ELECTRON TUBE DATA SHEET

# WESTERN ELECTRIC 395A ELECTRON TUBE


## DESCRIPTION

The 395A electron tube is a ruggedized three-electrode inert-gas-filled cold cathode tube for use primarily in triggering circuits. This tube is designed to withstand a 1000 G centrifuge test. The 395A is also suitable for use in control circuits such as in relay, counting or switching apparatus. Small size and provisions for wiring directly into the circuits makes this tube especially suitable for use in small equipment.

## CHARACTERISTICS

| | | | |
|---|---|---|---|
| Peak Anode Voltage | | 140 | volts |
| Average Cathode Current | 4 | 35 | milliamperes |
| Average Life, Approximate | 10000 | 10 | hours |

File: Cold Cathode Section

Indicates a change ←

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MAXIMUM RATINGS, Absolute System (Note 1)

| | | |
|---|---|---|
| Peak Anode Voltage (Note 2) | | |
| Forward | 140 | volts |
| Inverse | 140 | volts |
| → Forward Cathode Current (Note 3) | | |
| Peak | 35 | milliamperes |
| Average | 13 | milliamperes |
| Averaging Time | 1 | second |
| → Peak Inverse Current, Anode or Starter (Note 3) | 1 | milliampere |
| Ambient Temperature Limits | -55 to +85 | centigrade |

ELECTRICAL DATA, Throughout Life

| | Min. | Bogey | Max. | |
|---|---|---|---|---|
| Starter Breakdown Voltage (Notes 2 & 4) | 71 | 80 | 84 | volts |
| Starter Voltage Drop at 10 Milliamperes | 52 | 65 | 74 | volts |
| Anode Voltage Drop at 10 Milliamperes | 68 | 80 | 85 | volts |
| Transfer Current | | | See Curve - Fig. 1 | |
| Required Transfer Current at 130 Anode Volts | 10 | - | - | microamperes |
| Deionization Time, Main Gap | - | 2 | - | milliseconds |
| Ionization Time, Starter Gap (Note 5) | - | 0.05 | - | millisecond |

MECHANICAL DATA

| | |
|---|---|
| Mounting Position | Any |
| Net Weight, Approximate | 0.4 ounce |
| Ruggedness (Note 6) | 1000 G |

Dimensions and lead connections shown in outline drawing on Page 4.

HANDLING

This tube contains a small amount of krypton-85 gas which is a by-product radioactive material. The amount of krypton-85 is less than five microcuries, which is too small an amount to require any special care in use.

Atomic Energy Commission regulations require that the individual tube carton for tubes containing by-product radioactive material be appropriately marked. The marking includes the statement that tube disposal should be in approved manner.

Approved instructions for disposal of tubes containing krypton-85 are as follows;

> Tubes to be disposed of should be broken or crushed in a well ventilated place releasing any resulting vapors to the outside atmosphere. The residual broken or crushed tubes should be disposed of in a normal public trash disposal system. Tubes should be disposed of at a rate of not more than 100 each week from any one location. Avoid breathing vapors from broken tubes.

Note 1: In the "Absolute System" the maximum ratings specified are limiting values above which the serviceability of the device may be impaired from the viewpoint of life and satisfactory performance. Maximum ratings, as such, do not constitute a set of operating conditions and all values may not, therefore, be attained simultaneously.

Note 2: Values apply with the tube exposed to light in the order of 5 to 30 foot-candles. Exposure to direct sunlight may reduce peak anode voltage rating by as much as 45 volts and starter breakdown voltage as much as 5 volts.

→ Indicates a change

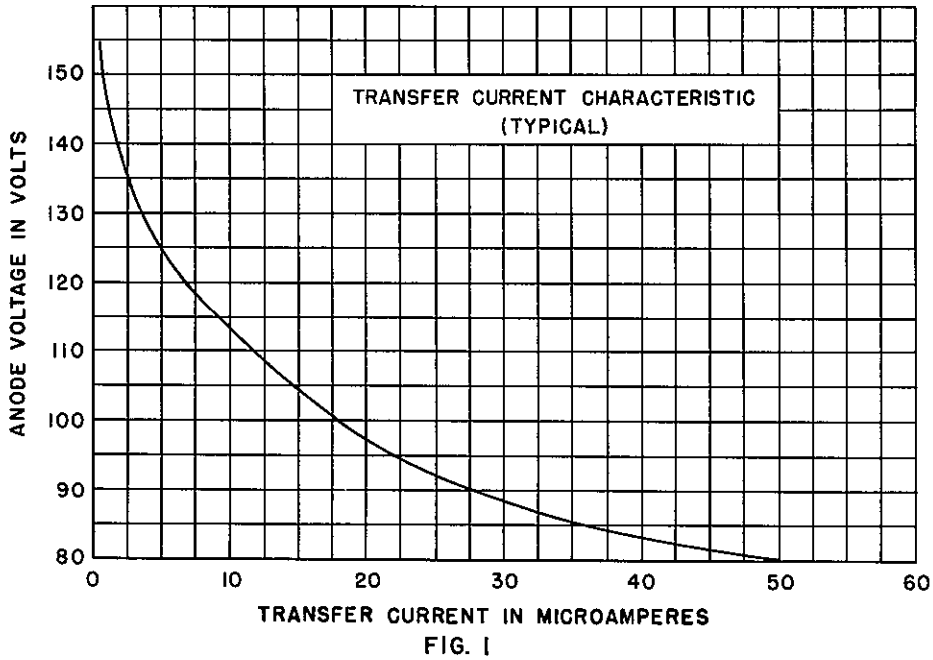



FIG. 1

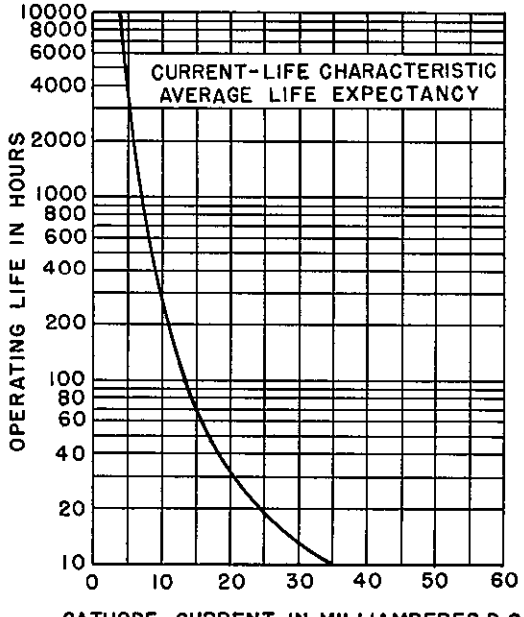



FIG. 2

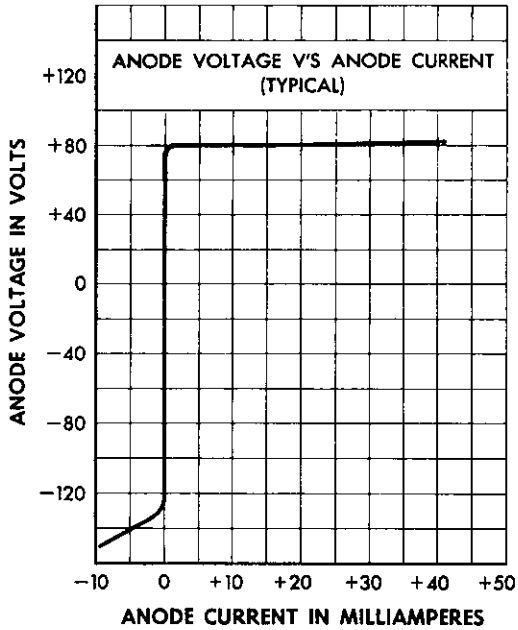



FIG. 3

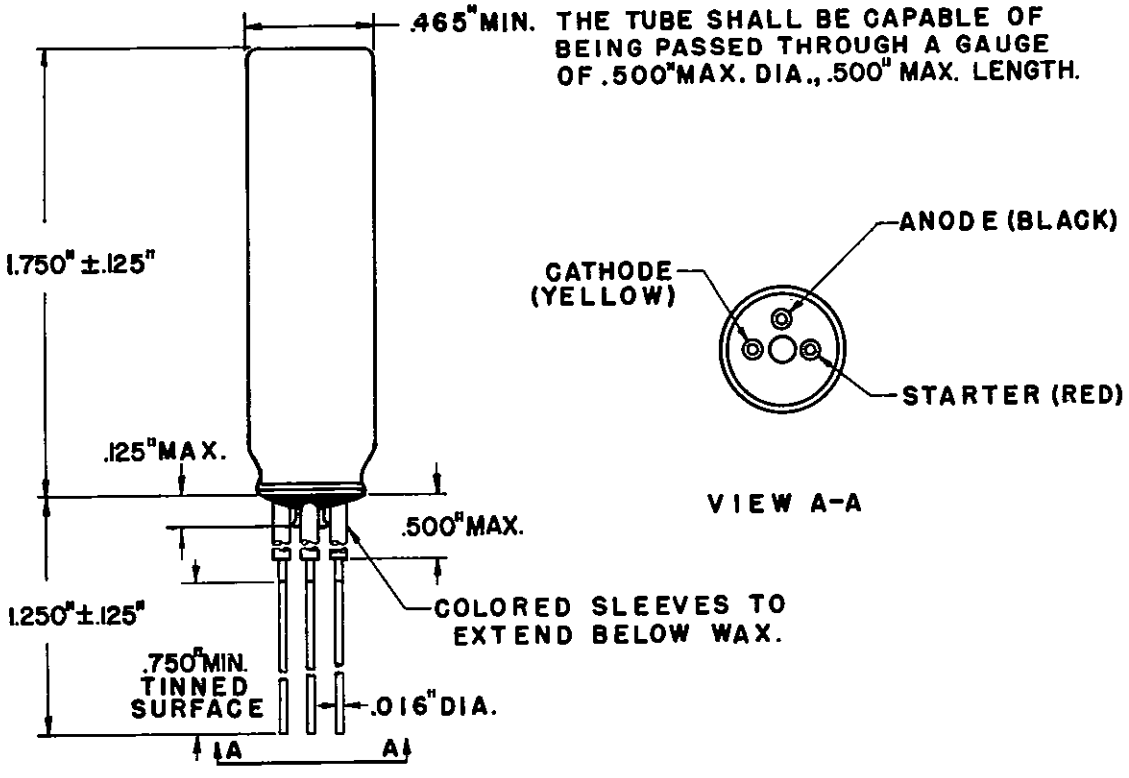
Note 3: Sufficient resistance must be used in series with the tube to assure that the electrode currents do not exceed their maximum rated values.

Note 4: Limits apply immediately after the tube has conducted current. If the tube has been idle, initially these values may be as much as 3 volts higher or lower.

Note 5: With 15 volts starter overvoltage. This value applies with the tube exposed to light in the order of 5 to 30 foot-candles. In total darkness ionization time will increase to a bogey of 5 milliseconds.

Note 6: Determined by centrifuge test.

Indicates a change ←

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