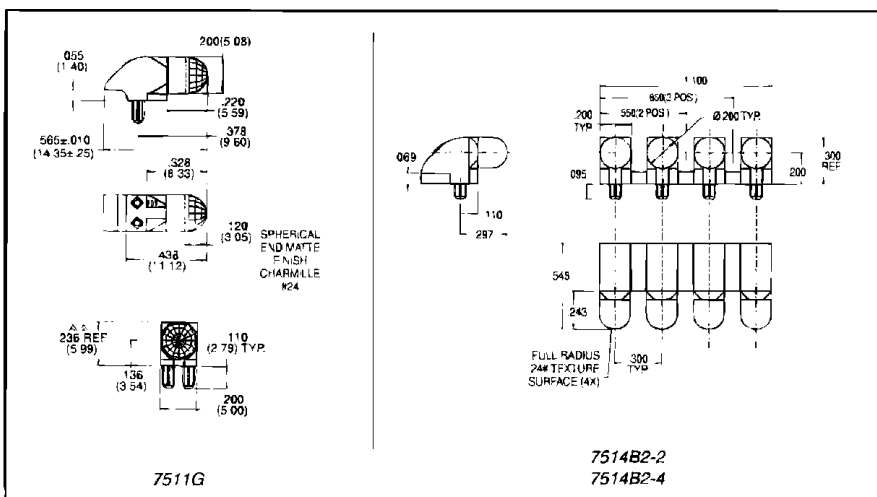
P I L O T L I G H T S & I N D I C A T O R S



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

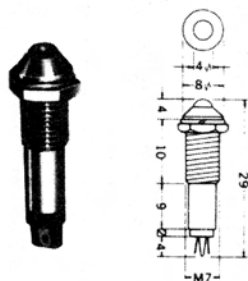
MODEL	OUTPUT COLOR
7511C5	GREEN
7511C1	RED
7511C7	YELLOW
7511C2	CLEAR
7512D1	RED
7512D2	CLEAR
7512D5	GREEN
7512D7	YELLOW



- 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

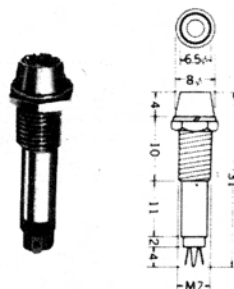
MODEL	OUTPUT COLOR
7511G2	DIFFUSED TRANSLUCENT
7511G1	CLEAR RED TINT
7511G5	CLEAR GREEN TINT
7511G7	CLEAR YELLOW

Models 406/407



MODEL 406

Model 406 LED Indicator Lights are manufactured from chrome plated brass with the LED installed in a manner that the lens of the LED forms a macrodome lens for the indicator light. Available also with a black anodized body. Voltages range from 2 to 24 with a built-in resistor. They mount in a 7mm panel hole with nut and washer provided. 2 volt versions mount in 6mm panel hole.



MODEL 407

Model 407 LED Indicator Lights are chrome plated brass with a large dish shaped reflector around the LED to produce a much larger illuminated area. Also available with the black anodized body. Voltages range from 2 to 24 with a built-in resistor. Panel mount in 7mm hole with nut and washer provided. 2 volt versions mount in 6mm hole.

Part Number	Color	Voltage	Current mA	Luminous Intensity (mcd)
LED-406G	Green	2.2	30	0.4
LED-406G-5	Green	5.0	30	10
LED-406G-12	Green	12.0	30	10
LED-406G-24	Green	24.0	30	10
LED-406GBO	Green - Black Body	2.1	30	1.0
LED-406GBO-5	Green - Black Body	5.0	30	10
LED-406GBO-12	Green - Black Body	12.0	30	10
LED-406GBO-24	Green - Black Body	24.0	30	10
LED-406R	Red	2.0	30	0.6
LED-406R-5	Red	5.0	30	10
LED-406R-12	Red	12.0	30	10
LED-406R-24	Red	24.0	30	10
LED-406RBO	Red - Black Body	2.0	30	0.6
LED-406RBO-5	Red - Black Body	5.0	30	10
LED-406RBO-12	Red - Black Body	12.0	30	10
LED-406RBO-24	Red - Black Body	24.0	30	10
LED-406R/G	Red/Green Bi-Color	2.0	30	0.6
LED-406R/GBO	Red/Green Bi-Color - Black Body	2.0	30	0.6
LED-406Y	Yellow	2.1	25	2.5
LED-406Y-5	Yellow	5.0	30	1.6
LED-406Y-12	Yellow	12.0	30	1.6
LED-406Y-24	Yellow	24.0	30	1.6
LED-406YBO	Yellow - Black Body	2.1	25	2.5
LED-406YBO-5	Yellow - Black Body	5.0	30	1.6
LED-406YBO-12	Yellow - Black Body	12.0	30	1.6
LED-406YBO-24	Yellow - Black Body	24.0	30	1.6

Panel Hole: 7mm, 2V Versions 6mm

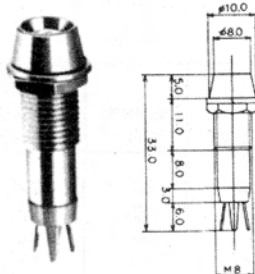
Part Number	Color	Voltage	Current mA	Luminous Intensity (mcd)
LED-407G	Green	2.1	30	1.0
LED-407G-5	Green	5.0	30	10
LED-407G-12	Green	12.0	30	10
LED-407G-24	Green	24.0	30	10
LED-407GBO	Green - Black Body	2.1	30	1.0
LED-407GBO-5	Green - Black Body	5.0	30	10
LED-407GBO-12	Green - Black Body	12.0	30	10
LED-407GBO-24	Green - Black Body	24.0	30	10
LED-407R	Red	2.0	30	0.6
LED-407R-5	Red	5.0	30	10
LED-407R-12	Red	12.0	30	10
LED-407R-24	Red	24.0	30	10
LED-407RBO	Red - Black Body	2.0	30	0.6
LED-407RBO-5	Red - Black Body	5.0	30	10
LED-407RBO-12	Red - Black Body	12.0	30	10
LED-407RBO-24	Red - Black Body	24.0	30	10
LED-407R/G	Red/Green Bi-Color	2.0	30	0.6
LED-407R/GBO	Red/Green Bi-Color - Black Body	2.0	30	0.6
LED-407Y	Yellow	2.1	25	2.5
LED-407Y-5	Yellow	5.0	30	1.6
LED-407Y-12	Yellow	12.0	30	1.6
LED-407Y-24	Yellow	24.0	30	1.6
LED-407YBO	Yellow - Black Body	2.1	25	2.5
LED-407YBO-5	Yellow - Black Body	5.0	30	1.6
LED-407YBO-12	Yellow - Black Body	12.0	30	1.6
LED-407YBO-24	Yellow - Black Body	24.0	30	1.6

Panel Hole: 7mm, 2V Versions 6mm

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PILLOT LIGHTS & INDICATORS

Models 440

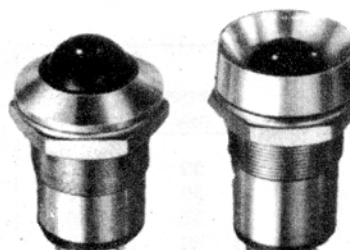


MODEL 440

The Model 440 LED Indicator Light is a larger version of the Model 407. Available with either chrome body or black anodized body. Voltages range from 2 to 24 with built-in resistor. 2 volt versions slightly shorter in length.

Part Number	Color	Voltage	Current mA	Luminous Intensity (mcd)
LED-440G	Green	2.0	30	15
LED-440G-5	Green	5.0	30	15
LED-440G-12	Green	12.0	30	15
LED-440G-24	Green	24.0	30	15
LED-440GBO	Green - Black Body	2.0	30	15
LED-440GBO-5	Green - Black Body	5.0	30	15
LED-440GBO-12	Green - Black Body	12.0	30	15
LED-440GBO-24	Green - Black Body	24.0	30	15
LED-440R	Red	2.0	30	15
LED-440R-5	Red	5.0	30	15
LED-440R-12	Red	12.0	30	15
LED-440R-24	Red	24.0	30	15
LED-440RBO	Red - Black Body	2.0	30	15
LED-440RBO-5	Red - Black Body	5.0	30	15
LED-440RBO-12	Red - Black Body	12.0	30	15
LED-440RBO-24	Red - Black Body	24.0	30	15
LED-440Y	Yellow	2.0	30	2.5
LED-440Y-5	Yellow	5.0	30	2.5
LED-440Y-12	Yellow	12.0	30	2.5
LED-440Y-24	Yellow	24.0	30	2.5
LED-440YBO	Yellow - Black Body	2.0	30	2.5
LED-440YBO-5	Yellow - Black Body	5.0	30	2.5
LED-440YBO-12	Yellow - Black Body	12.0	30	2.5
LED-440YBO-24	Yellow - Black Body	24.0	30	2.5

Models 420/430 Ultra Large Light Emitting Diode



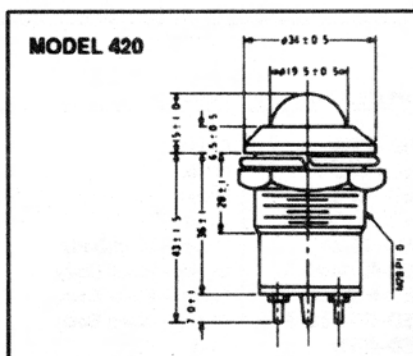
MODEL 420

MODEL 430

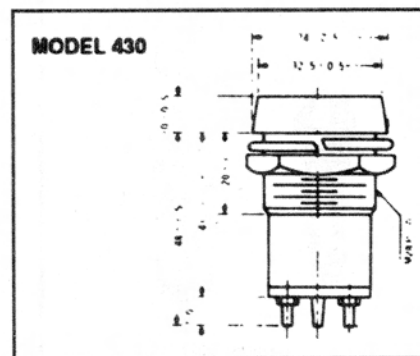
Model 420 Ultra-Large LED Indicator Lights are similar in appearance to the Model 406. The LED is installed in a manner that the lens of the LED forms a macrodome lens for the indicator light.

The Model 430 Ultra-Large LED Indicator Light looks similar to the Model 407. A large dish shaped reflector around the LED produces a much larger illuminated area.

These indicator lights come with a built-in resistor for 12, 24 or 100VDC. Other voltages are optional.



Panel Hole: 28.5mm



Part Number	Color	Voltage	Current mA	Luminous Intensity (mcd)
LED-420G-12 or LED-430G-12	Green	12V	20	4.0
LED-420G-24 or LED-430G-24	Green	24V	20	4.0
LED-420G-100 or LED-430G-100	Green	100V	20	4.0
LED-420R-12 or LED-430R-12	Red	12V	20	5.0
LED-420R-24 or LED-430R-24	Red	24V	20	5.0
LED-420R-100 or LED-430R-100	Red	100V	20	5.0
LED-420Y-12 or LED-430Y-12	Yellow	12V	20	4.0
LED-420Y-24 or LED-430Y-24	Yellow	24V	20	4.0
LED-420Y-100 or LED-430Y-100	Yellow	100V	20	4.0

SURFACE MOUNT LED LAMPS

Features

- Super thin package, wide viewing angle
- Reverse surface mount LEDs
- Low power consumption
- Ideal for backlight and indicator
- Available in blue and other colors
- Various lens types and inner lens type

Descriptions

The bright red source color devices are made with Gallium Phosphide Red LED.

The super bright green source color devices are made with Gallium Phosphide Green LED.

The high efficiency red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange LED.

The yellow source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow LED.

The super bright red source color devices are made with Gallium Aluminum Arsenide red LED.

The super bright yellow source color devices are made with DH InGaAlP on GaAs substrate LED.

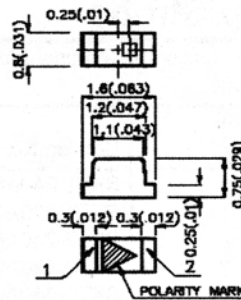


Fig. 1

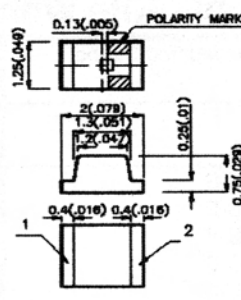


Fig. 2

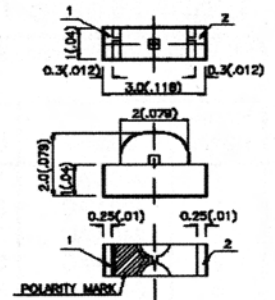


Fig. 3

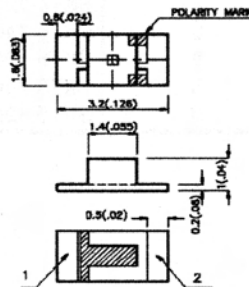


Fig. 4

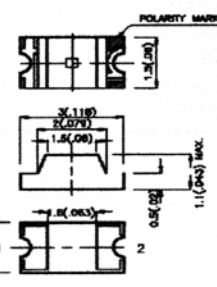


Fig. 5

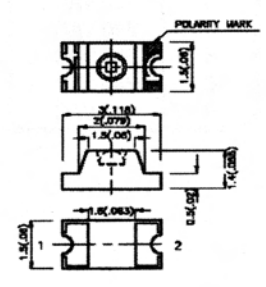


Fig. 6

1.6mm x 0.8mm x 0.75mm (0603 Super Thin SMT LED)

Fig. No.	Kingbright Part No.	Emitted Color	Peak Wave-Length (nm)	Iv (mcd) @20mA	
				Min.	Max.
1	KPT1608SRWPRV	Red	660	40	70
	KPT1608NW	Orange	610	5	12.5
	KPT1608PYW	Yellow	580	3.2	8
	KPT1608QYW	Yellow	565	3.2	12.5
	KPT1608QGW	Green	560	3.2	8
	KPT1608PGW	Pure Gm.	555	0.8	3.2

3.2mm x 1.6mm x 1.05mm (1206 Reverse Angle SMT LED)

Fig. No.	Kingbright Part No.	Emitted Color	Peak Wave-Length (nm)	Iv (mcd) @20mA	
				Min.	Max.
4	KPTR3216SRWPRV	Red	660	40	70
	KPTR3216NW	Orange	610	5	12.5
	KPTR3216PYW	Yellow	580	3.2	8
	KPTR3216QYW	Yellow	565	3.2	12.5
	KPTR3216QGW	Green	560	3.2	8
	KPTR3216PGW	Pure Gm.	555	0.8	3.2

2.0mm x 1.2mm x 0.75mm (0805 Super Thin SMT LED)

Fig. No.	Kingbright Part No.	Emitted Color	Peak Wave-Length (nm)	Iv (mcd) @20mA	
				Min.	Max.
2	KPT2012SRWPRV	Red	660	40	70
	KPT2012NW	Orange	610	5	12.5
	KPT2012PYW	Yellow	580	3.2	8
	KPT2012QYW	Yellow	565	3.2	12.5
	KPT2012QGW	Green	560	3.2	8
	KPT2012PGW	Pure Gm.	555	0.8	3.2

3.0mm x 1.5mm x 1.1mm (1106 SMT LED)

Fig. No.	Kingbright Part No.	Emitted Color	Peak Wave-Length (nm)	Iv (mcd) @20mA	
				Min.	Max.
5	KP3015SRCPV	Red	660	40	70
	KP3015NC	Orange	610	5	12.5
	KP3015PYC	Yellow	580	3.2	8
	KP3015QYC	Yellow	565	3.2	12.5
	KP3015QGC	Green	560	3.2	8
	KP3015PGC	Pure Gm.	555	0.8	3.2

3.0mm x 1.0mm (1104 Right Angle SMT LED)

Fig. No.	Kingbright Part No.	Emitted Color	Peak Wave-Length (nm)	Iv (mcd) @20mA	
				Min.	Max.
3	KPA3010SRCPV	Red	660	40	70
	KPA3010NC	Orange	610	5	12.5
	KPA3010PYC	Yellow	580	3.2	8
	KPA3010QYC	Yellow	565	3.2	12.5
	KPA3010QGC	Green	560	3.2	8
	KPA3010PGC	Pure Gm.	555	0.8	3.2

3.0mm x 1.5mm x 1.1mm (1106 SMT LED)

Fig. No.	Kingbright Part No.	Emitted Color	Peak Wave-Length (nm)	Iv (mcd) @20mA	
				Min.	Max.
6	KPL3015SRCPV	Red	660	40	80
	KPL3015NC	Orange	610	5	16
	KPL3015PYC	Yellow	580	3.2	12.5
	KPL3015QYC	Yellow	565	5	16
	KPL3015QGC	Green	560	3.2	8
	KPL3015PGC	Pure Gm.	555	0.8	3.2



SURFACE MOUNT LED LAMPS

Features

3.0mmx2.5mm SMT LED 1.1mm thickness. Bi-color, low power consumption.
Axial leads, right angle leads are also available in subminiature solid state lamps.
3.0mmx2.0mm, 1.4mm high, suitable for compact optoelectronic applications.
Sot-23 package surface mount LED, both single chip and dual chips available.
3.5mmx2.8mm SMT, available in single color and bi-color, ideal for backlighting.

Descriptions

The bright red source color devices are made with Gallium Phosphide red LED.

The super bright green source color devices are made with Gallium Phosphide green LED.

The high efficiency red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange LED.

The yellow source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide yellow LED.

The super bright red source color devices are made with Gallium Aluminium Arsenide red LED.

The super bright yellow source color device are made with DH InGaAlP on GaAs substrate LED.

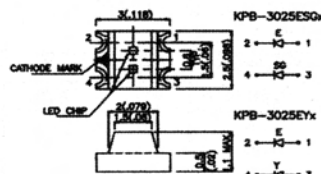


Fig. 7

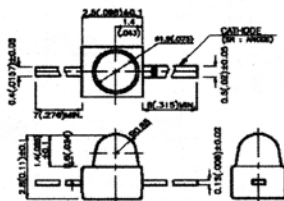


Fig. 8 - Axial Lead

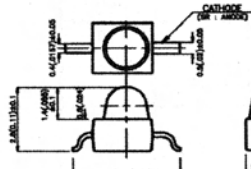


Fig. 9 - Gull Wing Lead

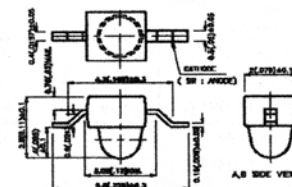


Fig. 10 - Z Bend Lead

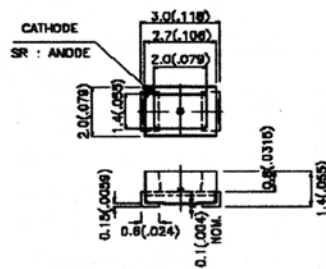


Fig. 11

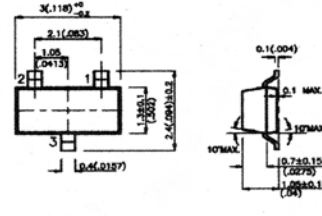


Fig. 12

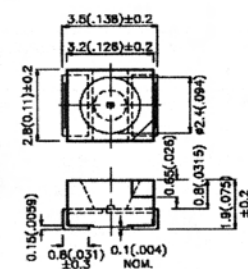


Fig. 13

3.0mm x 2.5mm (1109 Bi-Color)

Fig. No.	Kingbright Part No.	Emitted Color	Peak Wave-Length (nm)	Iv (mcd) @20mA	
				Min.	Max.
7	KPB3025ESGC	Red/Gm.	625/565	5/3.2	12.5/12.5
	KPB3025ESGW	Red/Gm.	625/565	5/3.2	12.5/12.5
	KPB3025EYC	Red/Yel.	625/590	5/3.2	12.5/8
	KPB3025EYW	Red/Yel.	625/590	5/3.2	12.5/8
	KPB3025SGYC	Gm./Yel.	565/590	3.2/3.2	12.5/8

3.0mm x 2.0mm SMT LED Lamps

Fig. No.	Kingbright Part No.	Emitted Color	Peak Wave-Length (nm)	Iv (mcd) @20mA	
				Min.	Max.
11	KA3020EC	Red	625	8	60
	KA3020SGC	Green	565	8	40
	KA3020YC	Yellow	590	8	40
	KA3020SRC	Red	660	70	300
	KA3020SYC	Yellow	595	100	200

Subminiature Solid State Lamps (Axial Leads)

Fig. No.	Kingbright Part No.	Emitted Color	Peak Wave-Length (nm)	Iv (mcd) @20mA	
				Min.	Max.
8	KM2520A01EC001	Red	625	20	100
	KM2520A01SGC001	Green	565	50	150
	KM2520A01YC001	Yellow	590	20	70
	KM2520A01SRC001	Red	660	200	1000
	KM2520A01SYC001	Yellow	595	700	1300
9	KM2520A01EC003	Red	625	20	100
	KM2520A01SGC003	Green	565	50	150
	KM2520A01YC003	Yellow	590	20	70
	KM2520A01SRC003	Red	660	200	1000
	KM2520A01SYC003	Yellow	595	700	1300
10	KM2520A01EC009	Red	625	20	100
	KM2520A01SGC009	Green	565	50	150
	KM2520A01YC009	Yellow	590	20	70
	KM2520A01SRC009	Red	660	200	1000
	KM2520A01SRT009	Red	660	200	1000
	KM2520A01SYC009	Yellow	595	700	1300

3mm x 1.3mm SOT- 23 SMT LED Lamps

Fig. No.	Kingbright Part No.	Emitted Color	Peak Wave-Length (nm)	Iv (mcd) @20mA	
				Min.	Max.
12	KM23EC	Red	625	8	32
	KM23SGC	Green	565	8	32
	KM23YC	Yellow	590	5	12.5
	KM23SRC	Red	660	50	90
	KM23SYC	Yellow	595	40	100
	KM23ESGC	Red/Gm.	625/565	8.0/8.0	32/32

3.5mm x 2.8mm SMT LED

Fig. No.	Kingbright Part No.	Emitted Color	Peak Wave-Length (nm)	Iv (mcd) @20mA	
				Min.	Max.
13	KA3528EC	Red	625	12.5	40
	KA3528SGC	Green	565	12.5	40
	KA3528YC	Yellow	590	8	20
	KA3528SRC	Red	660	70	300
	KA3528SYC	Yellow	595	40	100

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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

CIRCUIT BOARD INDICATORS
3mm Single Level, Bi-Level, Tri-Level, and Quad-Level

Shape	Kingbright Part No.	Emitted Color	Peak Wave-Length (nm)	Iv (mcd) @10mA	
				Min.	Max.
	L934CB/ID	Red	625	8	50
	L934CB/GD	Green	565	8	32
	L934CB/YD	Yellow	590	8	32
	L934EB/2ID	Red	625	8	50
	L934EB/2GD	Green	565	8	32
	L934EB/2YD	Yellow	590	8	32
	L934BY/3ID	Red	625	8	50
	L934BY/3GD	Green	565	8	32
	L934BY/3YD	Yellow	595	8	32
	L96XDM/4ID	Red	625	8	50
	L96XDM/4GD	Green	565	8	32
	L96XDM/4YD	Yellow	590	8	32

5mm Single Level, Bi-Level, Array Indicators

Shape	Kingbright Part No.	Emitted Color	Peak Wave-Length (nm)	Iv (mcd) @10mA	
				Min.	Max.
	L1503CB/ID	Red	625	12.5	8
	L1503CB/GD	Green	565	5	32
	L1503CB/YD	Yellow	590	5	32
	L73HB/IDA	Red	625	8	32
	L73HB/GDA	Green	565	5	32
	L73HB/YDA	Yellow	590	5	32
	L1503EB/2ID	Red	625	12.5	80
	L1503EB/2GD	Green	565	5	32
	L1503EB/2YD	Yellow	595	5	32
	L73CB/3IDA	Red	625	8	32
	L73CB/3GDA	Green	565	5	32
	L73CB/3YDA	Yellow	590	5	32

SUPERBRIGHT ROUND LED LAMPS

Shape	Kingbright Part No.	Emitted Color	Peak Wave-Length (nm)	Iv (mcd) @10mA	
				Min.	Max.
	L1060HD	Red	700	0.5	3.2
	L1060ID	Red	625	8	32
	L1060ED	Red	625	8	32
	L1060GD	Green	565	5	20
	L1060YD	Yellow	590	3.2	20
	L934ID	Red	625	8	50
	L934EC	Red	625	20	125
	L934GD	Green	565	8	32
	L934GC	Green	565	20	80
	L934YD	Yellow	590	8	32
	L934YC	Yellow	590	10	50
	L934SGC	Green	565	100*	300*
	L934SYC	Yellow	595	200*	1300*
	L934SRC/C	Red	660	360*	500*
	L934SRC/G	Red	660	1200*	1400*
	L934SRC/J	Red	660	1800*	2500*
	L132XID	Red	625	8	50
	L132XIT	Red	625	20	125
	L132XGD	Green	565	8	32
	L132XGT	Green	565	20	80
	L132XYD	Yellow	590	8	32
	L132XYT	Yellow	590	10	50
	L53ID	Red	625	12.5	80
	L53GD	Green	565	5	32
	L53YD	Yellow	590	5	32
	L53SRC/DU	Red	660	1000*	1300*
	L53SRC/E	Red	660	2000*	3500*
	L53SRC/F	Red	660	3500*	4500*

Shape	Kingbright Part No.	Emitted Color	Peak Wave-Length (nm)	Iv (mcd) @10mA	
				Min.	Max.
	L63ID	Red	625	12.5	50
	L63IT	Red	625	32	125
	L63GD	Green	565	5	20
	L63GT	Green	565	20	80
	L63YD	Yellow	590	5	20
	L63YT	Yellow	590	20	80
	L1053HDT	Red	700	0.5	2
	L1053IDT	Red	625	5	12.5
	L1053GDT	Green	565	2	8
	L1053YDT	Yellow	590	2	8
	L113IDT	Red	625	3.2	12.5
	L113GDT	Green	565	2	8
	L113YDT	Yellow	590	2	8
	L113SRDT	Red	660	40*	80*
	L113SRSGWT	Red/Grn	625/565	30*/8*	70*/20*
	L144IDT	Red	625	3.2	20
	L144EDT	Orange	625	3.2	20
	L144GDT	Green	565	2	8
	L144YDT	Yellow	590	2	8
	L144SRDT	Red	660	40*	70*
	L153IDT	Red	625	3.2	12.5
	L153GDT	Green	565	1.3	8
	L153YDT	Yellow	590	1.3	8
	L153SRDT	Red	660	32*	80*
	L1553IDT	Red	625	3.2	12.5
	L1553GDT	Green	565	1.3	8
	L1553YDT	Yellow	590	1.3	8
	L1553SRDT	Red	660	32*	100*

Note: All intensities with (*) denotes operating current @ 20mA.



BASED LED LAMPS (INCANDESCENT LAMP REPLACEMENT)

Kingbright Part Number	Emitted Color	Peak Wave- Length (nm)	Iv (mcd)		Fig. No.
			Min.	Max.	
BLF041SRC-12V-P	Red	660	400	1600	14
BLF041SYC-12V-P	Yellow	595	400	1600	
BLF051URC-12V-P	Red	660	1500	3000	15
BLF051SYC-12V-P	Yellow	595	400	2000	
BLB101URC-12V-P	Red	660	1500	3000	16
BLB101SYC-12V-P	Yellow	595	700	2500	
BLS101URC-12V-P	Red	660	1500	3000	17
BLS101SYC-12V-P	Yellow	595	700	2500	

Notes:

1. Various colors and lens type are also available.
2. All incandescent lamps replacement are available in 6V, 12V, 24V.

LED DISPLAYS

Shape	Kingbright Part No.	Emitted Color	Peak Wave- Length (nm)	Iv (ucd) @10mA	
				Min.	Max.
10 Seg. 	DC10EWA	Red	625	2200	5600
	DC10GWA	Green	565	2200	5600
	DC10YWA	Yellow	590	2200	5600
	DC10SRWA	Red	660	5600	31000
	DC7G3HWA	Gm/Red	565/700	2200/900	5600/2200
0.3" 	SA03-11EWA	Red	625	2200	9000
	SA03-11GWA	Green	565	1400	5600
	SA03-11YWA	Yellow	590	1400	5600
	SA03-11SRWA	Red	660	5600	14000
0.4" 	SA04-11EWA	Red	625	2200	9000
	SA04-11GWA	Green	565	9000	21000
	SA04-11YWA	Yellow	590	1400	5600
	SA04-11SRWA	Red	660	9000	30000
0.56" 	SA56-21EWA	Red	625	2200	5600
	SA56-21GWA	Green	565	5600	14000
	SA56-21YWA	Yellow	590	2200	5600
	SA56-21SRWA	Red	660	5600	21000
1.0" 	SA10-21EWA	Red	625	5600	14000
	SA10-21GWA	Green	565	9000	22000
	SA10-21YWA	Yellow	590	3600	9000
	SA10-21SRWA	Red	660	14000	31000
0.4" 	DA04-11EWA	Red	625	2200	5600
	DA04-11GWA	Green	565	2200	3600
	DA04-11YWA	Yellow	590	2200	5600
	DA04-11SRWA	Red	660	3600	9000
0.56" 	DA56-11EWA	Red	625	2200	5600
	DA56-11GWA	Green	565	2200	5600
	DA56-11YWA	Yellow	590	2200	5600
	DA56-11SRWA	Red	660	5600	21000

Notes:

1. All displays are available in both common anode and common cathode.
2. Bi-color, other face color and various dimensions are also available.

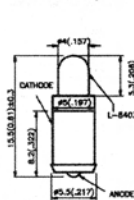


Fig. 14

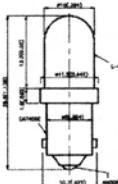


Fig. 16

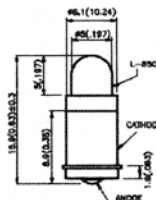


Fig. 15

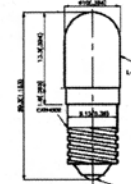
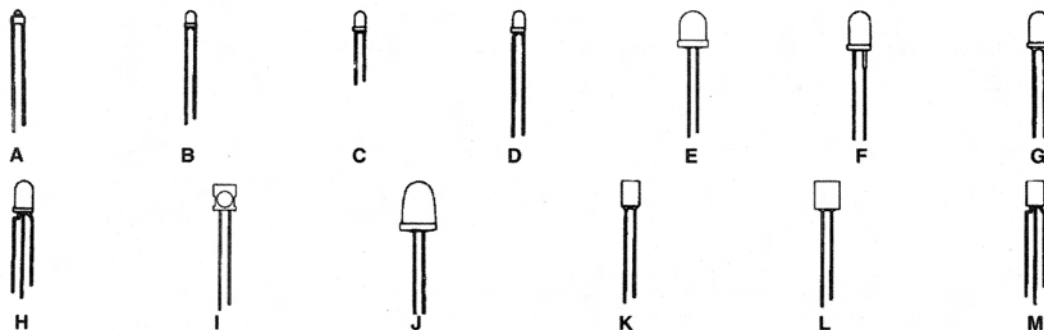


Fig. 17

Shape	Kingbright Part No.	Emitted Color	Peak Wave- Length (nm)	Iv (ucd) @10mA	
				Min.	Max.
0.56" 	BA56-11EWA	Red	625	2200	9000
	BA56-11GWA	Green	565	3600	5600
	BA56-11YWA	Yellow	590	2200	5600
	BA56-11SRWA	Red	660	5600	21000
0.5" 	PSA05-11EWA	Red	625	2200	5600
	PSA05-11GWA	Green	565	2200	5600
	PSA05-11YWA	Yellow	590	2200	5600
	PSA05-11SRWA	Red	660	5600	21000
0.54" 	PDA54-11EWA	Red	625	1400	5600
	PDA54-11GWA	Green	565	1400	3600
	PDA54-11YWA	Yellow	590	1400	3600
	PDA54-11SRWA	Red	660	3600	14000
0.7" 5x7 	TA07-11EWA	Red	625	2200	5600
	TA07-11GWA	Green	565	2200	5600
	TA07-11YWA	Yellow	590	2200	5600
	TA07-11SRWA	Red	660	5600	14000
1.2" 8x8 	TA12-11EWA	Red	625	3600	9000
	TA12-11GWA	Green	565	2200	5600
	TA12-11YWA	Yellow	590	2200	5600
	TA12-11SRWA	Red	660	5600	14000
1.5" 8x8 	TA15-11EWA	Red	625	3600	9000
	TA15-11GWA	Green	565	2200	5600
	TA15-11YWA	Yellow	590	2200	5600
	TA15-11SRWA	Red	660	5600	14000
2.0" 5x7 	TA20-11EWA	Red	625	3600	9000
	TA20-11GWA	Green	565	2200	5600
	TA20-11YWA	Yellow	590	2200	5600
	TA20-11SRWA	Red	660	9000	31000
2.3" 8x8 	TA23-11EWA	Red	625	3600	9000
	TA23-11GWA	Green	565	2200	5600
	TA23-11YWA	Yellow	590	2200	5600
	TA23-11SRWA	Red	660	14000	31000

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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

DESCRETE WIRE LEAD LEDs


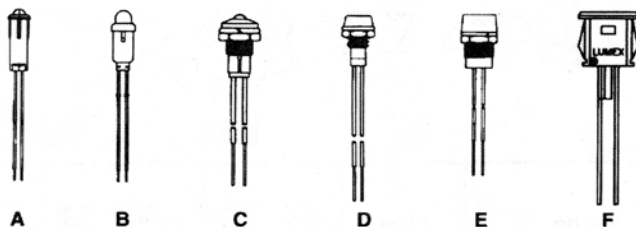
Mfr. No.	Color	View. Angle	Iv/ mA	λ_p (nm)
T-2 mm Short Profile, Diffused Lens (Fig. A)				
SSL-LX20333ID	Red	70°	32/20	635
SSL-LX20333GD	Green	70°	6/20	565
SSL-LX20333YD	Yellow	70°	6/20	585
SSL-LX20333SRD	S. Red	70°	50/20	660
SSL-LX20333SRC†	S. Red	30°	120/20	660
T-3 mm Short Profile, Low Current, Diffused Lens (Fig. B)				
SSL-LX3044LID	Red	65°	3/2	635
SSL-LX3044LGD	Green	65°	2/2	565
SSL-LX3044LYD	Yellow	65°	2/2	585
SSL-LX3044SRD	S. Red	65°	10/2	660
SSL-LX3044SRC/B†	S. Red	45°	20/2	660
T-3 mm Low Cost Package, Diffused Lens (Fig. C)				
SSL-LX3052HD	S. Red	60°	4/20	700
SSL-LX3052ID	Red	60°	8/20	635
SSL-LX3052GD	Green	60°	6/20	565
SSL-LX3052YD	Yellow	60°	8/20	585
T-3 mm Standard Size Lens, Diffused Lens (Fig. D)				
SSL-LX3054ID	Red	80°	20/20	635
SSL-LX3054GD	Green	80°	12/20	565
SSL-LX3054YD	Yellow	80°	10/20	585
SSL-LX3054SRD	S. Red	80°	40/20	660
SSL-LX3054SBD	Blue	80°	20/20	470
T-3 Super Bright, Clear Lens (Fig. B)				
SSL-LX3044SRC/E	S. Red	50°	1000/20	660
SSL-LX3044SGC	Green	50°	300/20	580
SSL-LX3044SYC	Yellow	50°	400/20	590
T-3 Bi-Color Units, Diffused Lens (Fig. B)				
SSL-LX3044IGW	Red/Grn.		30/20	635/565
SSL-LX3044YGW	Yel./Grn.		30/20	585/565
T-5 Low Cost Units, Diffused Lens (Fig. F)				
SSL-LX5091HD	S. Red	70°	6/20	695
SSL-LX5091GD	Green	70°	10/20	565
SSL-LX5091YD	Yellow	70°	10/20	585
T-5 Standard Size, Diffused Lens (Fig. G)				
SSL-LX5093SBD	Blue	70°	30/20	470
SSL-LX5093ID	Red	70°	60/20	635
SSL-LX5093GD	Green	70°	30/20	565
SSL-LX5093YD	Yellow	70°	30/20	585
SSL-LX5093SRD	S. Red	70°	150/20	660
SSL-LX5093IGW	Red/Grn.	70°	30/20	635/565
T-5 Standard Size Super Bright, Clear Lens (Fig. G)				
SSL-LX5093SRC/E	S. Red	30°	2000/20	660
SSL-LX5093SGC/B	Green	30°	400/20	565
SSL-LX5093SYC	Yellow	30°	800/20	590
T-5 Three Ledged Bi/Tri-Color, Diffused Lens (Fig. H)				
SSL-LX5099IGW	Red/Grn.	70°	40/20	635/565
SSL-LX-5099YGW	Yel./Grn.	70°	40/20	585/565

Mfr. No.	Color	View. Angle	Iv/ mA	λ_p (nm)
T-8 Jumbo Size, Diffused Lens (Fig. E)				
SSL-LX80113ID	Red	60°	60/20	635
SSL-LX80113GD	Green	60°	50/20	565
SSL-LX80113YD	Yellow	60°	60/20	585
SSL-LX80113SRD/D	S. Red	60°	400/20	660
T-10 Jumbo Size, Diffused Lens (Fig. J)				
SSL-LX100133ID	Red	70°	50/20	635
SSL-LX100133GD	Green	70°	40/20	565
SSL-LX100133YD	Yellow	70°	50/20	585
SSL-LX100133SRD/D	S. Red	70°	400/20	660
T-10 Jumbo Size Super Bright, Clear Lens (Fig. J)				
SSL-LX100133SRC	Red	28°	2500/20	660
SSL-LX100133SGC	Green	28°	400/20	570
SSL-LX100133SYC	Yellow	28°	600/20	590
2 x 5 Rectangular, Diffused Lens (Fig. K)				
SSL-LX2573SBD	Blue	110°	20/20	470
SSL-LX2573ID	Red	110°	10/20	635
SSL-LX2573GD	Green	110°	8/20	565
SSL-LX2573YD	Yellow	110°	8/20	585
SSL-LX2573SRD	S. Red	110°	60/20	660
4 x 6 Rectangular with Case, Diffused Lens (Fig. I)				
SSL-LX4673ID-LA20	Red	100°	20/20	635
SSL-LX4673GD-LA20	Green	100°	8/20	565
SSL-LX4673YD-LA20	Yellow	100°	8/20	585
SSL-LX4673SRD-LA20	S. Red	100°	80/20	660
Two 5 x 7 Rectangular, Diffused Lens (Fig. L)				
SSL-LX25783ID	Red	110°	15/20	635
SSL-LX25783GD	Green	110°	6/20	565
SSL-LX25783YD	Yellow	110°	6/20	585
SSL-LX25783SRD	S. Red	110°	50/20	660
2 x 5 Rectangular Bi/Tri-Color, Diffused Lens (Fig. M)				
SSL-LX2579IGW	Red/Grn.	110°	10/20	635/565
SSL-LX2579YGW	Yel./Grn.	110°	8/20	585/565

†Clear Lens

T-3 AND T-5 PANEL CLIPS


Mfr. No.	Description
SSH-LX3050	T-3 Panel Clip
SSH-LX5091	Black Nylon T-5 Panel Clip

PANEL LED INDICATORS


Diffused LED Lenses.

Mfr. No.	Color	λ_n (nm)	IF (mA)	Vf (TYP)	Iv at 20 mA
T-3 mm - Micro LED Indicator (Fig. A)					
SSI-LXH312ID-150	Red	635	2-25	2.2	35
SSI-LXH312GD-150	Green	565	2-25	2.2	30
SSI-LXH312YD-150	Yellow	585	2-25	2.2	30
SSI-LXH312SRD-150	S. Red	660	2-25	1.7	90

T-5 mm 1/4" Panel Hole Indicator (Fig. B)					
SSI-LXH600ID-150	Red	635	2-25	2.2	40
SSI-LXH600GD-150	Green	565	2-25	2.2	35
SSI-LXH600YD-150	Yellow	585	2-25	2.2	35
SSI-LXH600SRD-150	S. Red	660	2-25	2.2	80
SSI-LXH600IGW-150	Red/Grn.	635/565	2-25	1.7	40/40

T-3 mm Chrome Bezel Indicator (Fig. C)					
SSI-LXR3612ID-150	Red	635	2-25	2.2	40
SSI-LXR3612YD-150	Green	565	2-25	2.2	35
SSI-LXR3612YD-150	Yellow	585	2-25	2.2	35
SSI-LXR3612SRD-150	S. Red	660	2-25	2.2	80
SSI-LXR3612IGW-150	Red/Grn.	635/565	2-25	1.7	40/40

T-3 mm Chrome Bezel Reflector Indicator (Fig. D)					
SSI-LXR1612ID-150	Red	635	2-25	2.2	50
SSI-LXR1612GD-150	Green	565	2-25	2.2	40
SSI-LXR1612YD-150	Yellow	585	2-25	2.2	40
SSI-LXR1612SRD-150	S. Red	660	2-25	1.7	90
SSI-LXR1612SBD-150	Blue	470	10-25	2.0	3.0

T-5 mm Chrome Bezel Reflector Indicator (Fig. E)					
SSI-LXR4815ID-150	Red	635	2-25	2.2	50
SSI-LXR4815GD-150	Green	565	2-25	2.2	40
SSI-LXR4815YD-150	Yellow	585	2-25	2.2	40
SSI-LXR4815SRD-150	S. RED	660	2-25	1.7	100
SSI-LXR4815SBD-150	Blue	470	10-25	2.0	3.0

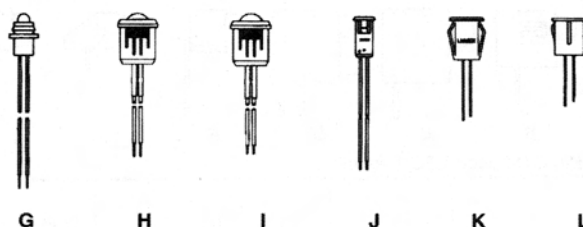
T-5 Flat Fresnel Lens Indicator (Fig. F)					
SSI-LXH387ID	Red	635	2-25	2.2	30
SSI-LXH387GD	Green	565	2-25	2.2	25
SSI-LXH387YD	Yellow	585	2-25	2.2	25
SSI-LXH387SRD	S. Red	660	2-25	1.7	80

DISCRETE SMT LEDs


SMT LEDs are available on reels of 1000-3000 pcs.

Mfr. No.	Color	View. Angle	Iv/ mA	λ_p (nm)	Fig. No.
SOT-23 Single Chip, Clear Lens					
SSL-LX15IC-RP-TR	Red	140°	5/10	635	A
SSL-LX15GC-RP-TR	Green	140°	5/20	565	A
SSL-LX15YC-RP-TR	Yellow	140°	5/20	585	A
SSL-LX15SRC-RP-TR	S. Red	140°	20/20	660	A

SOT-23 Dual Chip, Bi-Color, Clear Lens					
SSL-LX15IC-RP-TR	Red	140°	12/20	635	B
SSL-LX15GC-RP-TR	Green	140°	12/20	565	B
SSL-LX15YC-RP-TR	Red/Grn.	140°	5/20	635/565	B
SSL-LX15YGC-RP-TR	Yel./Grn.	140°	5/20	585/565	B



Mfr. No.	Color	λ_n (nm)	IF (mA)	Vf (TYP)	Iv at 20 mA
T-5 Rear of Panel Installation, Soft Rubber Holder (Fig. G)					
SSI-LXH9ID-150	Red	635	2-25	2.2	50
SSI-LXH9GD-150	Green	565	2-25	2.2	40
SSI-LXH9YD-150	Yellow	585	2-25	2.2	40
SSI-LXH9SRD-150	S. Red	660	2-25	1.7	100
SSI-LXH9IGW-150	Red/Grn.	635/565	2-25	2.2	40/40

T-8 Jumbo Black Bezel Indicator (Fig. H)					
SSI-LXH808ID-150	Red	635	2-25	2.2	40
SSI-LXH808GD-150	Green	565	2-25	2.2	30
SSI-LXH808YD-150	Yellow	585	2-25	2.2	30
SSI-LXH808SRD-150	S. Red	660	2-25	1.7	80

T-10 Jumbo Black Bezel Indicator (Fig. I)					
SSI-LXH1090ID-150	Red	635	2-25	2.2	40
SSI-LXH1090GD-150	Green	565	2-25	2.2	30
SSI-LXH1090YD-150	Yellow	585	2-25	2.2	30
SSI-LXH1090SRD-150	S. Red	660	2-25	1.7	80
SSI-LXH1090SBD-150	Blue	470	10-25	3.0	30
SSI-LXH1090IGW-150	Red/Grn.	635/565	2-25	2.2	30/30

2 x 5 LED Rectangular Indicator (Fig. J)					
SSI-LXMP059ID-150	Red	635	2-25	2.2	30
SSI-LXMP059GD-150	Green	565	2-25	2.2	25
SSI-LXMP059YD-150	Yellow	585	2-25	2.2	25
SSI-LXMP059SRD-150	S. Red	660	2-25	1.7	55

Two 5 x 7 LED Rectangular Indicator (Fig. K)					
SSI-LXH072ID	Red	635	2-25	2.2	30
SSI-LXH072GD	Green	565	2-25	2.2	25
SSI-LXH072YD	Yellow	585	2-25	2.2	25
SSI-LXH072SRD	S. Red	660	2-25	1.7	55

5 x 5 Square In Round Hole Indicator (Fig. L)					
SSI-LXH55ID	Red	635	2-25	2.2	35
SSI-LXH55GD	Green	565	2-25	2.2	30
SSI-LXH55YD	Yellow	585	2-25	2.2	30
SSI-LXH55SRD	S. Red	660	2-25	1.7	60



Mfr. No.	Color	View. Angle	Iv/ mA	λ_p (nm)	Fig. No.
Ceramic Chip With Light Cup, Clear Lens					
CCL-LX23IC-TR	Red	90°	30/20	635	C
CCL-LX23GC-TR	Green	90°	20/20	565	C
CCL-LX23YC-TR	Yellow	90°	20/20	585	C
CCL-LX23SRC-TR	S. Red	90°	80/20	660	C

Right Angle SMT with Housing, Diffused Lens					
SSF-LXH305ID-TR	Red	60°	30/20	635	D
SSF-LXH305GD-TR	Green	60°	20/20	565	D
SSF-LXH305YD-TR	Yellow	60°	20/20	585	D
SSF-LXH305SRD-TR	S. Red	60°	80/20	660	D

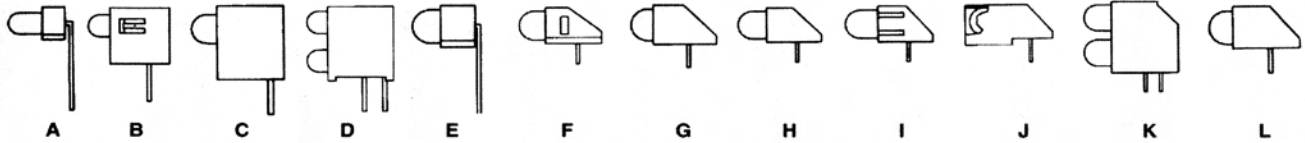
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PRINTED CIRCUIT BOARD LED INDICATORS

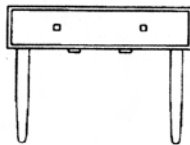


Hot Tinned Pins. Diffused LED Lenses.

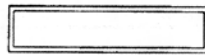
Mfr. No.	Color	λ_p (nm)	If (mA)	Vf (TYP)	Iv at /mA
T-3 All Epoxy PCB Indicator (Fig. A)					
SSF-LX3P74ID-99	Red	635	5-25	2.2	14/20
SSF-LX3P74GD-99	Green	565	5-25	2.2	12/20
SSF-LX3P74YD-99	Yellow	585	5-25	2.2	12/20
SSF-LX3P74SRD-99	S. Red	660	5-25	1.7	60/20
SSF-LX3P74SRC-99	S. Red	660	5-25	1.7	170/20
T-3 Snap-On Holder PCB Indicator (Fig. B)					
SSF-LXH304ID	Red	635	5-25	2.2	14/20
SSF-LXH304GD	Green	565	5-25	2.2	12/20
SSF-LXH304YD	Yellow	585	5-25	2.2	12/20
SSF-LXH304SRD	S. Red	660	5-25	1.7	60/20
T-3 Snap-On Holder PCB Indicator Low Current Version (Fig. B)					
SSF-LXH304LID	Red	635	2-25	1.8	2.0/2
SSF-LXH304LGD	Green	565	2-25	1.8	1.0/2
SSF-LXH304LYD	Yellow	585	2-25	1.8	1.0/2
T-3 Popular Low Cost PCB Indicator (Fig. C)					
SSF-LXH103ID	Red	635	5-25	2.2	14/20
SSF-LXH103GD	Green	565	5-25	2.2	12/20
SSF-LXH103YD	Yellow	585	5-25	2.2	12/20
T-3 Dual LED Tower PCB Indicator (Fig. D)					
SSF-LXH240IID	Red	635	5-25	2.2	14/20
SSF-LXH240GGD	Green	565	5-25	2.2	12/20
SSF-LXH240YYD	Yellow	585	5-25	2.2	12/20
T-5 All Epoxy Low Cost PCB Indicator (Fig. E)					
SSF-LX453ID-99	Red	635	5-25	2.2	25/20
SSF-LX453GD-99	Green	565	5-25	2.2	20/20
SSF-LX453YD-99	Yellow	585	5-25	2.2	20/20
SSF-LX453SRD-99	S. Red	660	5-25	1.7	70/20
T-5 Low Current PCB Indicator (Fig. F)					
SSF-LXH104LID	Red	635	2-5	1.8	3/2
SSF-LXH104LGD	Green	565	2-5	1.8	2/2
SSF-LXH104LYD	Yellow	585	2-5	1.8	2/2
SSF-LXH104SRD	S. Red	660	2-5	1.6	10/2

Mfr. No.	Color	λ_p (nm)	If (mA)	Vf (TYP)	Iv at /mA
T-5 Bi-Color PCB Indicator (Fig. F)					
SSF-LXH104IGW	Red/Grn.	635/565	5-25	2.2	20/20
SSF-LXH104YGW	Yel./Grn.	585/565	5-25	2.2	20/20
T-5 Standard PCB Indicator (Fig. G)					
SSF-LXH100ID	Red	635	5-25	2.2	30/20
SSF-LXH100GD	Green	565	5-25	2.2	20/20
SSF-LXH100YD	Yellow	585	5-25	2.2	20/20
T-5 Standard Long Protrusion PCB LED (Fig. H)					
SSF-LXH100ID-01	Red	635	5-25	2.2	30/20
SSF-LXH100GD-01	Green	565	5-25	2.2	20/20
SSF-LXH100YD-01	Yellow	585	5-25	2.2	20/20
SSF-LXH100SRD-01	S. Red	660	5-25	1.7	100/20
T-5 mm Mating PCB Indicator (Fig. I)					
SSF-LXH100MID	Red	635	5-25	2.2	15/20
SSF-LXH100MGD	Green	565	5-25	2.2	12/20
SSF-LXH100MYD	Yellow	585	5-25	2.2	12/20
SSF-LXH100MSRD	S. Red	660	5-25	1.7	70/20
T-5 Shrouded PCB Indicator (Fig. J)					
SSF-LXH1071ID	Red	635	5-25	2.2	30/20
SSF-LXH1071GD	Green	565	5-25	2.2	20/20
SSF-LXH1071YD	Yellow	585	5-25	2.2	20/20
SSF-LXH1071SRD	S. Red	660	5-25	1.7	120/20
T-5 Dual Tower PCB Indicator (Fig. K)					
SSF-LXH250IID	Red	635	5-25	2.2	15/20
SSF-LXH250GGD	Green	565	5-25	2.2	12/20
SSF-LXH250YYD	Yellow	585	5-25	2.2	12/20
SSF-LXH250SRD	S. Red	660	5-25	1.7	70/20
T-5 Quad Ranch PCB Indicator (Fig. L)					
SSF-LXH400ID	Red	635	5-25	2.2	15/20
SSF-LXH400GD	Green	565	5-25	2.2	12/20
SSF-LXH400YD	Yellow	585	5-25	2.2	12/20
SSF-LXH400SRD	S. Red	660	5-25	1.7	70/20

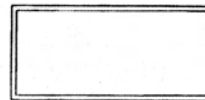
MULTI-CHIP LIGHT BARS



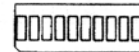
A



B



C

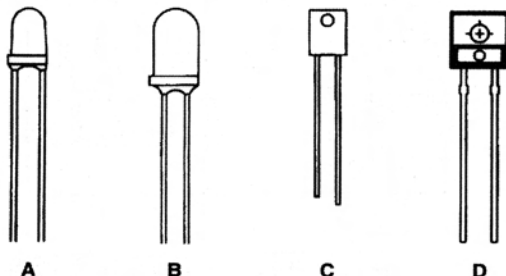


D

Chip on Board Reliability.

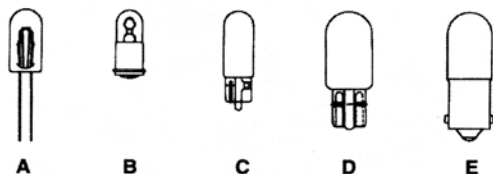
Mfr. No.	Color	Viewing Angle	Iv mA	λ_p (nm)	Fig.
Dual Chip Side Looking—Edge Lighting, 2 Chips, Clear Lens					
SSB-LX02IC	Red	160°	16/20	635	A
SSB-LX02GC	Green	160°	16/20	565	A
SSB-LX02YC	Yellow	160°	16/20	585	A
SSB-LX02SRC	S. Red	160°	60/20	660	A
5 x 20 Four Chip (8 Pins) Bar, 4 Chips, Diffused Lens					
SSB-LX2350IW	Red	160°	50/20	635	B
SSB-LX2550SGW	Green	160°	50/20	565	B
SSB-LX2450YW	Yellow	160°	50/20	585	B
SSB-LXB100SRW	S. Red	160°	80/20	660	B

Mfr. No.	Color	Viewing Angle	Iv mA	λ_p (nm)	Fig.
10 x 20 Eight Chip (16 Pins) Bar, 8 Chips, Diffused Lens					
SSB-2685IW	Red	160°	80/20	635	C
SSB-LX2885SGW	Green	160°	80/20	565	C
SSB-LX2785YW	Yellow	160°	70/20	585	C
SSB-LX100SRW	S. Red	160°	100/20	660	C
10 x 25 Ten Chip (20 Pins) Bar, 10 Segments, 10 Chips, Diffused Lens					
SSA-LXB10IW	Red	160°	20/20	635	D
SSA-LXB10GW	Green	160°	15/20	565	D
SSA-LSB10YW	Yellow	160°	15/20	585	D
SSA-LXB10SRW	S. Red	160°	60/20	660	D

INFRA-RED EMITTERS


High Output Chips

Mfr. No.	Po mw/lf (mA)	λ p Type	$\Delta \theta$ Type	Vr Min.	Fig. No.
T-1 (3mm) Size					
OED-EL-8L	25/40	940	± 20	4	A
OED-CL-8L	20/20	880	± 20	5	A
T-1 1/4 (5mm) Size					
OED-EL-1L1	35/50	940	± 10	5	B
OED-EL-1L2	30/50	940	± 20	5	B
OED-EL-1L3	25/50	940	± 30	5	B
OED-CL-1L1	60/100	880	± 20	5	B
Side Looking Packages					
OED-EL-1556SN	2.0/20	940	± 30	4	C
OED-CL-1556SN	3.5/20	880	± 30	5	C
OED-EL-23G	2.0/20	940	± 30	4	D
OED-CL-23G	3.5/20	880	± 30	5	D

FILAMENT LAMPS


Variable Light Output

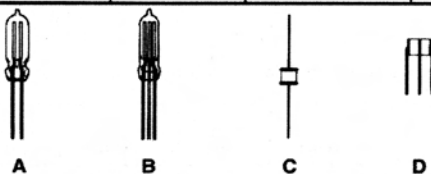
Mfr. No.	V	I (mA)	Iv MSCP	Life K-hrs.	Fig. No.
T-1 (3 mm) Wire Ended					
IFL-LX683	5	60	.05	100	A
IFL-LX715	5	115	.15	40	A
IFL-LX23	14	40	.15	16	A
IFL-LX8111	14	65	.15	16	A
IFL-LX6838	28	24	.15	15	A
T-1 1/4 (5.8 mm) Flange Base					
IFL-LX7335	5	115	.15	40	B
IFL-LX381	6.3	200	.20	20	B
IFL-LX382	14	80	.30	50	B
IFL-LX387	28	40	.30	25	B
IFL-LX327	28	40	.35	7	B
T-1 1/4 (5 mm) Wedge Base					
IFL-LX86	6.3	200	.40	20	C
IFL-LX37	14.0	90	.50	1.5	C
IFL-LX85	28.0	40	.30	7.0	C
T-3/4 (10 mm) Wedge and Bayonet Base					
IFL-LX161	14	130	1.0	4	D
IFL-LX194	14	270	2.0	2	D
IFL-LX656	28	60	.62	2	D
IFL-LX44	6.3	250	.9	3	D
IFL-LX1815	14	200	1.4	3	D
IFL-LX1829	28	70	1.0	1	D
IFL-LX120MB	120	25	.36	5	D

GAS INDICATOR AND ARRESTOR TUBES


Radial and Axial Leads. UL Recognized Arrestors

T-2 (6.2 MM) INDICATOR GLOW LAMPS

Mfr. No.	Color	Firing Volts (AC)	Series K ohms
GT-NE6H1525T	Amber	90	33
GT-NG6H1625T	Green	90	47
GT-NY6H1525T	Yellow	90	27
GT-NRGH1525T	Red	90	27
GT-NB6S1525T	Blue	90	51



Mfr. No.	Firing Volts (DC)	I pk KA	Fig.
T-2 1/2 (6.5 mm) Radial Lead Arrestor			
GT-RLSA80D	80	1.5	A
GT-RLSA145D	145	1.5	A
GT-RLSA250D	250	1.5	A
GT-RLSA450D	450	2.0	A

T-2 3/4 (7.0 mm) Three Lead Arrestors

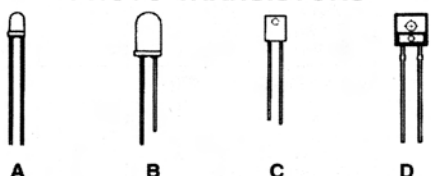
Mfr. No.	Firing Volts (DC)	I pk KA	Fig.
GT-RLSA3080D	80	2.5	B
GT-RLSA3230D	230	2.5	B
GT-RLSA3300D	300	2.5	B

Glass Bottom (8 mm) Arrestors, Two Lead

Mfr. No.	Firing Volts (DC)	I pk KA	Fig.
GT-BG90L	90	5.0	C
GT-BG230L	230	5.0	C
GT-BG470L	470	5.0	C

Ceramic Three Lead Arrestors

Mfr. No.	Firing Volts (DC)	I pk KA	Fig.
GT-CM3090L	90	10.0	D
GT-CM3230L	230	10.0	D

PHOTO-TRANSISTORS


Quick response.

Mfr. No.	I cel (mA) /V ce (Volts)	t r V cc=10V	λ p Type	$\Delta \theta$ Type	Fig. No.
T-1 (3mm) Size					
OED-ST-8L	10/5	3.2 μ s	880	± 30	A
T-1 1/4 (5mm) Size					
OED-ST-1L1	10/5	2.5 μ s	880	± 20	B
T-1 1/4 (5 mm) Size with Daylight Filter Lens					
OED-ST-1L1R2	12/5	2.5 μ s	880	± 20	B
Side Looking Packages					
OED-ST-1556SN	5/5	2.5 μ s	880	± 20	C
OED-ST-23G	4/5	3.2 μ s	880	± 30	D

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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