



IP37

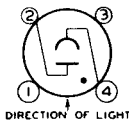
IP37 GAS PHOTOTUBE

BLUE SENSITIVE

DATA**General:**

Spectral Response.	S-4
Wavelength of Maximum Response	4200 Angstroms
Cathode:	
Shape.	Semi-Cylindrical
Minimum Projected Width *	5/8"
Minimum Projected Length *	1-1/4"
Center Length (from bottom edge of base)	2-1/8" $\pm$ 3/32"
Direct Interelectrode Capacitance.	3 μ f
Mounting Position.	Any
Maximum Overall Length	4-1/8"
Maximum Seated Length	3-1/2"
Maximum Diameter	1-1/8"
Bulb	T-8
Base	Dwarf Shell Small 4-Pin
Basing Designation for BOTTOM VIEW	2K

Pin 1—No Connection
Pin 2—Anode (+)



Pin 3—No Connection
Pin 4—Cathode (-)

Maximum Ratings, Absolute Values:

ANODE-SUPPLY VOLTAGE (DC or Peak AC).	100 max.	volts
CATHODE CURRENT DENSITY.	15 max. μ amp./sq.in.	
AVERAGE CATHODE CURRENT.	5 max.	μ amp
AMBIENT TEMPERATURE.	75 max.	$^{\circ}$ C

Characteristics:

Maximum Dark Current at 90 volts	0.1	μ amp
Sensitivity:		
At 4200 Angstroms.	0.099	μ amp./ μ watt
Luminous:		
At 0 Cycles.	120	μ amp./lumen
At 5000 Cycles	110	μ amp./lumen
At 10000 Cycles.	95	μ amp./lumen
Max. Gas Amplification Factor.	5.5	

Minimum Circuit Values:**Minimum DC Load Resistance:**

With anode-supply voltage of 75 volts or less:

For dc currents { above 3 μ amp.	0.1	megohm
{ below 3 μ amp.	No Minimum	

With anode-supply voltage of 90 volts:

For dc currents { above 3 μ amp.	2.5	megohm
{ below 3 μ amp.	0.1	megohm

* On plane perpendicular to indicated direction of incident light.

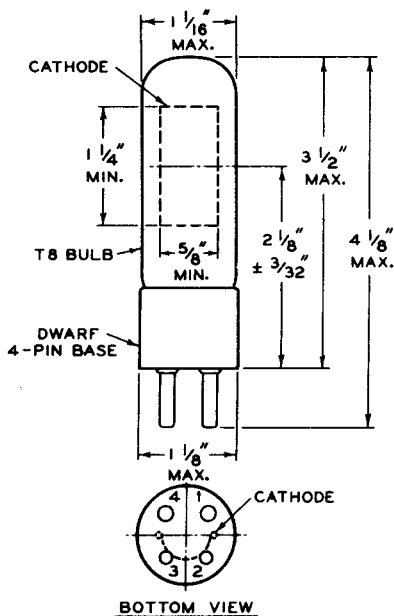
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GAS PHOTOTUBE

Spectral Sensitivity Characteristic of Phototube having S-4 Response is shown at beginning of this section.



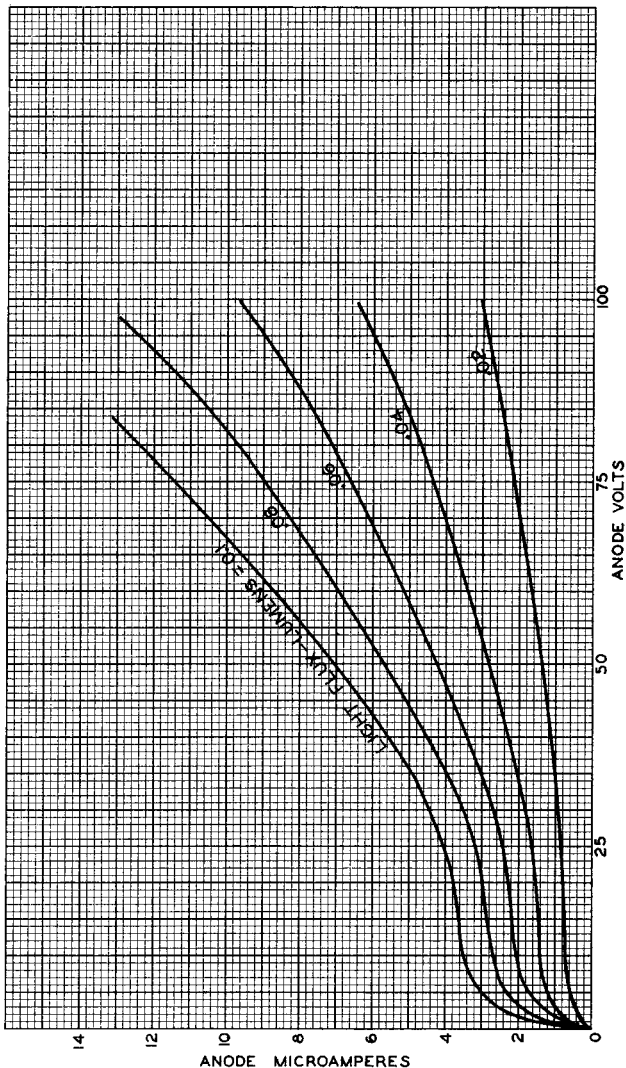
92CM-470R4



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AVERAGE ANODE CHARACTERISTICS



DEC. 6, 1945

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

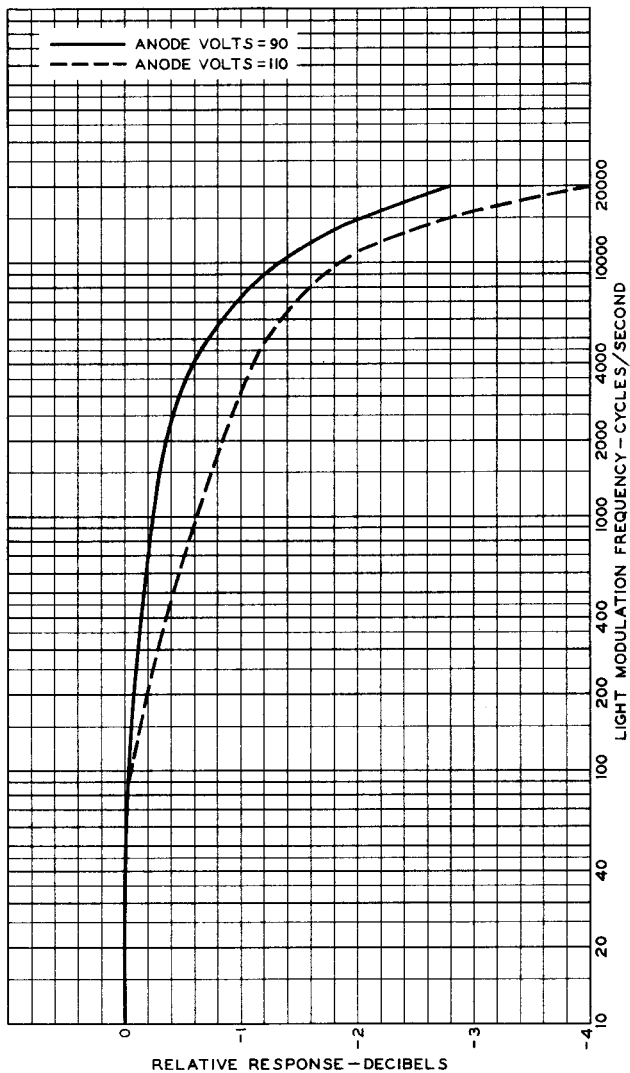
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FREQUENCY-RESPONSE CHARACTERISTICS



Gas Phototube

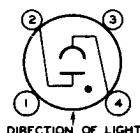
SIDE-ON TYPE HAVING S-4 RESPONSE

DATA

General:

Spectral Response	S-4
Wavelength of Maximum Response.	4000 $\pm$ 500 angstroms
Cathode:	
Shape	Semicylindrical
Minimum projected length ^a	1-1/4"
Minimum projected width ^a	5/8"
Direct Interelectrode Capacitance (Approx.)	3 μ f
Maximum Overall Length.	4-1/8"
Maximum Seated Length	3-1/2"
Seated Length to Center of Cathode.	2-1/8" $\pm$ 3/32"
Maximum Diameter.	1-1/8"
Operating Position.	Any
Weight (Approx.)	1.1 oz $\leftarrow$
Bulb.	T8
Socket.	Amphenol No.77-MIP-4-T, or equivalent $\leftarrow$
Base.	Dwarf-Shell Small 4-Pin (JEDEC No.A4-26) $\leftarrow$
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 I	Rating II	
ANODE-SUPPLY VOLTAGE (DC or Peak AC)	80 max.	100 max.	volts
AVERAGE CATHODE-CURRENT DENSITY ^b	50 max.	25 max.	μ a/sq. in.
AVERAGE CATHODE CURRENT ^b	10 max.	5 max.	μ a
AMBIENT TEMPERATURE	75 max.	75 max.	$^{\circ}$ C

Characteristics:

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

	Min.	Median	Max.	
Sensitivity:				
Radiant, at 4000 angstroms.	-	0.13	-	μ a/ μ w
Luminous: ^c				
At 0 cps.	75	135	205	μ a/lumen
At 5000 cps	-	124	-	μ a/lumen
At 10000 cps.	-	108	-	μ a/lumen
Gas Amplification Factor ^d	-	-	5.5	
Anode Dark Current at 25 $^{\circ}$ C	-	-	0.05	μ a

$\leftarrow$ Indicates a change.



Minimum Circuit Values:

With an anode-supply voltage of 80 or less 100 volts

DC Load Resistance:

For dc currents above 5 μ a . .	0.1 min.	-	megohm
For dc currents below 5 μ a . .	0 min.	-	megohms
For dc currents above 3 μ a . .	-	2.5 min.	megohms
For dc currents below 3 μ 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.

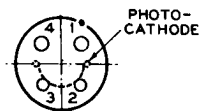
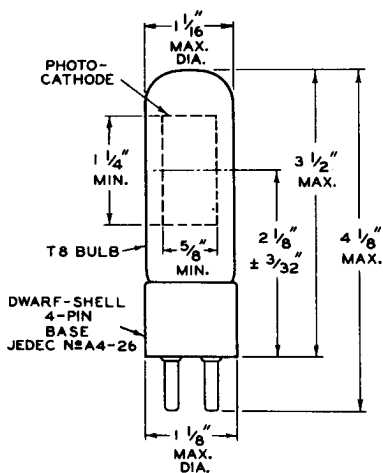
SPECTRAL-SENSITIVITY CHARACTERISTIC OF PHOTOSENSITIVE DEVICE HAVING S-4 RESPONSE

and

FREQUENCY-RESPONSE CHARACTERISTICS OF GAS PHOTOTUBES

are shown at the front of this section

AVERAGE-ANODE-CHARACTERISTICS CURVE
shown under Type 5581 also applies to the 1P37



92CM-470R5

