

Gas Phototube

SIDE-ON TYPE

S-1 RESPONSE

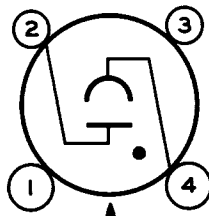
For Industrial Applications Critical as
to Microphonics and Sensitivity Gradient

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



DIRECTION OF RADIATION

Pin 3 - No Internal
Connection
Pin 4 - Photocathode

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.

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

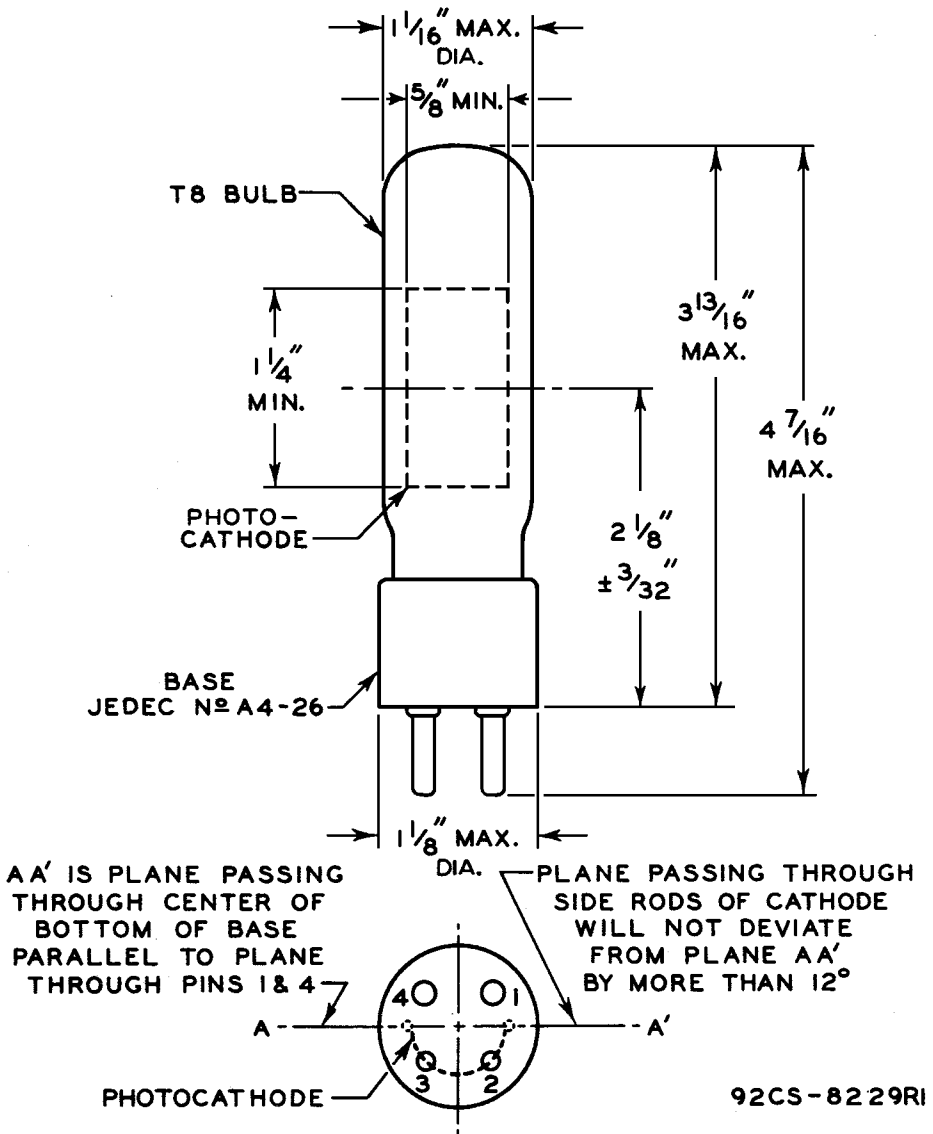
Minimum Circuit Values:

<i>With an anode-supply voltage of</i>	<i>70 or less</i>	<i>90</i>	<i>volts</i>
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

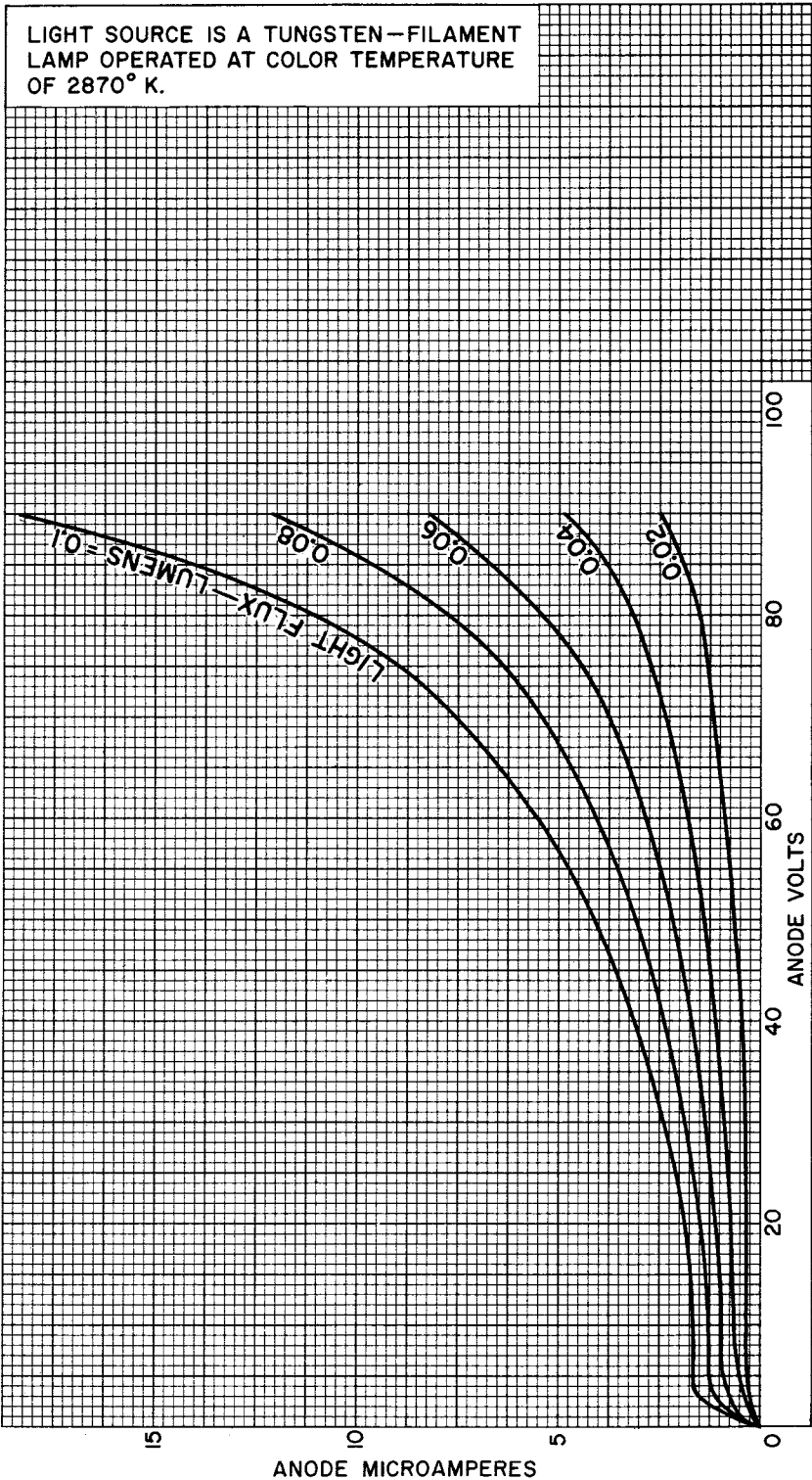
- ^a On plane perpendicular to indicated direction of incident radiation.
- ^b Averaged over any interval of 30 seconds maximum.
- ^c For conditions where the light source is a tungsten-filament lamp operated at a color temperature of 2870° K. A dc anode supply of 50 volts and a 1-megohm load resistor 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 PHOTOSENSITIVE 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



92CM-8227RI

