



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.....	$1\frac{11}{16} \pm \frac{3}{32}$	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

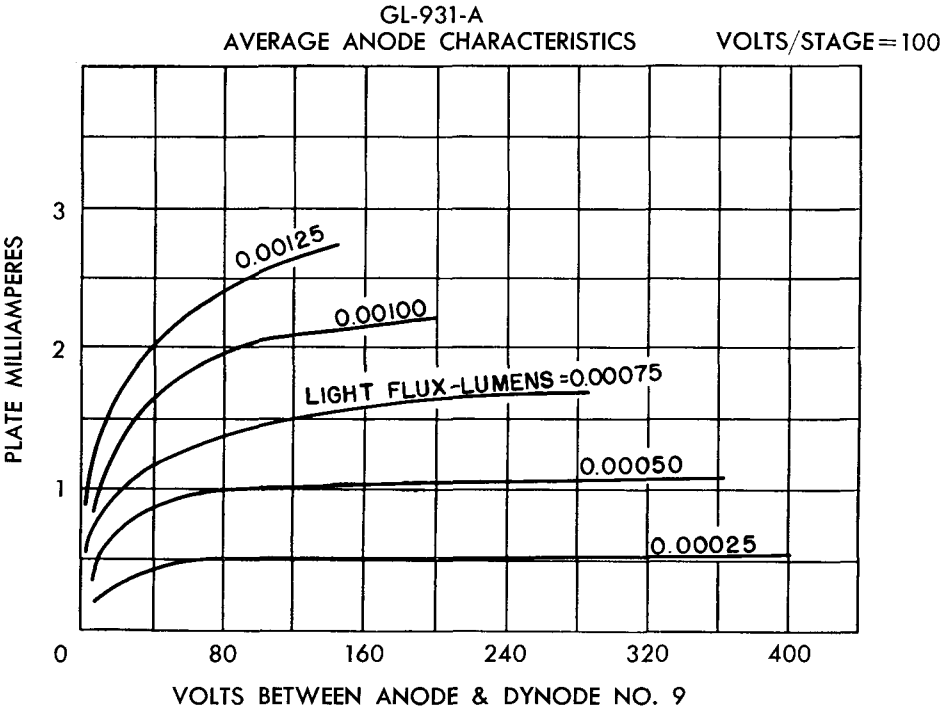
MAXIMUM RATINGS

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

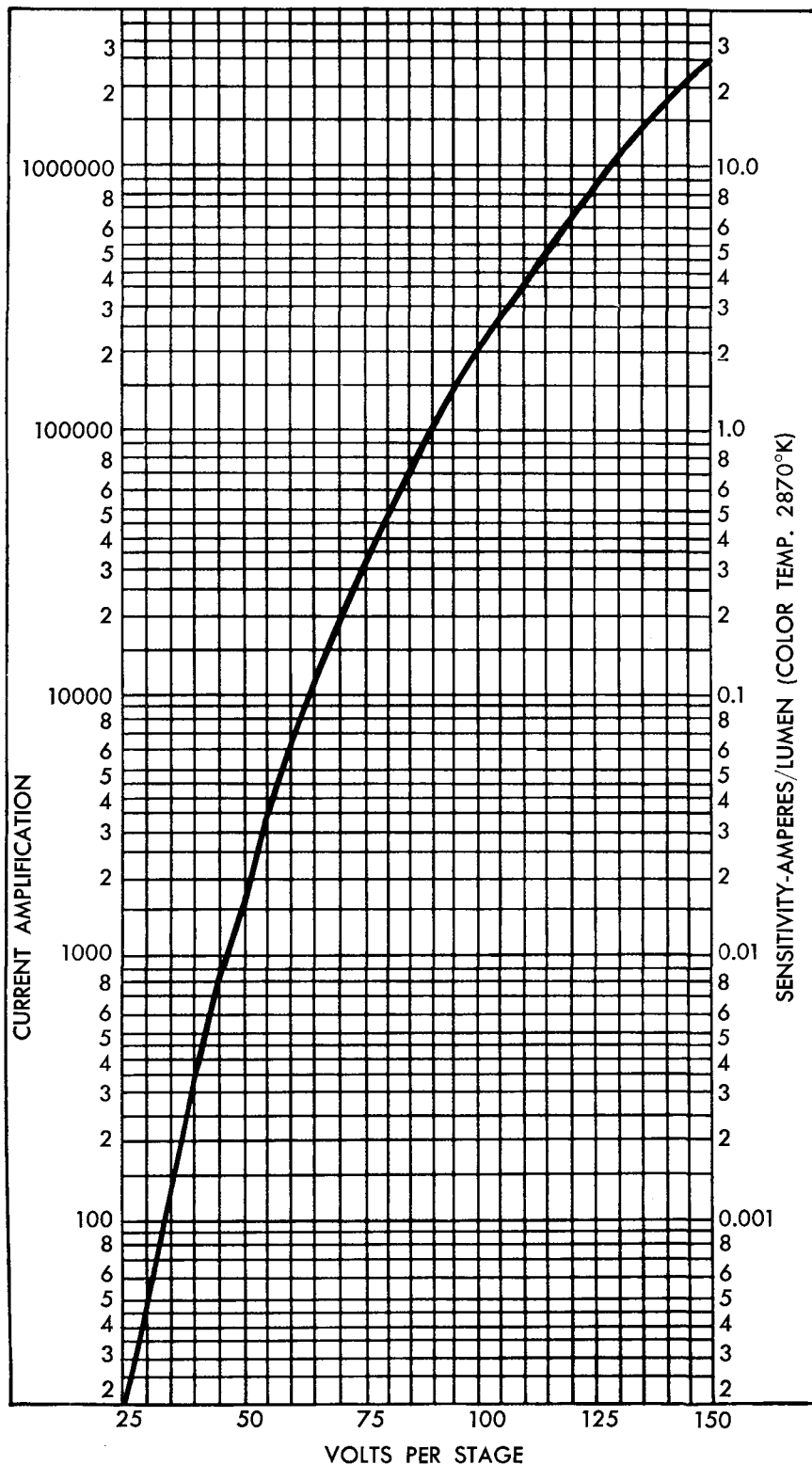
TYPICAL OPERATION

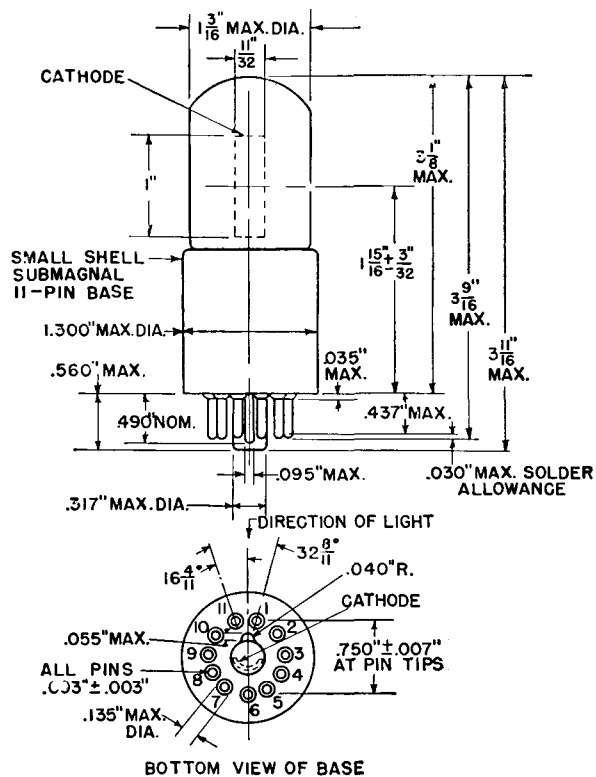
Voltage per stage.....	75	100	volts
Luminous sensitivity†.....	0.3	2.0	amperes per lumen
Current amplifications†.....	30,000	200,000	
Sensitivity at 3750 angstroms.....	270	1800	microamperes per microwatts

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



GL-931-A
AVERAGE CHARACTERISTICS
D-C OPERATION





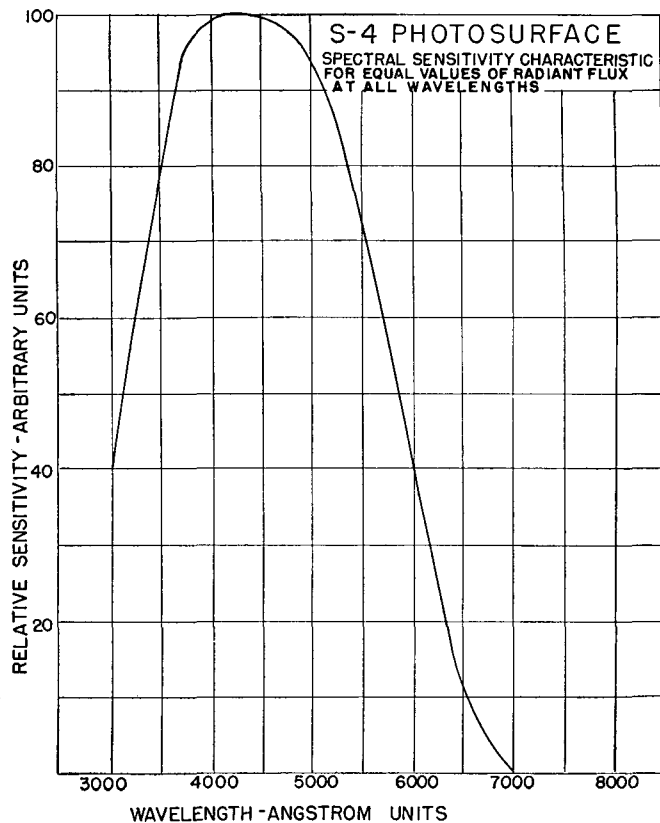
PIN	CONNECTION
1-9	DYNODE
10	ANODE
11	CATHODE

OUTLINE

GL-931-A MULTIPLIER PHOTOTUBE

K-8277037

9-23-44



K-8639625

4-27-44