Neon Datalamp Cartridges

NEON DATALAMPS

Electrically, neon lamps are unique. They require a minimum firing voltage, and once started, current must be limited by a series resistor whose value determines performance. Both the standard and the high brightness neons are each offered with 2 resistor values. In each case the lower value gives the best indication, with a minimum life of 5000 hours, while the higher value results in long life, preferred where 25000 hours or more operation may be required.

No indicator light in this voltage range is more rugged or shows slower deterioration as it operates than the high brightness types of the neon T-2 series. Offering relatively constant light output through life, and five times the brightness of the standard T-2 neon, they should be used in all cases where the circuit voltage is adequate.

Neon Lamps for Circuit Component Uses

Lamps of the "standard brightness" type may be required with narrower limits on starting voltage than are characteristic of run of factory product. Seasoned and selected lamps will be provided in Datalamps on request. Practical limits are 72 ± 8 volts and, at higher cost, 72 ± 4 volts. All selected lamps contain radio-active additive for more stable starting voltage characteristics. The shielding provided by the Datalamp housing, if grounded, adds a useful stablizing effect.

MATERIALS AND FINISHES

- **Housing:** Aluminum. Standard finish - clear anodize. Optional black anodize. Other finishes available on special order.
- **Connections:** Nickel silver pins mounted in nylon insulated header. Offset to provide polarization.
- **Lens:** Heat resistant, high strength plastic. Permanently attached to the open end of the housing.

Part numbers shown in gray are normally in inventory at your Dialight Distributor.

RECOMMENDED BUILT-IN RESISTANCE VALUES

Neon Lamp	Volts Applied to Terminals	Bright Light Resistor and Approx. Life	Long Life Resistor and Approx. Life
High Brightness A1C	110–125 AC only	22K 5,000 hrs.	33K 25,000 hrs.
Standard Brightness A1B	105–125 AC or DC	56K 3,000 hrs.	100K 15,000 hrs.

Change the second digit in the part number suffix to designate the appropriate built-in resistor as follows:

22K-1; 33K-3; 56K-4; 100K-7. Example: 507-4537-0931-670.

	Design Voltage	Lamp	Hours♦	Built-in Resistor	Stovepipe Fig. 6	Stovepipe Fig. 7	Short Cylindrical Fig. 8
High Brightness	110-125V AC	A1C	5,000	22K	507-4538-0931-610		507-4538-1431-610
	110-125V AC	A1C	25,000	33K	507-4538-0931-630		507-4538-1431-630
	110-125V AC	NE2H	5,000	□NONE		507-3836-0931-600	
	110-125V AC	A1C	25,000	□NONE			
	110-125V AC	A1C	5,000	22K		507-5338-0931-610	
	110-125V AC	A1C	25,000	33K		507-5338-0931-630	
Standard Brightness	105-125V AC-DC	A1B	3,000	56K	507-4537-0931-640		507-4537-1431-640
	105-125V AC-DC	A1B	15,000	100K	507-4537-0931-670		507-4537-1431-670
	105-125V AC-DC	NE2E	3,000	□NONE		507-3835-0931-600	
	105-125V AC-DC	A1B	15,000	□NONE			
	105-125V AC-DC	A1B	3,000	56K		507-5337-0931-640	
	105-125V AC-DC	A1B	15,000	100K		507-5337-0931-670	

Note: The part numbers designate cartridges with red lens. Refer to Lens color code for other colors.

Important: If Datalamp cartridge is to be used with complete indicator (illustrations E and F, pages 16B–17B), specify clear colorless lens only.

To obtain optional **black anodize finish,** change the "**6**" in the part number suffix to "**5**".
Example: 507-4538-0931-510.

□The necessary current-limiting resistor must be added externally. See the chart with recommended resistance values

+These Datalamp Cartridges are listed to extend the range of the 507-5824-0747-600 incandescent cartridges (described on pages 10B-11B) to 125 volts. The cartridge is accommodated by complete indicator B only (see pages 16B-17B).

♦Replacement is indicated when darkening of lamp is observed.

LENS COLOR CODE

Number	Color Code
1	Red
3	Yellow (Amber)
5	White (Translucent)
6	Light Yellow
7	Clear Colorless

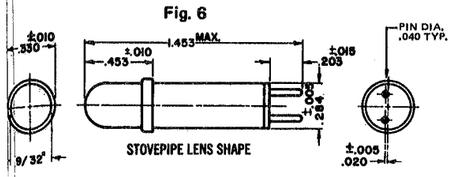
Example: 507-4537-0935-670 (White)

MARKINGS

Markings on Datalamp cartridge include DIALCO, basic Datalamp series number and resistor value.
Example: DIALCO 507-4538 33K

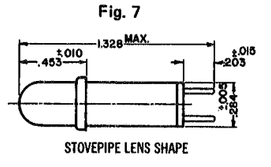
Standard Brightness: 105-125V AC-DC
High Brightness: 110-125V AC

Fig. 6



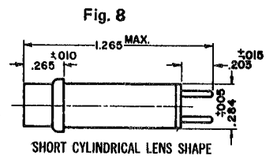
STOVEPIPE LENS SHAPE

Fig. 7



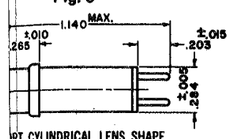
STOVEPIPE LENS SHAPE

Fig. 8



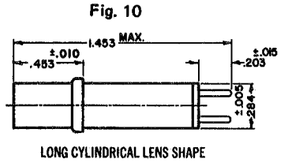
SHORT CYLINDRICAL LENS SHAPE

Fig. 9



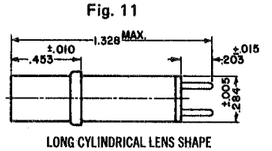
RT CYLINDRICAL LENS SHAPE

Fig. 10



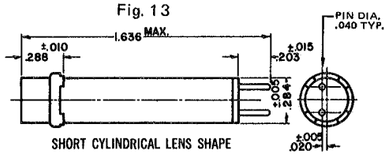
LONG CYLINDRICAL LENS SHAPE

Fig. 11



LONG CYLINDRICAL LENS SHAPE

Fig. 13



SHORT CYLINDRICAL LENS SHAPE

Short Cylindrical Fig. 9	Long Cylindrical Fig. 10	Long Cylindrical Fig. 11	Short Cylindrical Fig. 13+	Accommodated By: Datalamp Holder (See Page 18B)	Accommodated By: Complete Indicator(s) (See Pages 16B–17B)	Lens Colors Available (See Above)
	507-4538-1531-610		507-5838-1431-610	G	B, D, E	1,3,5,6,7
	507-4538-1531-630			G	D,E	1,3,5,6,7
		507-3836-1531-600		C	D,F	1,3,5,6,7
507-3838-1431-600				C	D,F	1,3,5,6,7
		507-5338-1531-610		C	D,F	1,3,5,6,7
		507-5338-1531-630	507-5838-1431-630	C	B, D, E	1,3,5,6,7
	507-4537-1531-640			G	D,E	1,3,5,6,7
	507-4537-1531-670			G	D,E	1,3,5,6,7
		507-3835-1531-600		C	D,F	1,3,5,6,7
507-3837-1431-600				C	D,F	1,3,5,6,7
		507-5337-1531-640		C	D,F	1,3,5,6,7
		507-5337-1531-670		C	D,F	1,3,5,6,7

NEON DATALAMP PLUG-IN CARTRIDGES with Pre-aged, Seasoned and Selected features.

Selected lamps can be provided when low circuit voltages are required for DC applications. These Neon Datalamps will be provided with 68 to 76 volt range of starting voltage and at lower cost with 64 to 80 volt range.

Other ranges can be provided. All selected lamps are treated to insure high insulation resistance and are seasoned before selection. All contain radioactive additive to reduce dark starting effect on voltage. Please note that Datalamp Cartridges without built-in resistor are accommodated by Datalamp Holder C (see page 15B) and complete indicator lights A and D (see pages 16B-17B); Datalamp Cartridges with built-in resistor are accommodated by Datalamp Holder G (see page 15B) and complete indicators D and E (see pages 16B–17B).

Lens Color: See Lens Color Code on facing page.

	Datalamp Cartridges Without Built-in Resistor		*Datalamp Cartridges with Built-in Resistor	
Starting Volts	Stovepipe	Long Cylindrical	Stovepipe	Long Cylindrical
72 ± 4	507-3840-0931-600	507-3840-1531-600	507-4540-0931-640	507-4540-1531-640
72 ± 8	507-3839-0931-600	507-3839-1531-600	507-4539-0931-640	507-4539-1531-640

*The given part numbers indicate use of 56K built-in resistor. If other value is desired, change the appropriate digit in the part number to the designation noted in chart "Recommended Built-in Resistance Values" on facing page.