PHOTOTUBE

DESCRIPTION

The GL-931-A is an eleven-electrode vacuum phototube unique in that the photo-current produced at the cathode is multiplied many times by secondary emission occurring at successive dynodes within the tube. This tube can multiply feeble currents produced by weak illuminations as much as 200,000 times. This feature combined with its high sensitivity, low-noise level, low-dark current, and freedom from distortion renders the GL-931-A very useful for relays and in applications involving low-light levels.

TECHNICAL INFORMATION

These data are for reference only. For design information refer to specifications.

GENERAL CHARACTERISTICS

Number of electrodes	11	
Electrical		
Spectral response	S-4	
Interelectrode capacitances		
Anode to dynode No. 9	3.5	micromicrofarads
Anode to all other electrodes	6.5	micromicrofarads
Wavelength of maximum response	3750	angstroms

Electronic TUBE

GENERAL ELECTRIC

TECHNICAL INFORMATION (CONT'D)

Mechanical

Cathode window area	0.25	square inch
Seated height to center of useful cathode area	$1\frac{15}{16} \pm \frac{3}{32}$	inches
Maximum over-all height	$3\frac{11}{16}$	inches
Maximum seated height	$3\frac{1}{8}$	inches
Maximum diameter	$1\frac{5}{16}$	inches
Base		small-shell submagnal 11-pin
Mounting position	any	
Net weight, approx	1	ounce
Shipping weight, approx	3	pounds

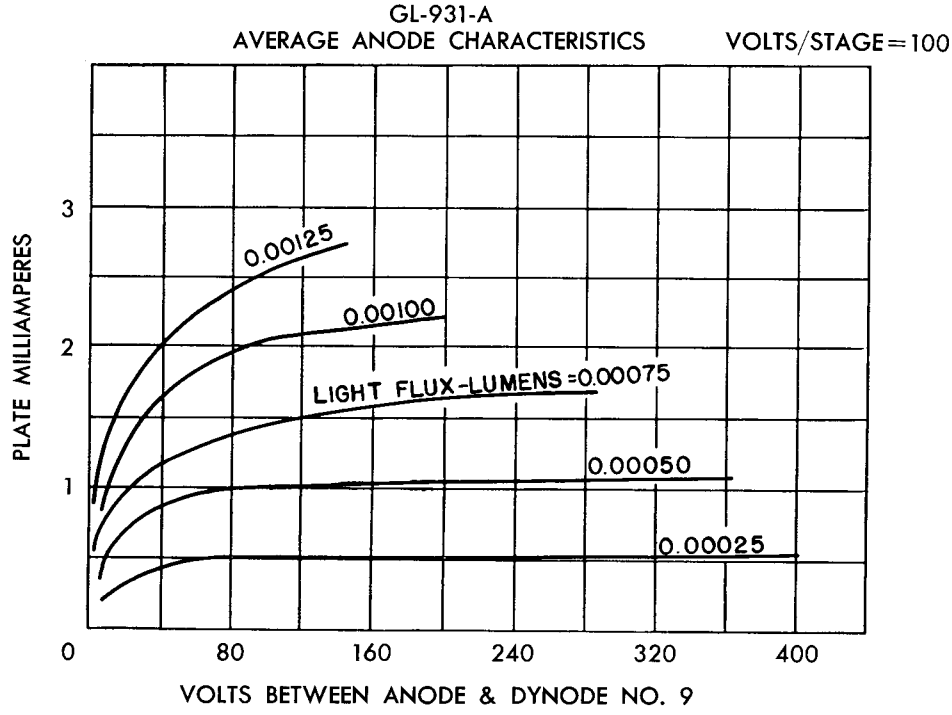
MAXIMUM RATINGS

Anode voltage, d-c or peak a-c*	1250	volts
Cathode current density	230	milliamperes per square inch
Ambient temperature	50	centigrade
Voltage between Dynode No. 9 and Anode	250	volts
Anode current	2.5	milliamperes
Anode dissipation	0.5	watt

TYPICAL OPERATION

Voltage per stage	75	100	volts
Luminous sensitivity†	0.3	2.0	amperes per lumen
Current amplifications†	30,000	200,000	
Sensitivity at 3750 angstroms	270	1800	microamperes per microwatts

* Referred to cathode.
† On basis of lighted cathode area approximately 3 mm in diameter.



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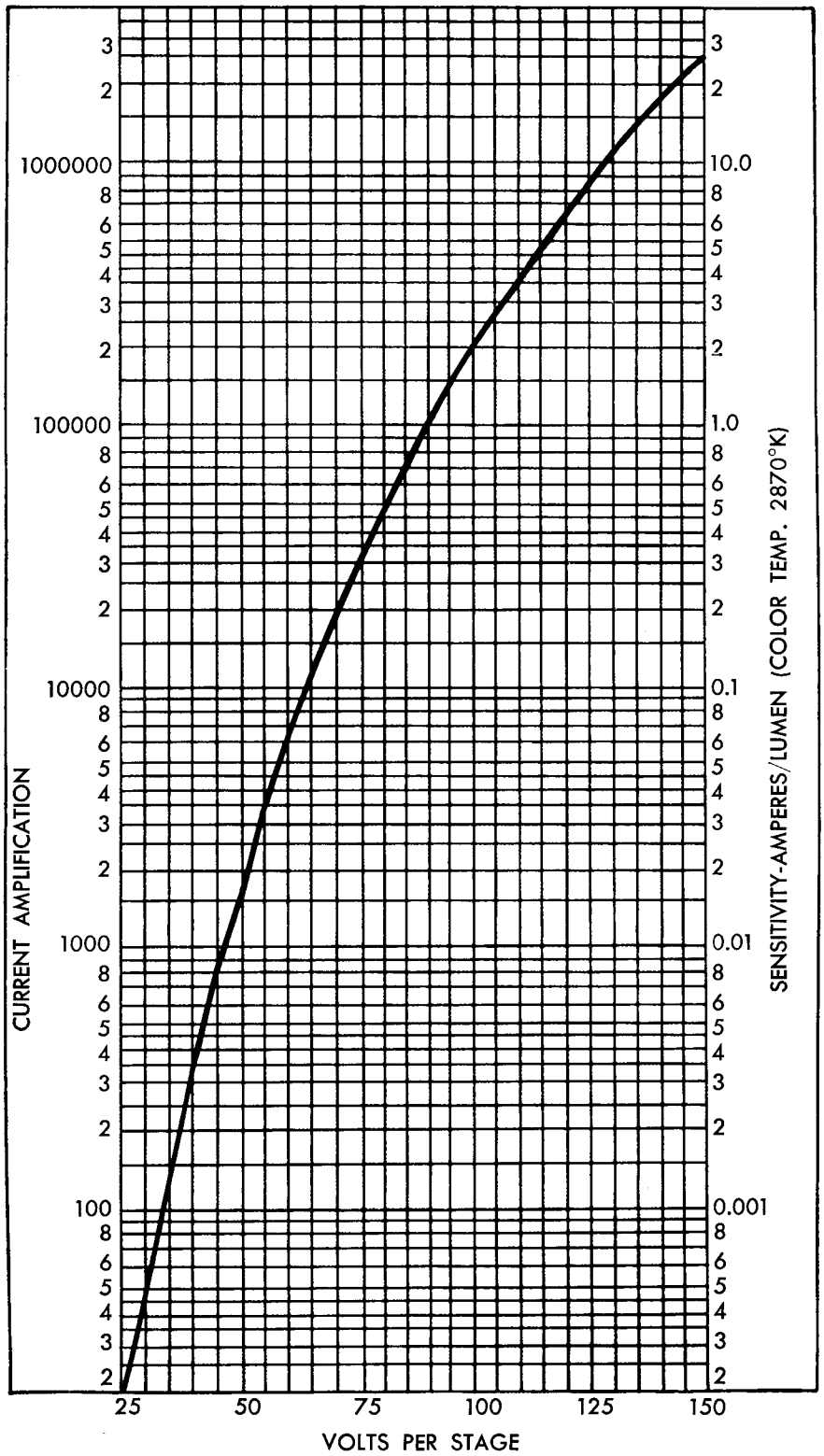
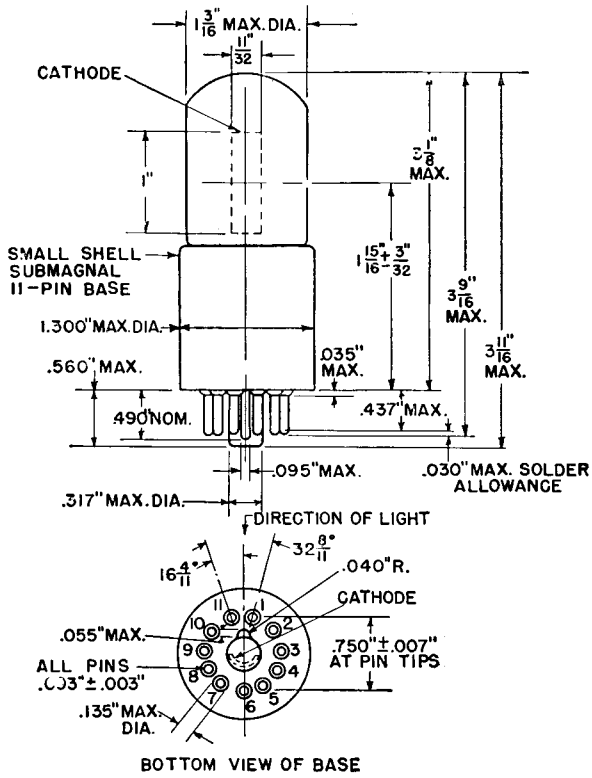
GL-931-A
AVERAGE CHARACTERISTICS
D-C OPERATION





PIN	CONNECTION
1-9	DYNODE
10	ANODE
11	CATHODE

OUTLINE

GL-931-A MULTIPLIER PHOTOTUBE

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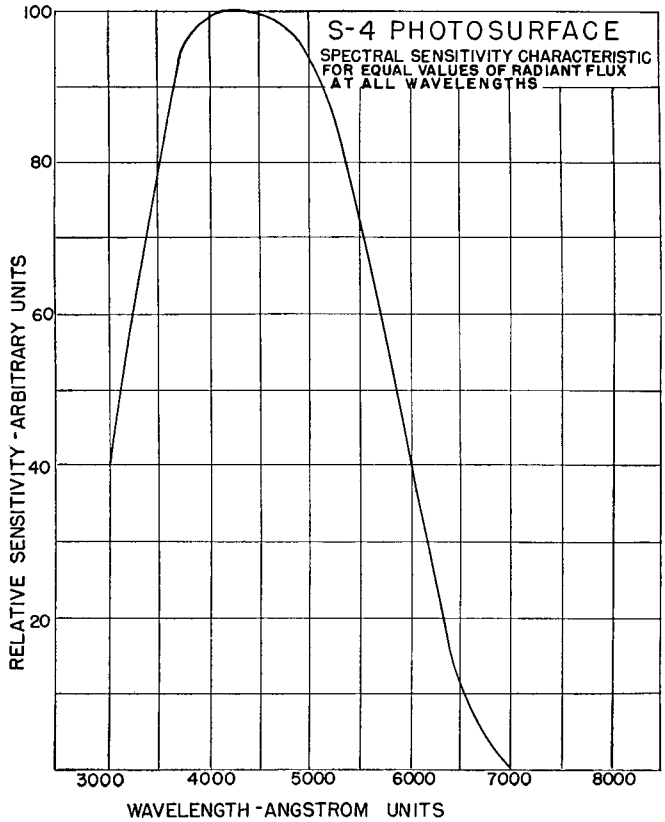

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Electronics Department

GENERAL ELECTRIC

Schenectady, N. Y.