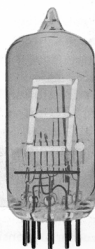


SYLVANIA

Fluorescent Flurotron[®] Indicator

8843, 8894

- **FLUORESCENT NUMERIC INDICATOR**
- **BRIGHT (200 FT L), High-visibility numeric displays** - formed by efficient fluorescent segments
- **LOW DRIVING VOLTAGE (25 volts)** and total power consumption less than 200 mW - reduces power supply, logic, and driver circuit costs
- **WIDE VIEWING ANGLE** with no parallax - all numbers formed on a single plane near the envelope sidewall
- **RAPID NUMERIC READOUTS** - provided by a special low-persistence phosphor
- **HIGH RELIABILITY** - rugged construction and reduced power dissipation with attendant lower operating temperature provide greatly increased service life
- **UNIVERSAL APPLICATION** - only one tube type required to display any digit (0 through 9)
- **COMPACT** - miniature T-6 1/2 envelope permits packaging complete multi-digit displays in minimal space



DESCRIPTION

The Sylvania Types 8843 and 8894 Flurotron[®] are multi-segmented, fluorescent readout devices which provide bright, sharp display of digits at low drive and power levels. Location of all displays on a single plane near the periphery of the envelope eliminates parallax error at wide viewing angles. Logic and driver circuits and power supply requirements are simplified by the low power and driving level characteristics of these types ideally suiting MOS integrated circuits to directly drive the display*.

Digits are formed by 25V excitation of applicable combinations of up to seven phosphor-coated segments (anodes), which are energized by electrons emitted by a directly heated, common cathode. The filament is operated continuously and switching of the driving voltage only between the two levels of zero and +25 vdc is required of the driving circuitry. Internal display elements are designed for maximum physical ruggedness. A compact T-6 1/2 glass envelope houses the entire display. These types have broad application for test equipment, computers, instrumentation, and other types of equipment requiring numeric displays. They are also ideally adapted for use in battery-powered portable equipment.

*Matching IC Driver SM-204 incorporating all logic necessary for translation from BCD to 7-segment readout display is also available from Sylvania in 16-lead dual in-line package.

September 8, 1970

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MECHANICAL DATA

	8843	8894
Envelope	T-6-1/2, 10 Pin	T-6-1/2, 9 Pin
Base	Button 10-Pin, E10-73	Button 9-Pin, E9-1
Outline Drawing	6-13	6-2
Maximum Diameter	0.875	0.875 Inch
Maximum Seated Height	1.940	1.937 Inches
Maximum Overall Length	2.190	2.187 Inches
Cathode	Filamentary	Filamentary
Operating Position	Vertical	Vertical
Number of Segments	Seven Plus Decimal Point	Seven

ELECTRICAL DATA

Filament Voltage	1.2	V AC or DC
Filament Current	90	mA
Filament Heater Power	108	mW
Filament Resonant Frequency	1500-1600	Hz
Anode Excitation Voltage (Max.)	30	V DC
Anode Excitation Voltage	25	V DC
Anode Current/Segment (at 25 volts)	0.5	mA
Maximum Total Anode Power Dissipation at 25 Volts	0.1	W

OPTICAL DATA

Light Output (Brightness at 25 VDC Anode Voltage)	200	ft L
Characters Displayed	0 Through 9	
Character Dimension		
Height	0.570	Inch
Width	0.360	Inch
Color of Characters	Green	
Phosphor Designations	P15	
Viewing Angle	Lateral (side) View	
Character Orientation	Perpendicular to a Plane Passing Through Pins 3 and 7 with Pin 5 Facing Observer	
Normal Viewing Distance	1-10	Feet

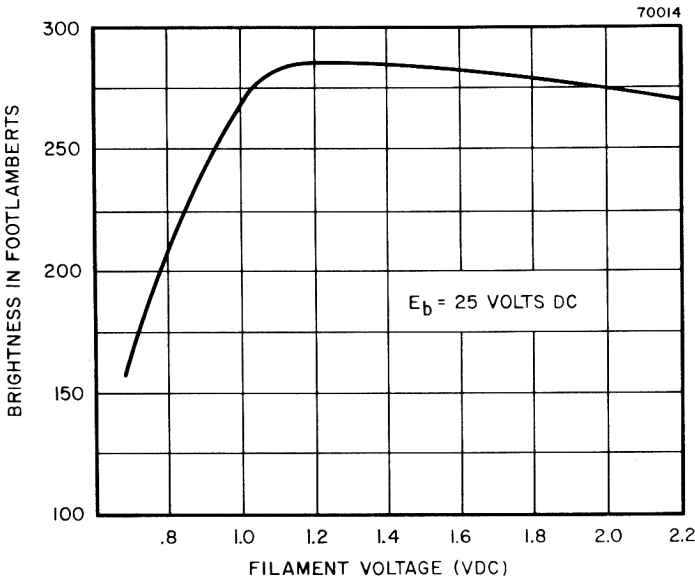


Figure 1. Typical Brightness vs Filament Voltage

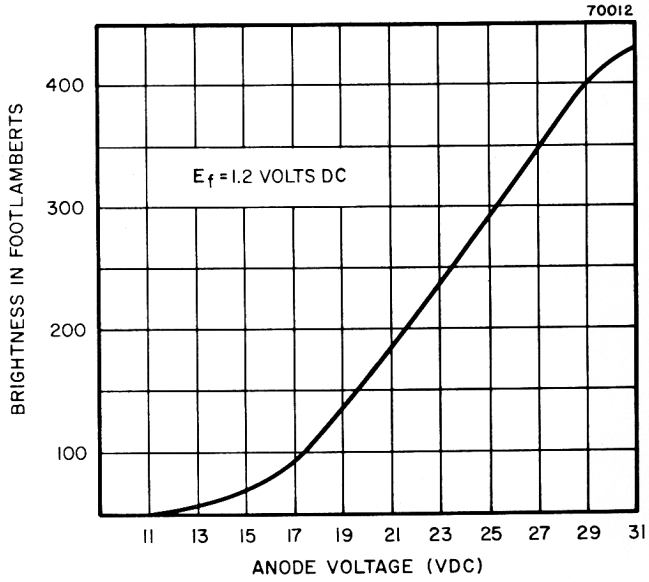


Figure 2. Typical Brightness vs Anode Voltage

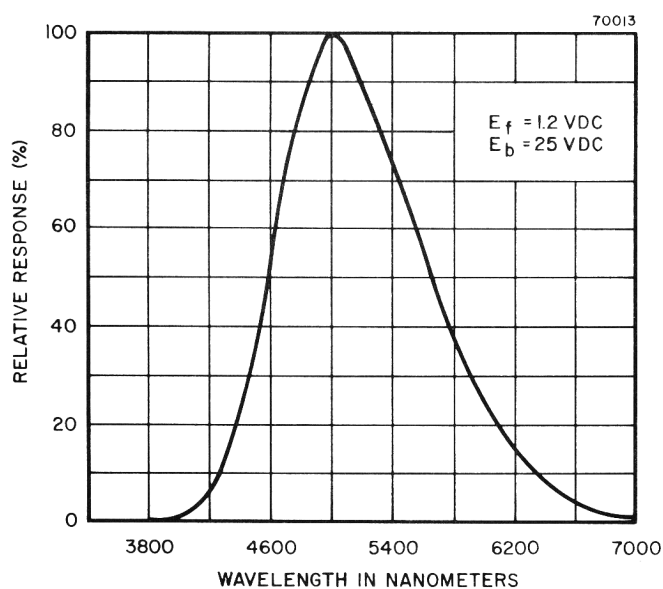


Figure 3. Spectral Energy Distribution of Sylvania Phosphor P15

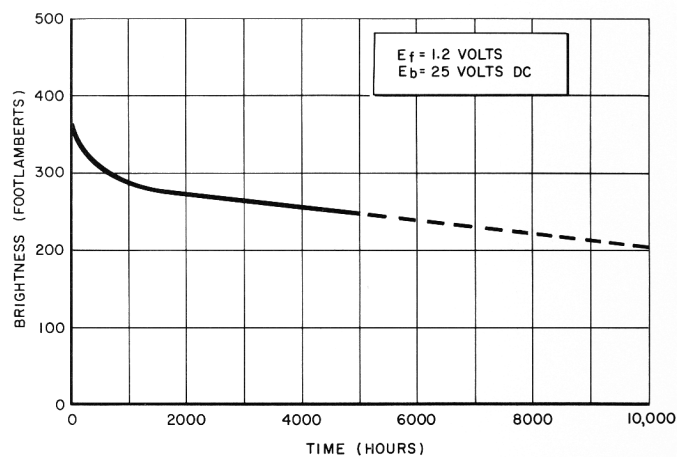
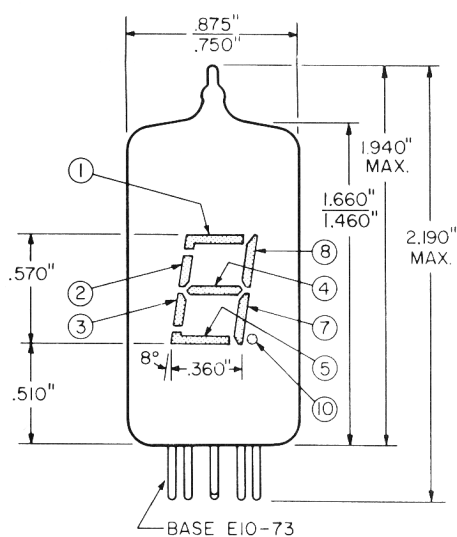


Figure 4. Typical Life Curve

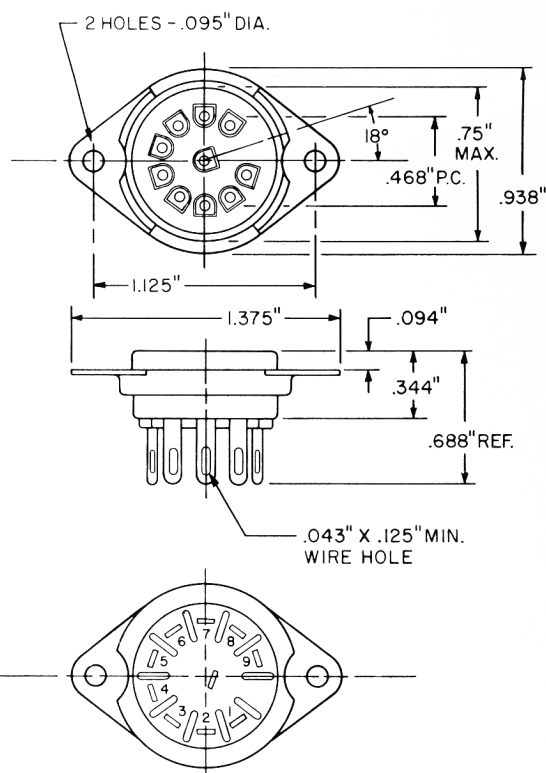


○—INDICATES BASE PIN NUMBERS

Outline Drawing

Pin Connections

- Pin 1 - Anode, Segment 1
- Pin 2 - Anode, Segment 2
- Pin 3 - Anode, Segment 3
- Pin 4 - Anode, Segment 4
- Pin 5 - Anode, Segment 5
- Pin 6 - Filament
- Pin 7 - Anode, Segment 7
- Pin 8 - Anode, Segment 8
- Pin 9 - Filament
- Pin 10 (8843 Only) - Anode, Decimal Point (Center Pin)



Ten-Pin Miniature Socket, Sylvania
Part No. 7460-0035