

Gas Phototube

SIDE-ON TYPE

S-1 RESPONSE

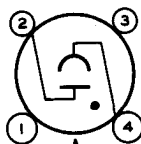
**For Industrial Applications Critical as
to Microphonics and Sensitivity Gradient**

DATA

General:

Spectral Response	S-1
Wavelength of Maximum Response.	8000 $\pm$ 1000 angstroms
Cathode:	
Shape	Semicylindrical
Minimum projected length ^a	1-1/4"
Minimum projected width ^a	5/8"
Direct Interelectrode Capacitance (Approx.)	2.6 pf
Maximum Overall Length.	4-7/16"
Maximum Seated Length	3-13/16"
Seated Length to Center of Cathode.	2-1/8" $\pm$ 3/32"
Maximum Diameter.	1-1/8"
Operating Position.	Any
Weight (Approx.).	1.3 oz
Bulb.	T8
Socket.	Amphenol No.77-MIP-4-T, or equivalent
Base.	Dwarf-Shell Small 4-Pin (JEDEC No. A4-26)
	Non-hygroscopic
Basing Designation for BOTTOM VIEW.	2K

Pin 1—No Internal
Connection
Pin 2—Anode



Pin 3—No Internal
Connection
Pin 4—Photocathode

DIRECTION OF RADIATION

Maximum Ratings, Absolute-Maximum Values:

	Rating I	Rating II	
ANODE SUPPLY VOLTAGE (DC or Peak AC)	70 max.	90 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	100 max.	100 max.	$^{\circ}$ C

Characteristics:

*With an anode-supply voltage of 50
volts unless otherwise specified*

Min. Typical Max.

Sensitivity:				
Radiant, at 8000 angstroms.	—	0.0033	—	a/w $\leftarrow$

$\leftarrow$ Indicates a change.



RADIO CORPORATION OF AMERICA
Electronic Components and Devices
Harrison, N. J.

DATA
8-63

	Min.	Typical	Max.	
Luminous: ^c				
At 0 cps.	17.5	35	70	$\mu\text{a/lumen}$
At 5000 cps	-	30	-	$\mu\text{a/lumen}$
At 10000 cps.	-	26	-	$\mu\text{a/lumen}$
Sensitivity Difference between highest value and lowest value along cathode length ^d .	-	-	1.1	$\mu\text{a/lumen}$
Gas amplification Factor ^e . . .	-	-	2.5	
Anode Dark Current at 25° C . .	-	-	0.1	μa

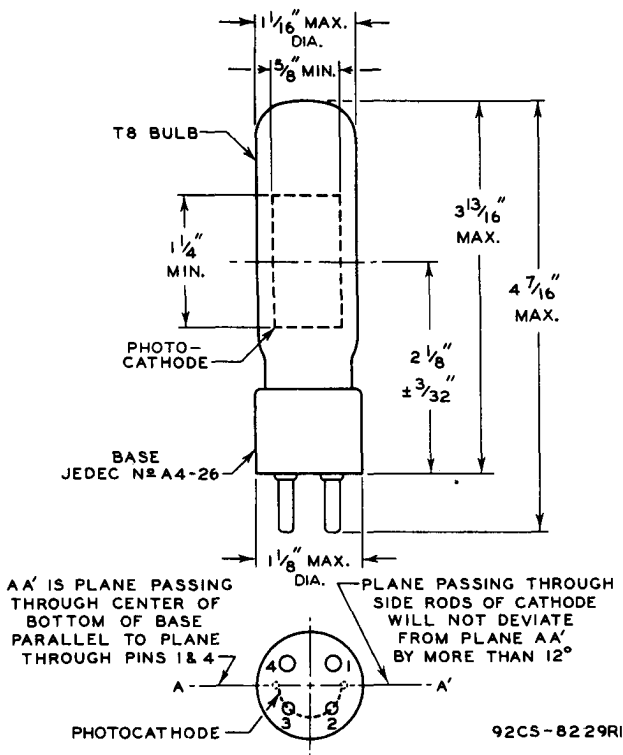
Minimum Circuit Values:

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.	-	megohm
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 of 50 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 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 value.
- ^d Measured under the same conditions as indicated under "c" with light input of 0.1 lumen and a rectangular light spot having a width of 0.315 inch and a length sufficient to cover the length of the cathode.
- ^e The ratio of luminous sensitivity at an anode-supply voltage of 50 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 PHOTSENSITIVE DEVICE HAVING S-I RESPONSE
and
FREQUENCY-RESPONSE CHARACTERISTICS
OF GAS PHOTOTUBES
are shown at the front of this section**

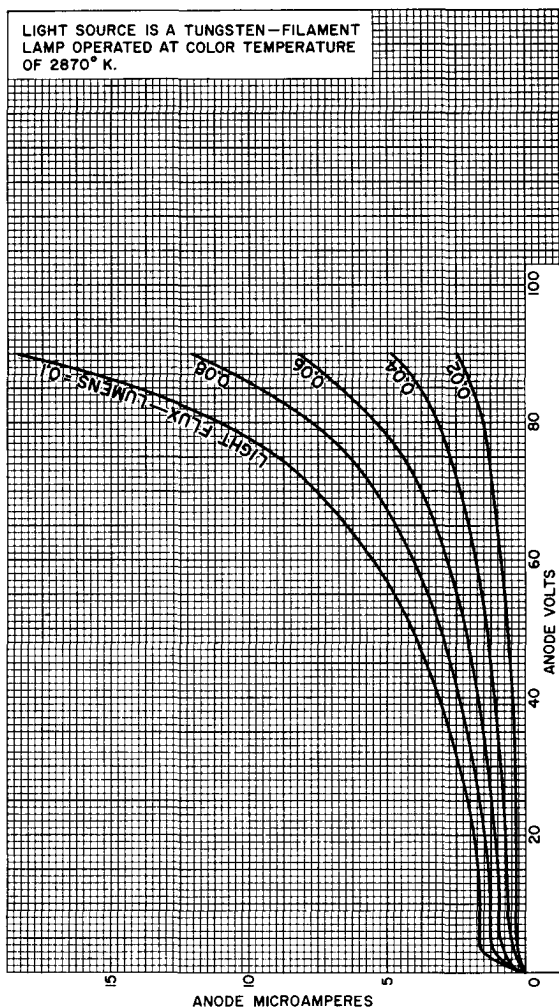




6405/1640

AVERAGE ANODE CHARACTERISTICS

LIGHT SOURCE IS A TUNGSTEN-FILAMENT
LAMP OPERATED AT COLOR TEMPERATURE
OF 2870° K.



92CM-8227RI

