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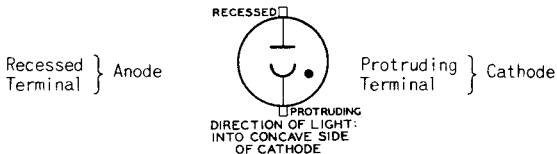
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**GAS PHOTOTUBE**

CARTRIDGE TYPE WITH S-4 RESPONSE

**DATA****General:**

Spectral Response . . . . .	S-4
Wavelength of Maximum Response . . . . .	4000 ± 500 Angstroms
Cathode:	
Shape . . . . .	Semi-Cylindrical
Minimum Projected Length* . . . . .	5/8"
Minimum Projected Width* . . . . .	1/2"
Direct Interelectrode Capacitance . . . . .	1.0 μmf
Overall Length . . . . .	1-21/32" ± 1/16"
Length, Cathode Center to plane A-A' (See Outline) . . . . .	11/16" ± 1/16"
Maximum Diameter . . . . .	0.890"
Mounting Position . . . . .	Any
Terminal Caps. . . . .	See Outline

**BOTTOM VIEW****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 <sup>o</sup> . . . . .	2 max.	.. μamp
AMBIENT TEMPERATURE . . . . .	75 max.	.. °C

**Characteristics:**

	<u>Min.</u>	<u>Av.</u>	<u>Max.</u>	
Dark Current at 90 Volts . . . . .	-	-	0.050	.. μamp
Sensitivity:				
At 4000 Angstroms . . . . .	-	0.11	-	μamp/μwatt
Luminous:▲				
At 0 Cycles . . . . .	80	120	175	μamp/lumen ←
At 5000 Cycles . . . . .	-	110	-	μamp/lumen
At 10000 Cycles . . . . .	-	96	-	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

\* , <sup>o</sup> , ▲: See next page.

← Indicates a change.

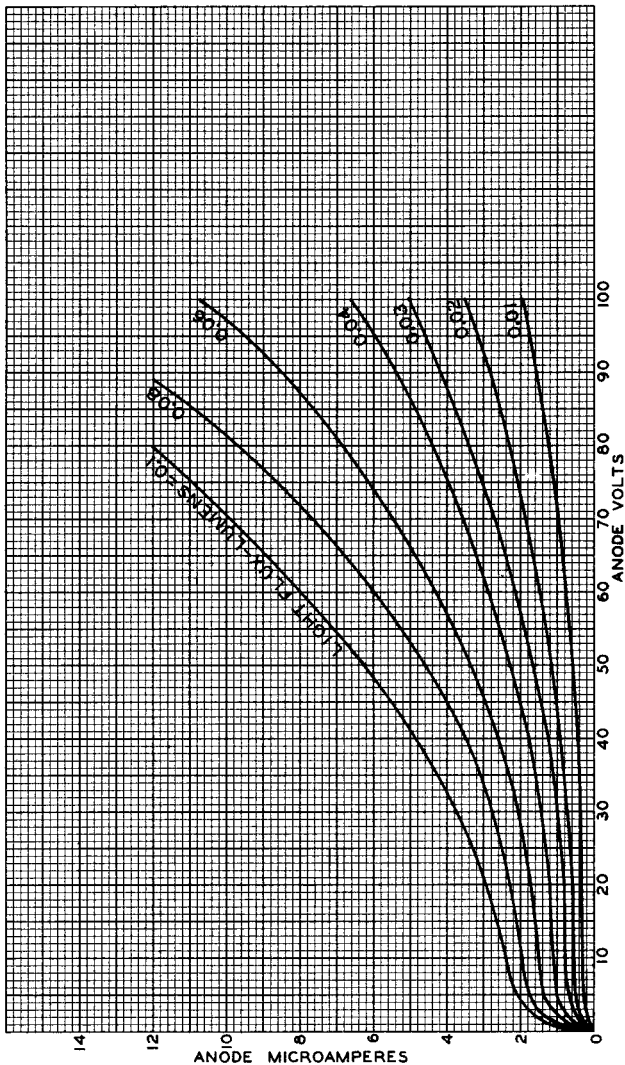




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### AVERAGE ANODE CHARACTERISTICS



DEC. 27, 1946

TUBE DEPARTMENT  
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-6823



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# GAS PHOTOTUBE

CARTRIDGE TYPE WITH S-4 RESPONSE

For sound reproduction involving a dye-image sound track  
in conjunction with an incandescent light source

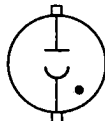
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## DATA

### General:

Spectral Response . . . . .	S-4
Wavelength of Maximum Response . . . . .	4000 ± 500 angstroms
Cathode:	
Shape . . . . .	Semicylindrical
Minimum projected length* . . . . .	5/8"
Minimum projected width* . . . . .	1/2"
Direct Interelectrode Capacitance . . . . .	1 μmf
Overall Length . . . . .	1-21/32" ± 1/16"
Seated Length . . . . .	1-13/32" ± 1/32" ←
Length from Center of Useful Cathode Area to Plane A-A' (See Dimensional Outline) . . . . .	11/16" ± 1/16"
Maximum Diameter . . . . .	0.890"
Weight (Approx.) . . . . .	0.4 oz ←
Mounting Position . . . . .	Any ←
Terminals:	
Recessed cap . . . . .	JETEC No. J1-23 ←
Protruding cap . . . . .	JETEC No. J1-24 ←
Basing Designation . . . . .	2A0 ←

Recessed } Anode  
Cap }



Protruding } Cathode  
Cap }

DIRECTION OF LIGHT  
INTO CONCAVE  
SIDE  
OF CATHODE

### Maximum Ratings, Absolute Values:

ANODE-SUPPLY VOLTAGE (DC or Peak AC) . . . . .	100 max.	volts
AVERAGE CATHODE-CURRENT DENSITY <sup>o</sup> . . . . .	20 max.	μamp/sq. in. ←
AVERAGE CATHODE CURRENT <sup>o</sup> . . . . .	2 max.	μamp
AMBIENT TEMPERATURE . . . . .	75 max.	°C

### Characteristics, At 90 Volts on Anode:

	Min.	Median	Max.	
Sensitivity:				
Radiant, at				
4000 angstroms . . . . .	-	0.12	-	μamp/μwatt ←
Luminous: <sup>▲</sup>				
At 0 cps . . . . .	80	120	175	μamp/lumen
At 5000 cps . . . . .	-	110	-	μamp/lumen
At 10000 cps . . . . .	-	96	-	μamp/lumen
Gas Amplification Factor . . . . .	-	-	5.5	
Anode Dark Current				
at 25°C . . . . .	-	-	0.05	μamp

\* on plane perpendicular to indicated direction of incident light.  
<sup>o</sup>, <sup>▲</sup>: See next page. ← Indicates a change.

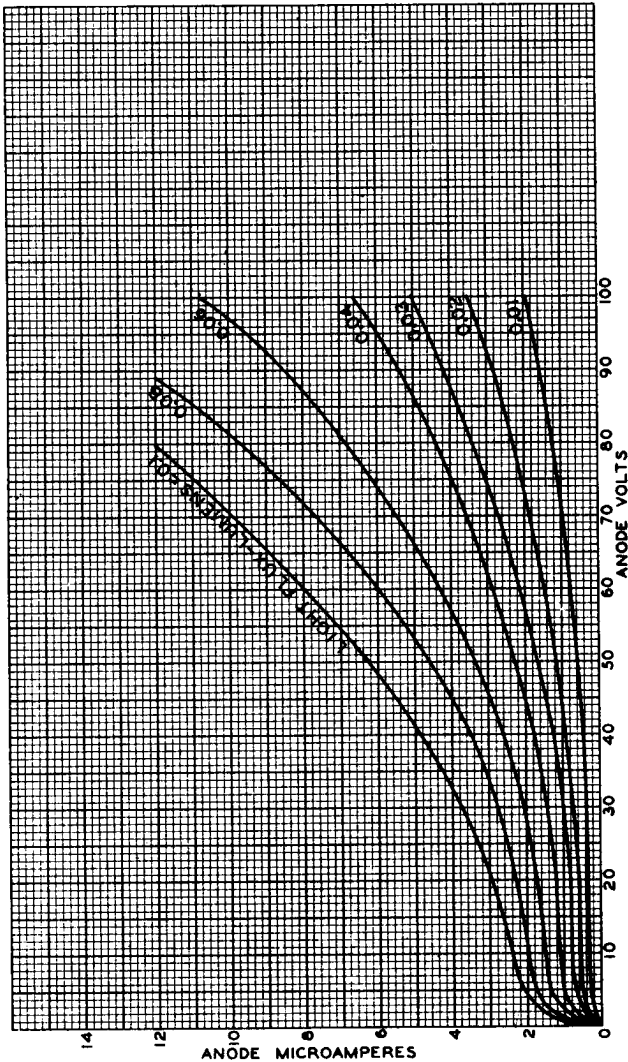




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### AVERAGE ANODE CHARACTERISTICS



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