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GAS PHOTOTUBE

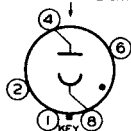
BLUE-SENSITIVE

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DATA**General:**

Spectral Response	S-4
Wavelength of Maximum Response	4000 ± 500 Angstroms
Cathode:	
Shape	Semi-Cylindrical
Minimum Projected Length*	13/16"
Minimum Projected Width*	5/8"
Direct Interelectrode Capacitance	2.6 μmf
Maximum Overall Length	3-1/16"
Maximum Seated Length	2-1/2"
Seated Length to Center of Cathode	1-5/8" ± 3/32"
Maximum Diameter	1-5/16"
Bulb	T-9
Mounting Position	Any
Base	Intermediate-Shell Octal 5-Pin

BOTTOM VIEW
DIRECTION OF LIGHT



Pin 1 - No Connection
Pin 2 - No Connection
Pin 4 - Anode

Pin 6 - No Connection
Pin 8 - Cathode

Maximum Ratings, Absolute Values:

ANODE-SUPPLY VOLTAGE (DC or Peak AC)	100 max.	..	volts
PEAK CATHODE CURRENT	10 max.	..	μamp
PEAK CATHODE-CURRENT DENSITY	100 max.	μamp/sq. in.	
AVERAGE CATHODE CURRENT ^o	3 max.	..	μamp
AMBIENT TEMPERATURE	75 max.	..	°C

Characteristics:

	<u>Min.</u>	<u>Au.</u>	<u>Max.</u>	
Dark Current at 90 Volts	-	-	0.050	.. μamp
Sensitivity:				
At 4000 Angstroms	-	0.125	-	μamp/μwatt
Luminous:				
At 0 Cycles	75	135	205	μamp/lumen
At 5000 Cycles	-	124	-	μamp/lumen
At 10000 Cycles	-	108	-	μamp/lumen
Gas Amplification Factor	-	-	5.5	

Minimum Circuit Values:

DC Load Resistance:

With anode-supply voltage of 80 volts or less

For dc currents { above 3 μamp 0.1 megohm
 below 3 μamp No Minimum

With anode-supply voltage of 100 volts

For dc currents { above 1 μamp 2.5 megohms
 below 1 μamp 0.1 megohm

* , ^o: See next page.

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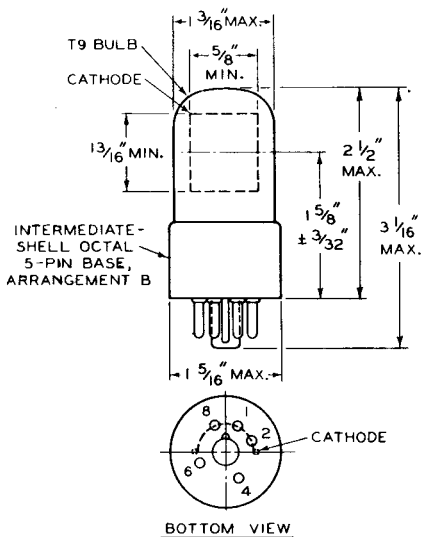


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GAS PHOTOTUBE

- * On plane perpendicular to indicated direction of incident light.
 O Averaged over any interval of 30 seconds maximum. Average current may be doubled when anode-supply voltage is limited to 80 volts.

SPECTRAL-SENSITIVITY CHARACTERISTIC
 and
 FREQUENCY-RESPONSE CHARACTERISTIC
 of Gas Phototube having S-4 Response
 are shown at beginning of this Section



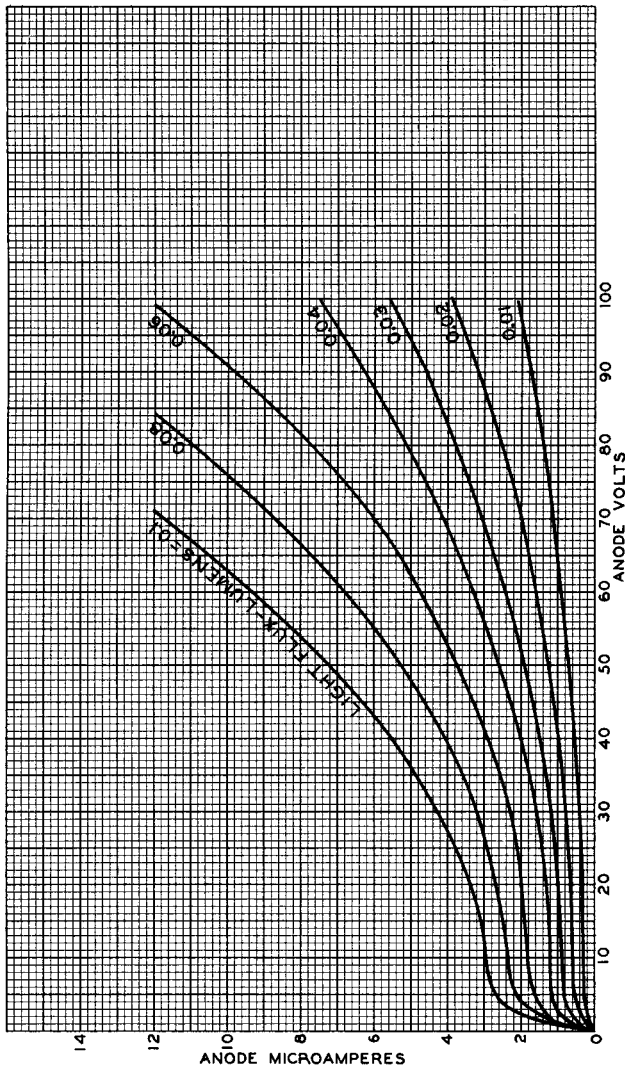
92CM-6137R2



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AVERAGE ANODE CHARACTERISTICS



Gas Phototube

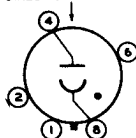
SIDE-ON TYPE HAVING S-4 RESPONSE

DATA

General:

Spectral Response.	S-4
Wavelength of Maximum Response	4000 ± 500 angstroms
Cathode:	
Shape.	Semicylindrical
Minimum projected length ^a	13/16"
Minimum projected width ^a	5/8"
Direct Interelectrode Capacitance(Approx.)	2.6 μf
Maximum Overall Length	3-1/16"
Maximum Seated Length.	2-1/2"
Seated Length to Center of Cathode	1-5/8" ± 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 LIGHT



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).	80 max.	100 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.	75 max.	75 max.	°C

Characteristics:

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

	Min.	Median	Max.	
Sensitivity:				
Radiant, at 4000 angstroms.	-	0.13	-	amp/watt
Luminous: ^c				
At 0 cps	75	135	205	μa/lumen
At 5000 cps.	-	124	-	μa/lumen
At 10000 cps	-	108	-	μa/lumen

← Indicates a change



	<i>Min.</i>	<i>Median</i>	<i>Max.</i>	
Gas Amplification Factor ^d	-	-	5.5	
Anode Dark Current	-	-	0.05	μa

Minimum Circuit Values:

*With an anode-supply
voltage of*

80 or less 100 volts

DC Load Resistance:

For dc currents above

$3 \mu\text{a}$ 0.1 min. - megohm

For dc currents below

$3 \mu\text{a}$ 0 min. - megohms

For dc currents above

$1 \mu\text{a}$ - 2.5 min. megohms

For dc currents below

$1 \mu\text{a}$ - 0.1 min. megohm

^a On plane perpendicular to indicated direction of incident light.

^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.

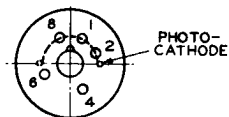
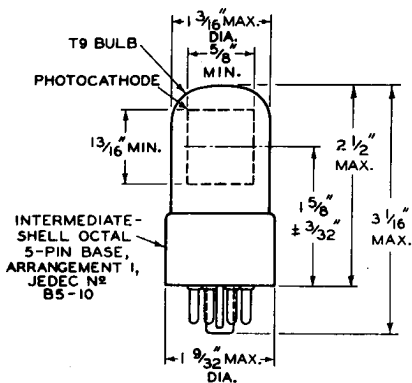
**SPECTRAL-SENSITIVITY CHARACTERISTIC
OF PHOTOSENSITIVE DEVICE HAVING S-4 RESPONSE**

and

**FREQUENCY-RESPONSE CHARACTERISTICS
OF GAS PHOTOTUBES**

are shown at the front of this section

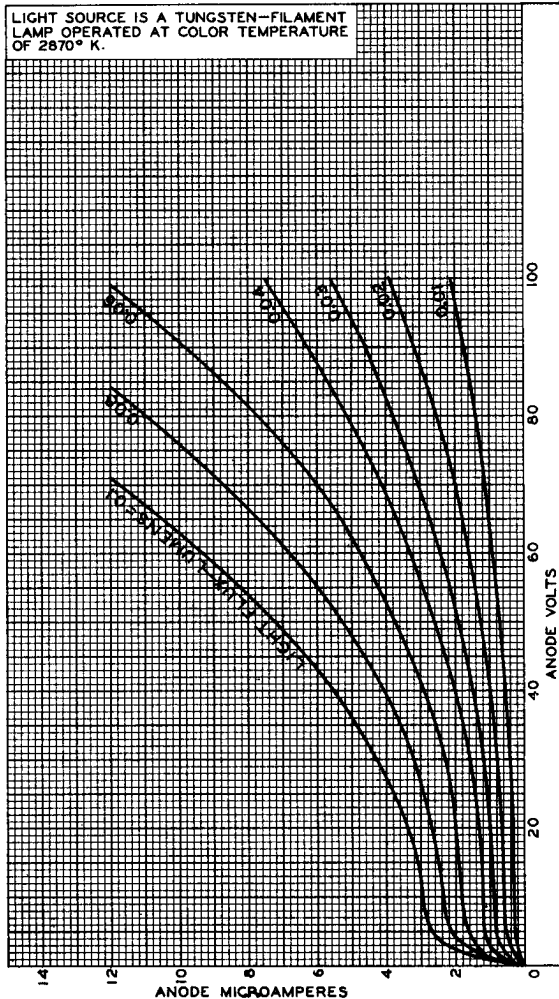




92CM-6137R3



AVERAGE ANODE CHARACTERISTICS



92CM-6822R1

