



928

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GAS PHOTOTUBE

NON-DIRECTIONAL TYPE

Cathode	Cylindrical Mesh	
Photosurface		S1
Window Area		0.7 sq. in.
Direct Interelectrode Capacitance		3.0 μ f
Maximum Overall Length		3-9/16"
Maximum Seated Height		2-15/16"
Maximum Diameter		1-3/16"
Bulb (lime glass)		T-9
Base		Small 4-Pin
Pin 1-No Connection		Pin 3-No Connection
Pin 2-Anode (+)		Pin 4-Cathode (-)
Mounting Position		Any



BOTTOM VIEW

*Maximum Ratings Are Absolute Values***MAXIMUM RATINGS and CHARACTERISTICS**

Anode-Supply Voltage (D.C. or Peak A.C.)	90 max.	volts
Anode Current*	15 max.	μ amp.
Ambient Temperature	100 max.	$^{\circ}$ C
Luminous Sensitivity:*		
At 0 cycles	65	μ amp./lumen
At 5000 cycles	Less than 65	μ amp./lumen
At 10000 cycles	Less than 65	μ amp./lumen
Sensitivity at 7500 Angstroms	0.0075	μ amp./ μ watt
Gas Amplification Factor	Not over 10	
D-C Resistance of Load:		

With anode-supply voltage of 75 volts or less

For d-c currents	{ above 3.5 μ amp.	0.1 min. megohm
	{ below 3.5 μ amp.	No Minimum

With anode-supply voltage of 90 volts

For d-c currents	{ above 2 μ amp	4 min. megohms
	{ below 2 μ amp	1 min. megohm

- * On the basis of the use of a sensitive cathode area 1/2" in diameter.
 * Subject to variations as explained on sheet PHOTOTUBE SENSITIVITY MEASUREMENTS in the front of this section.

Spectral Sensitivity Characteristic of S1 Photosurface
 in lime-glass bulb is shown at beginning
 of this section.

← Indicates a change.

Mar. 20, 1943

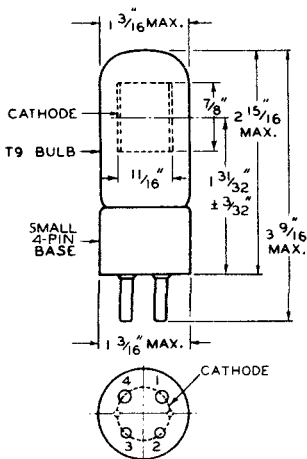
RCA VICTOR DIVISION
 RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

DATA



928

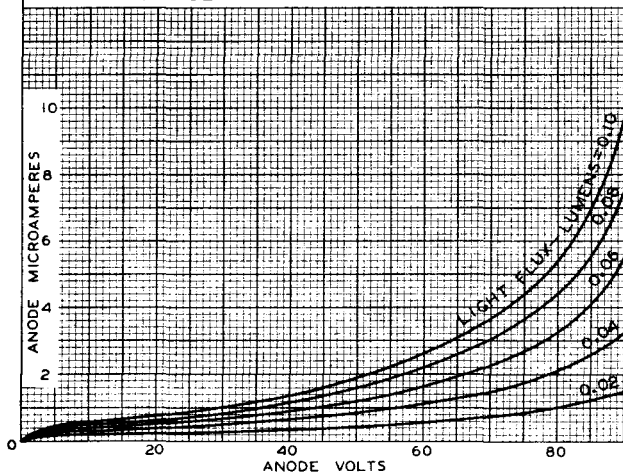
GAS PHOTOTUBE



92C-6111R1

BOTTOM VIEW

AVERAGE ANODE CHARACTERISTICS



Mar. 20, 1943

RCA VICTOR DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

CE-6111R1
CE-6117

Gas Phototube

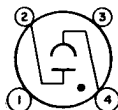
NON-DIRECTIONAL TYPE HAVING S-I RESPONSE

DATA

General:

Spectral Response.	S-1
Wavelength of Maximum Response	8000 $\pm$ 1000 angstroms
Cathode:	
Shape.	Cylindrical Mesh
Minimum length	13/16"
Minimum diameter	5/8"
Direct Interelectrode Capacitance (Approx.).	3 μ f
Maximum Overall Length	3-9/16"
Maximum Seated Length.	2-15/16"
Seated Length to Center of Cathode	1-31/32" $\pm$ 3/32"
Maximum Diameter	1-3/16"
Operating Position	Any
Weight (Approx.)	1 oz $\leftarrow$
Bulb	T9
Socket	Amphenol No.77-MIP-4-T, or equivalent $\leftarrow$
Base	Small-Shell Small 4-Pin (JEDEC No.A4-5) $\leftarrow$
Basing Designation for BOTTOM VIEW	2K

Pin 1—No Connection
Pin 2—Anode



Pin 3—No Connection
Pin 4—Photocathode

Maximum Ratings, Absolute-maximum Values:

Rating 1 Rating 11

ANODE-SUPPLY VOLTAGE (DC or Peak AC).	70 max.	90 max.	volts
AVERAGE CATHODE-CURRENT DENSITY ^b	60 max.	30 max.	μ a/sq. in.
AVERAGE CATHODE CURRENT ^b	6 max.	3 max.	μ a
AMBIENT TEMPERATURE.	100 max.	100 max.	$^{\circ}$ C

Characteristics:

With an anode-supply voltage of 90
volts unless otherwise specified

Min. Median Max.

Sensitivity:

Radiant, at 8000 angstroms.	—	0.0061	—	amp/watt
Luminous: ^c				
At 0 cps.	40	65	100	μ a/lumen
At 5000 cps.	—	56	—	μ a/lumen
At 10000 cps	—	50	—	μ a/lumen
Gas Amplification Factor ^d	—	—	10	
Anode Dark Current at 25 $^{\circ}$ C.	—	—	0.1	μ a

$\leftarrow$ Indicates a change.



RADIO CORPORATION OF AMERICA
Electron Tube Division Harrison, N. J.

DATA 1
3-61

Minimum Circuit Values:

With an anode-supply
voltage of

70 or less 90 volts

DC Load Resistance:

For dc currents above

3 μ a. 0.1 min. — megohm

For dc currents below

3 μ a. 0 min. — megohms

For dc currents above

2 μ a. — 2.5 min. megohms

For dc currents below

2 μ a. — 0.1 min. megohm

a On plane perpendicular to indicated direction of incident radiation.

b Averaged over any interval of 30 seconds maximum.

c For conditions where the light source is a tungsten-filament lamp operated at a color temperature of 2870° K. A dc anode supply voltage of 90 volts and a 1-megohm load resistor are used. For the 0-cycle measurement, a light input of 0.1 lumen is used. For the 5000- and 10,000-cycle measurements, the light input is varied sinusoidally about a mean value of 0.015 lumen from zero to a maximum of twice the mean value.

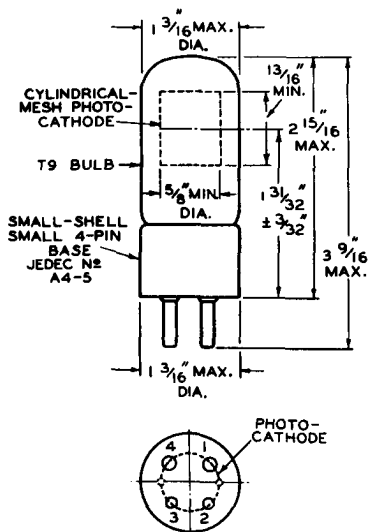
d The ratio of luminous sensitivity at an anode supply voltage of 90 volts to luminous sensitivity at an anode supply voltage of 25 volts. In each case, sensitivity is obtained under conditions where the light source is a tungsten-filament lamp operated at a color temperature of 2870° K, the light input is 0.1 lumen, and the load resistor has a value of 1 megohm.

**SPECTRAL-SENSITIVITY CHARACTERISTIC
OF PHOTOSENSITIVE DEVICE HAVING S-I RESPONSE**

and

**FREQUENCY-RESPONSE CHARACTERISTICS
OF GAS PHOTOTUBES**

are shown at the front of this section

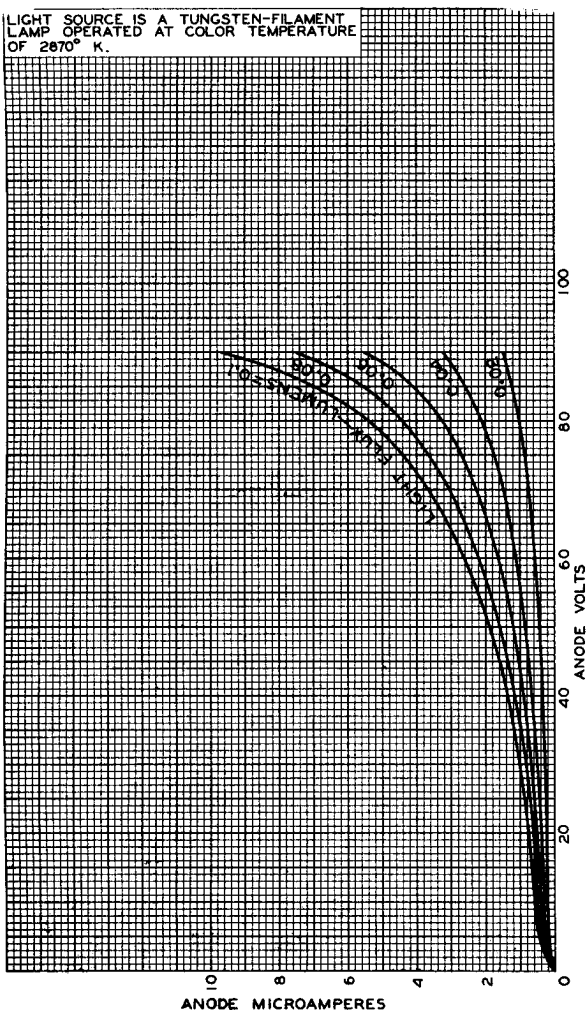


92CM-6111R3



AVERAGE ANODE CHARACTERISTICS

LIGHT SOURCE IS A TUNGSTEN-FILAMENT
LAMP OPERATED AT COLOR TEMPERATURE
OF 2870° K.



92CM-6117R1