928

GAS PHOTOTUBE

NON-DIRECTIONAL TYPE

Cathode	Cylindrical Mesh
Photosurface	S1
Window Area	0.7 sq. in. ←
Direct Interelectrode Capacitance	3.0 μμf ←
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.	μamp.
Ambient Temperature	100 max.	°C
Luminous Sensitivity:*		
At 0 cycles	65	μamp./lumen
At 5000 cycles	Less than 65	μamp./lumen
At 10000 cycles	Less than 65	μamp./lumen
Sensitivity at 7500 Angstroms	0.0075	μamp./μwatt ←
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 μamp.	0.1 min.	megohm
For d-c currents below 3.5 μamp.	No Minimum	
With anode-supply voltage of 90 volts		
For d-c currents above 2 μamp	4 min.	megohms
For d-c currents below 2 μamp	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.

928

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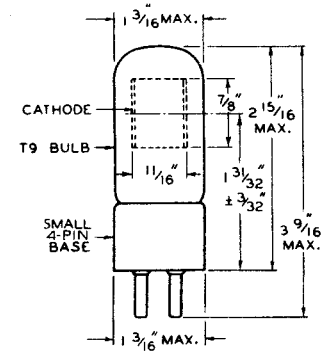
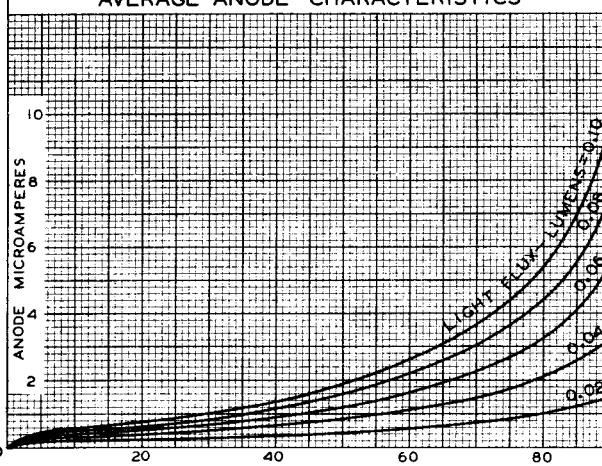
GAS PHOTOTUBE



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

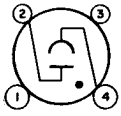
NON-DIRECTIONAL TYPE HAVING S-1 RESPONSE

DATA

General:

Spectral Response	S-1
Wavelength of Maximum Response	8000 ± 1000 angstroms
Cathode:	
Shape	Cylindrical Mesh
Minimum length	13/16"
Minimum diameter	5/8"
Direct Interelectrode Capacitance (Approx.)	3 μμf
Maximum Overall Length	3-9/16"
Maximum Seated Length	2-15/16"
Seated Length to Center of Cathode	1-31/32" ± 3/32"
Maximum Diameter	1-3/16"
Operating Position	Any
Weight (Approx.)	1 oz
Bulb	T9
Socket	Amphenol No.77-MIP-4-T, or equivalent
Base	Small-Shell Small 4-Pin (JEDEC No.A4-5)
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 I	*Rating II*	
ANODE-SUPPLY VOLTAGE (DC or Peak AC)	70 max.	90 max.	volts
AVERAGE CATHODE-CURRENT DENSITY[b]	60 max.	30 max.	μa/sq. in.
AVERAGE CATHODE CURRENT[b]	6 max.	3 max.	μa
AMBIENT TEMPERATURE	100 max.	100 max.	°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	μa/lumen
At 5000 cps	–	56	–	μa/lumen
At 10000 cps	–	50	–	μa/lumen
Gas Amplification Factor[d]	–	–	10	
Anode Dark Current at 25° C.	–	–	0.1	μa

◄ Indicates a change.

Minimum Circuit Values:

With an anode-supply voltage of	*70 or less*	*90*	*volts*
DC Load Resistance:			
For dc currents above 3 μa.	0.1 min.	–	megohm
For dc currents below 3 μa.	0 min.	–	megohms
For dc currents above 2 μa.	–	2.5 min.	megohms
For dc currents below 2 μa.	–	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.

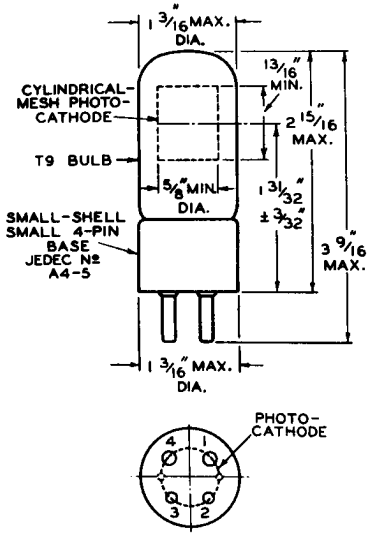
[d] The ratio of luminous sensitivity at an anode supply voltage of 90 volts to luminous sensitivity at an anode supply voltage of 25 volts. In each case, sensitivity is obtained under conditions where the light source is a tungsten-filament lamp operated at a color temperature of 2870° K, the light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

SPECTRAL-SENSITIVITY CHARACTERISTIC OF PHOTOSENSITIVE DEVICE HAVING S-1 RESPONSE

and

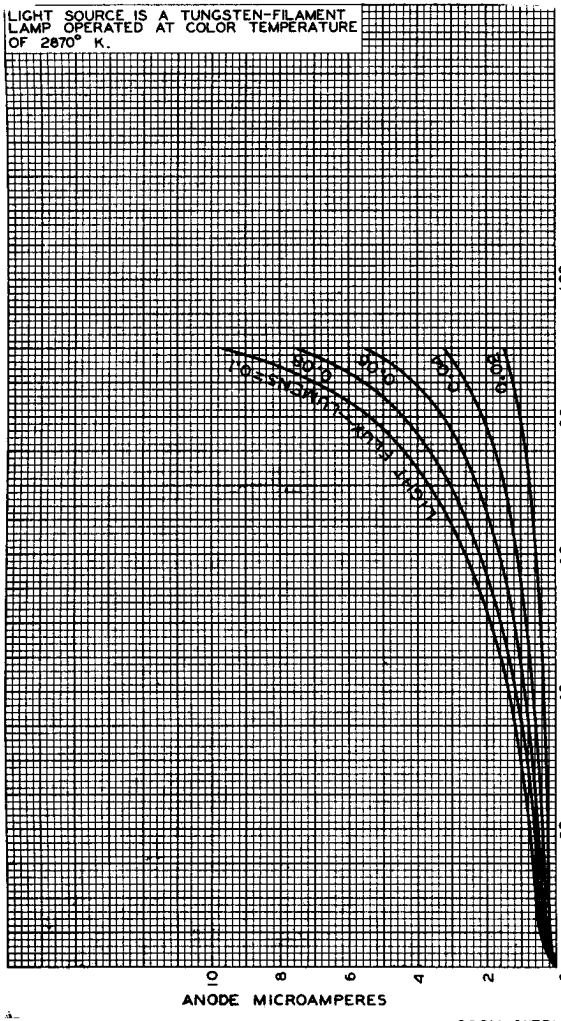
FREQUENCY-RESPONSE CHARACTERISTICS OF GAS PHOTOTUBES

are shown at the front of this section


1 3/16" MAX. DIA.
13/16" MIN.
CYLINDRICAL-MESH PHOTO-CATHODE
2 15/16" MAX.
T9 BULB
5/8" MIN. DIA.
1 31/32" ± 3/32"
SMALL-SHELL SMALL 4-PIN BASE JEDEC No. A4-5
3 9/16" MAX.
1 3/16" MAX. DIA.
PHOTO-CATHODE
4
1
3
2

92CM-6111R3

AVERAGE ANODE CHARACTERISTICS



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