



5582

5582

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

RECESSED □

Recessed } Anode
Terminal }Protruding } Cathode
Terminal }□ PROTRUDING
DIRECTION OF LIGHT:
INTO CONCAVE SIDE
OF 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	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

* , ^o , ▲: See next page.

← Indicates a change.

5582

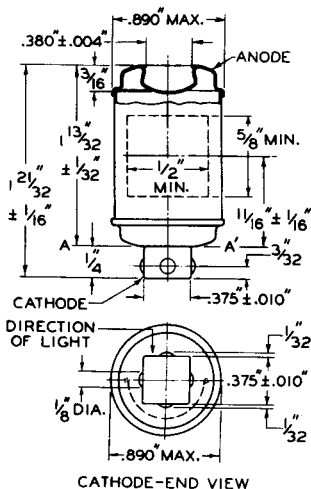


5582

GAS PHOTOTUBE

- * On plane perpendicular to indicated direction of incident light.
- Averaged over any interval of 30 seconds maximum. Average current may be doubled when anode-supply voltage is limited to 80 volts.
- ▲ Measured under conditions specified on sheet "PHOTOTUBE SENSITIVITY and SENSITIVITY MEASUREMENTS" at the front of this Section.

SPECTRAL-SENSITIVITY CHARACTERISTIC
of Phototube having S-4 Response
and
FREQUENCY-RESPONSE CHARACTERISTICS
of Gas Phototubes
are shown at the front of this Section



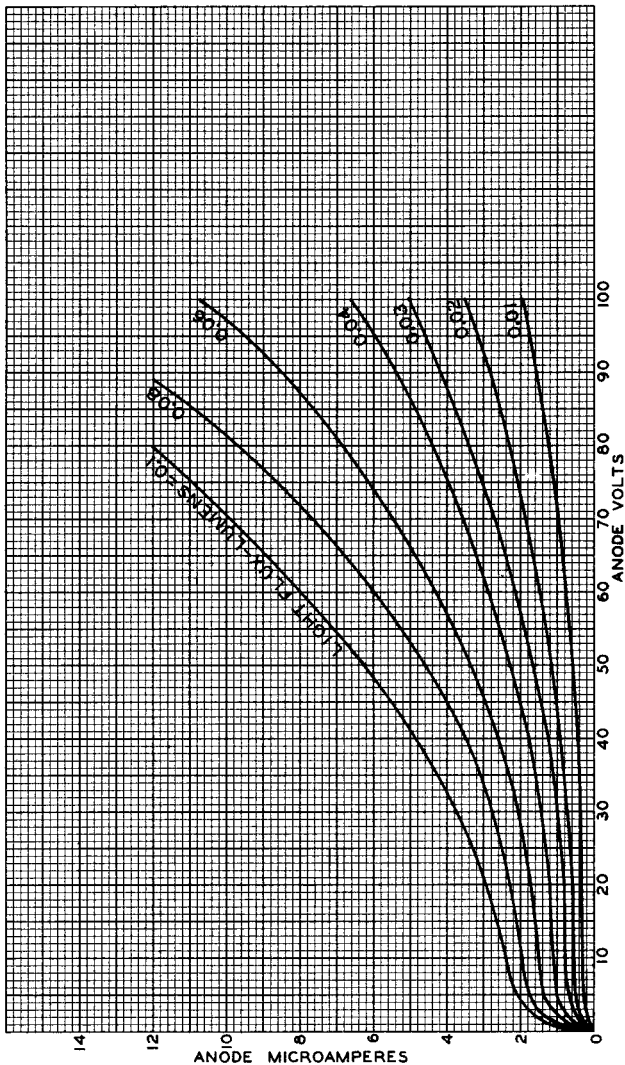
92CM-4818R2



5582

5582

AVERAGE ANODE CHARACTERISTICS



DEC. 27, 1946

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-6823



5582

GAS PHOTOTUBE

CARTRIDGE TYPE WITH S-4 RESPONSE

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

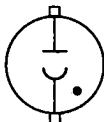
5582

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 ^o	20 max.	μamp/sq. in. ←
AVERAGE CATHODE CURRENT ^o	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: [▲]				
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.

^o, [▲]: See next page.

← Indicates a change.

5582



5582

GAS PHOTOTUBE

Minimum Circuit Values:

With anode-supply voltage of 80 or less 100 volts

DC Load Resistance:

For dc currents above

3 μ amp 0.1 min. - megohm

For dc currents below

3 μ amp 0 min. - megohm

For dc currents above

1 μ amp - 2.5 min. megohms

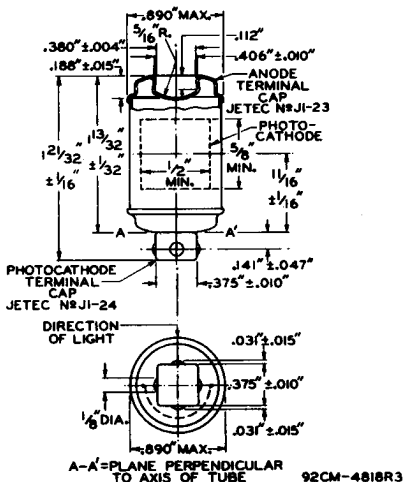
For dc currents below

1 μ amp - 0.1 min. megohm

^o Averaged over any interval of 30 seconds maximum. This value may be doubled when anode-supply voltage is limited to 80 volts.

^A For conditions where the light source is a tungsten-filament lamp operated at a color temperature of 2870°K. A dc anode supply of 90 volts and a 1-megohm load resistor are used. For the 0-cycle measurements, a light input of 0.1 lumen is used. For the 5000- and 10000-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.

SPECTRAL-SENSITIVITY CHARACTERISTIC
of Phototube having S-4 Response
and
FREQUENCY-RESPONSE CHARACTERISTICS
of Gas Phototubes
are shown at the front of this Section

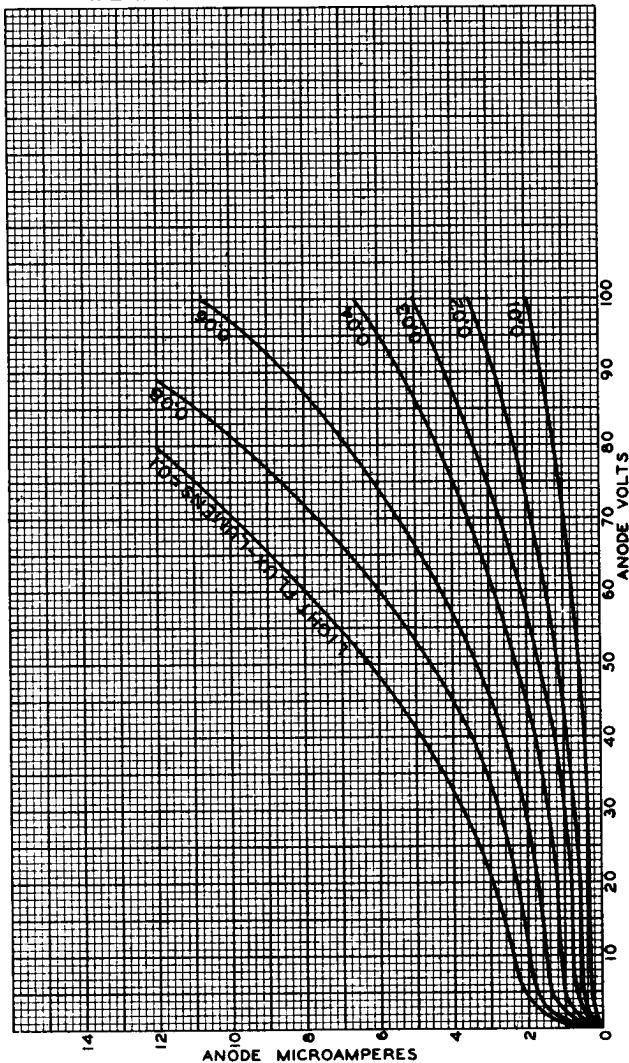




5582

5582

AVERAGE ANODE CHARACTERISTICS



DEC. 27, 1946

TUBE DEPARTMENT
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

92CM-6823