

Gas Phototube

SIDE-ON TYPE HAVING UNOBSTRUCTED
PHOTOCATHODE AREA AND S-I RESPONSE

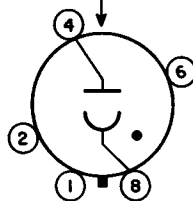
DATA

General:

Spectral Response.	S-1
Wavelength of Maximum Response	8000 $\pm$ 1000 angstroms
Cathode:	
Shape.	Semicylindrical
Minimum unobstructed projected length ^a	23/32"
Minimum unobstructed projected width ^a	9/16"
Direct Interelectrode Capacitance (Approx.)	3 μ f
Maximum Overall Length	3-1/16"
Maximum Seated Length.	2-1/2"
Seated Length to Center of Cathode	1-5/8" $\pm$ 3/32"
Maximum Diameter	1-9/32"
Operating Position	Any
Weight (Approx.)	0.9 oz
Bulb	T9
Socket	Cinch No.8JM-1, or equivalent ←
Base	Intermediate-Shell Octal 5-Pin Arrangement 1, (JEDEC No.B5-10)
Basing Designation for BOTTOM VIEW	3J

DIRECTION OF RADIATION

Pin 1—No Connection
Pin 2—No Connection



Pin 4—Anode
Pin 6—No Connection
Pin 8—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.	—	0.019	—	amp/watt
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← Indicates a change.



	<i>Min.</i>	<i>Median</i>	<i>Max.</i>	
Luminous: ^c				
At 0 cps.	140	200	330	$\mu\text{a/lumen}$
At 5000 cps.	—	165	—	$\mu\text{a/lumen}$
At 10000 cps.	—	150	—	$\mu\text{a/lumen}$
Gas Amplification Factor ^d	—	—	.10	
Anode Dark Current at 25° C	—	—	0.1	μa

Minimum Circuit Values:

<i>With an anode-supply</i>			
<i>voltage of</i>	<i>70 or less</i>	<i>90</i>	<i>volts</i>
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	—	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.

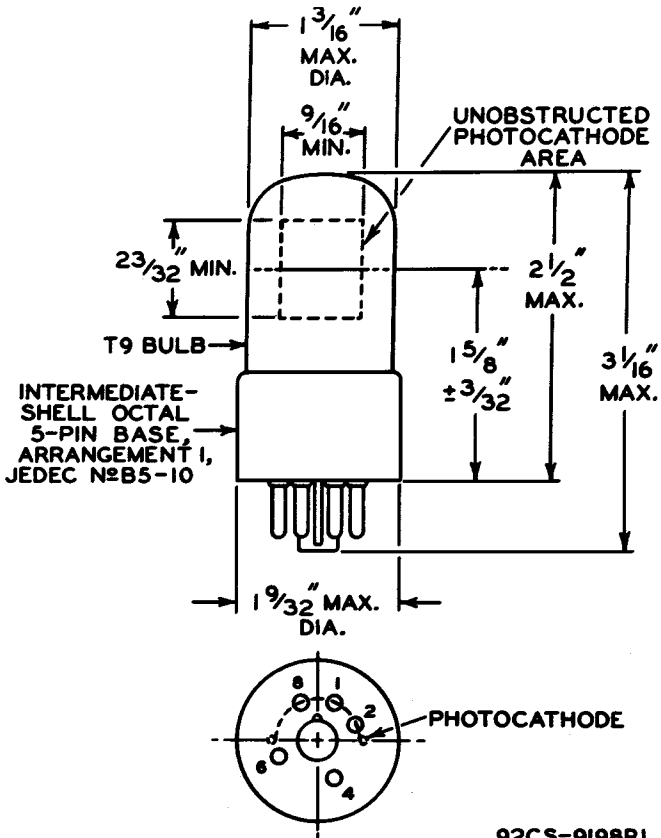
**SPECTRAL-SENSITIVITY CHARACTERISTIC
OF PHOTOSENSITIVE DEVICE HAVING S-I RESPONSE**

and

**FREQUENCY-RESPONSE CHARACTERISTICS
OF GAS PHOTOTUBES**

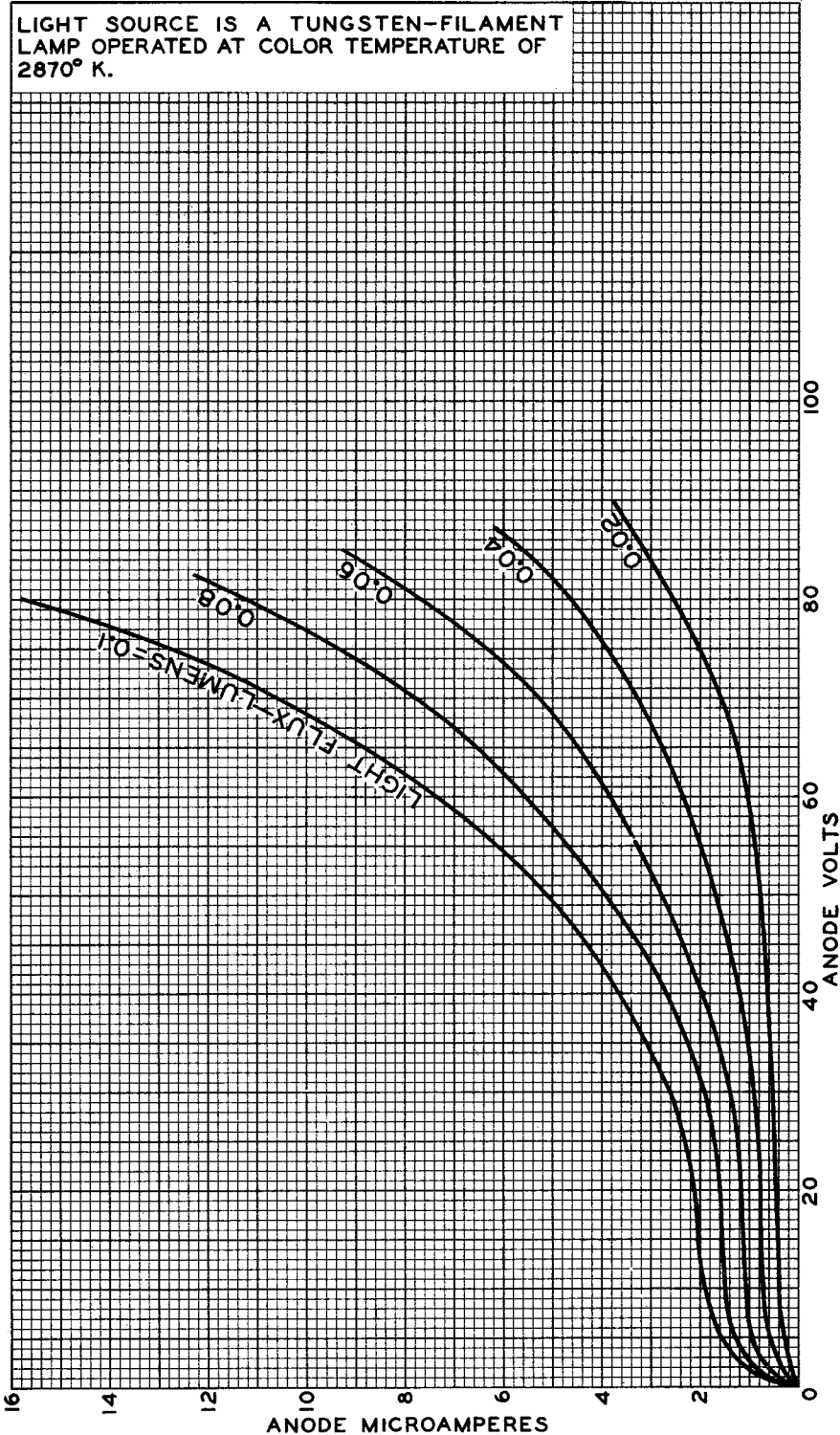
are shown at the front of this section





AVERAGE ANODE CHARACTERISTICS

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



92CM - 9226

