918

GAS PHOTOTUBE

Cathode	Semi-cylindrical
Photosurface	S2
Window Area	1 sq.in. ←
Direct Interelectrode Capacitance	3.0 μμf ←
Maximum Overall Length	4-1/8"
Maximum Seated Height	3-1/2"
Maximum Diameter	1-3/16"
Bulb (lime glass)	T-8
Base	Tapered 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●	20 max.	μamp.
Ambient Temperature	100 max.	°C ←
Luminous Sensitivity:*		←
At 0 cycles	150	μamp./lumen
At 5000 cycles	120	μamp./lumen
At 10000 cycles	105	μamp./lumen
Sensitivity at 8000 Angstroms	0.0145	μamp./μwatt ←
Gas Amplification Factor	Not over 10.5	←
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 2.0 μamp.	4.0 min.	megohms
For d-c currents below 2.0 μamp.	1.0 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.

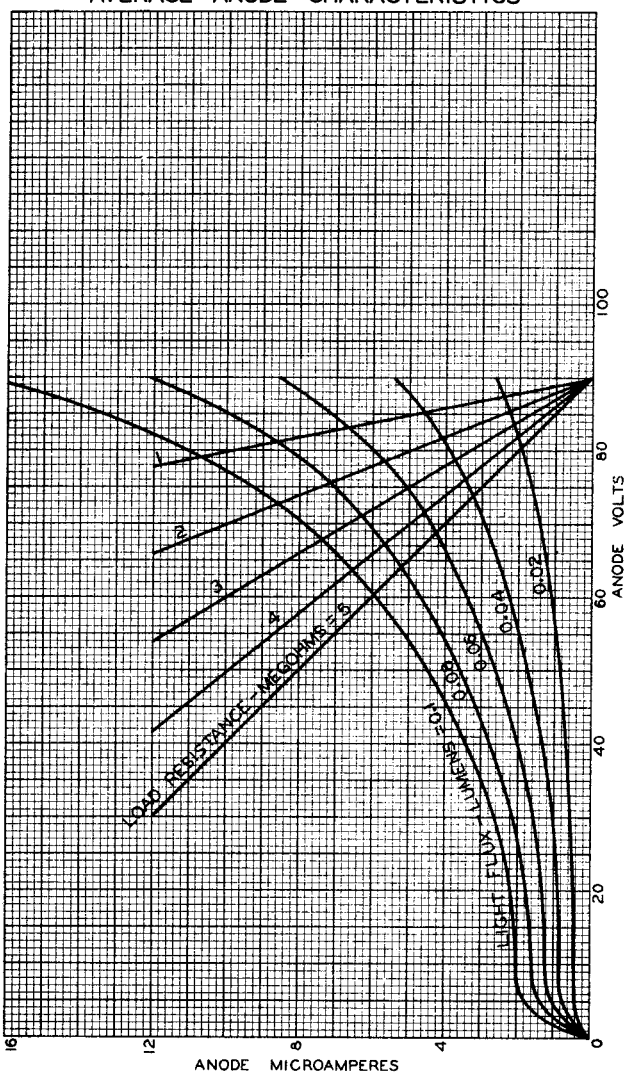
OUTLINE DIMENSIONS
for the 918 are the same as those for the 868.

Spectral Sensitivity Characteristic of S2 Photosurface in lime-glass bulb is shown at beginning of this section.

← Indicates a change.

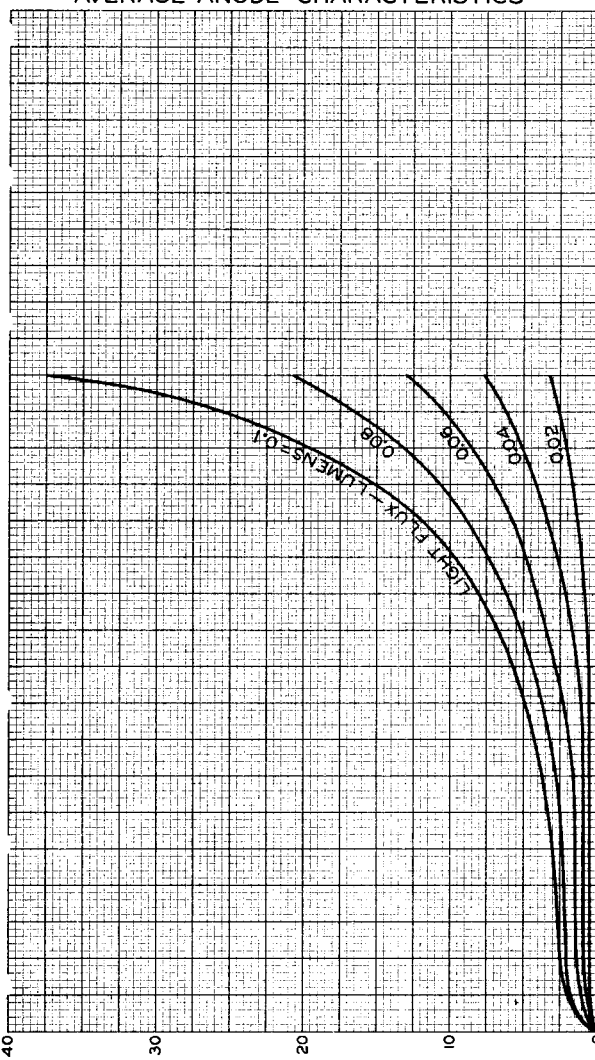
918

AVERAGE ANODE CHARACTERISTICS



RCA VICTOR DIVISION
RADIO CORPORATION OF AMERICA HARRISON, NEW JERSEY

AVERAGE ANODE CHARACTERISTICS



APRIL 7, 1950

92CM-4351R2

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

Gas Phototube

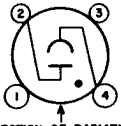
SIDE-ON TYPE HAVING S-1 RESPONSE

DATA

General:

Spectral Response	S-1
Wavelength of Maximum Response	8000 ± 1000 angstroms
Cathode:	
Shape	Semicylindrical
Minimum projected length[a]	1-1/4"
Minimum projected width[a]	5/8"
Direct Interelectrode Capacitance (Approx.)	3 μμf
Maximum Overall Length	4-1/8"
Maximum Seated Length	3-1/2"
Seated Length to Center of Cathode	2-1/8" ± 3/32"
Maximum Diameter	1-1/8"
Operating Position	Any
Weight (Approx.)	1.1 oz ←
Bulb	T8
Socket	Amphenol No.77-MIP-4-T, or equivalent ←
Base	Dwarf-Shell Small 4-Pin (JEDEC No.A4-26) ←
Basing Designation for BOTTOM VIEW	2K

Pin 1 – No Connection
Pin 2 – Anode



Pin 3 – No Connection
Pin 4 – Photocathode

DIRECTION OF RADIATION

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]	50 max.	25 max.	μa/sq. in.
AVERAGE CATHODE CURRENT[b]	10 max.	5 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	–	0.014	–	amp/watt
Luminous:[c]				
At 0 cps	120	150	220	μa/lumen
At 5000 cps	–	120	–	μa/lumen
At 10000 cps	–	105	–	μa/lumen
Gas Amplification Factor[d]	–	–	10.5	
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 5 μa.	0.1 min.	–	megohm
For dc currents below 5 μa.	0 min.	–	megohms
For dc currents above 3 μa.	–	2.5 min.	megohms
For dc currents below 3 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

DIMENSIONAL OUTLINE
shown under Type IP37 also applies to the 918

AVERAGE ANODE CHARACTERISTICS