

Photomultiplier Tube

FLEXIBLE LEADS

S-4 RESPONSE

SIDE-ON, 9-STAGE TYPE

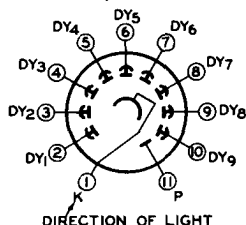
*For AC- or DC-Operated Control Applications
Which Require High Luminous Sensitivity*

GENERAL

Spectral Response	S-4
Wavelength of Maximum Response	4000 $\pm$ 500 angstroms
Cathode, Opaque	Cs-Sb $\leftarrow$
Minimum projected length ^a	15/16 in
Minimum projected width ^a	5/16 in
Window	Lime Glass, (Corning ^b No.0080), or equivalent $\leftarrow$
Dynode Material	Cs-Sb $\leftarrow$
Direct Interelectrode Capacitances (Approx.)	
Anode-to-dynode No.9	3.8 pF
Anode to all other electrodes	4.8 pF
Maximum Overall Length	2-3/4 in
Excluding semiflexible leads	
Maximum Envelope Length	2-1/4 in
Excluding tip	
Length	1-1/4 $\pm$ 3/32 in
From envelope seal to center of useful cathode area	
Maximum Diameter	1-3/16 in
Operating Position	Any
Weight (Approx.)	2 oz
Envelope	JEDEC T9
Magnetic Shield	Perfection Mica Co., ^c No.P-107, or equivalent

TERMINAL DIAGRAM (Bottom View)

- Lead 1 - Photocathode
- Lead 2 - Dynode No.1
- Lead 3 - Dynode No.2
- Lead 4 - Dynode No.3
- Lead 5 - Dynode No.4
- Lead 6 - Dynode No.5
- Lead 7 - Dynode No.6
- Lead 8 - Dynode No.7
- Lead 9 - Dynode No.8
- Lead 10 - Dynode No.9
- Lead 11 - Anode



ABSOLUTE-MAXIMUM RATINGS

DC or Peak AC Supply Voltage

Between anode and cathode	1250 V
Between anode and dynode No.9	250 V
Between consecutive dynodes	250 V $\leftarrow$
Between dynode No.1 and cathode	250 V $\leftarrow$
Average Anode Current ^d	0.1 mA
Ambient Temperature	75 $^{\circ}$ C $\leftarrow$

$\leftarrow$ Indicates a change.



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

DATA 1
12-65

CHARACTERISTICS RANGE VALUES

Under conditions with supply voltage (E) across a voltage divider providing 1/10 of E between cathode and dynode No.1; 1/10 of E for each succeeding dynode stage; and 1/10 of E between dynode No.9 and anode.

With E = 1000 V dc

	Min	Typ	Max	
Sensitivity				
Radiant, at 4000 angstroms. .	-	3.4×10^4	-	A/W
Luminous, at 0 c/s ^e	5	35	250	A/lm
Dark Current to any Electrode .	-	-	7.5×10^{-7}	A
At 25°C				

With E = Adjustable 60 c/s ac voltage

	Min	Typ	Max	
→ Anode-to-Cathode Voltage^f . . .				
RMS Values	535	775	1000	V
Anode Dark Current^g	-	-	2.5×10^{-7}	A
At 25°C				

^a On plane perpendicular to the indicated direction of incident light and passing through the major axis of the tube.

^b Made by Corning Glass Works, Corning, New York.

^c Made by Magnetic Shield Division, Perfection Mica Co., 1829 Civic Opera Bldg., 20 North Wacker Drive, Chicago 6, Illinois.

^d Averaged over any interval of 30 seconds maximum.

^e Under the following conditions: The light source is a tungsten-filament lamp having a lime-glass envelope. It is operated at a color temperature of 2870° K and a light input of 10 microlumens is used.

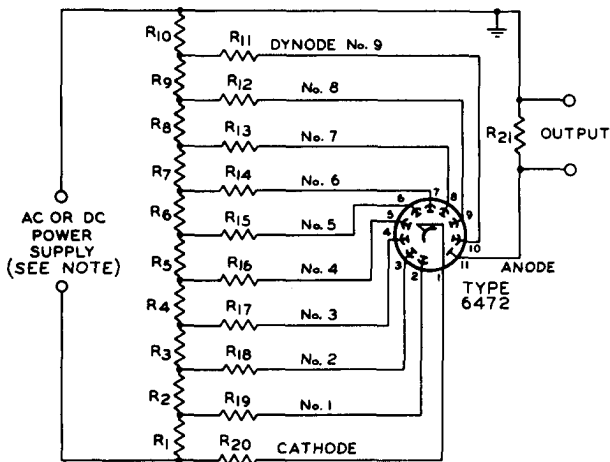
^f Under the following conditions: The light source is a tungsten-filament lamp having a lime-glass envelope. It is operated at a color temperature of 2870° K and a light input of 1 microlumen is used. Supply Voltage (E) is adjusted to give an anode current of 7.5 microamperes.

^g For conditions same as (f) except no radiant flux on photocathode.

→ Indicates a change.



RECOMMENDED VOLTAGE-DIVIDER NETWORK FOR USE
WITH TYPE 6472 IN HEADLIGHT-DIMMING SERVICE



92CS-8526

R1 R2 R3 R4 R5

R6 R7 R8 R9 R10: 1 megohm, 1/2 watt

R11: 2 megohms, 1/2 watt

R12: 5.1 megohms, 1/2 watt

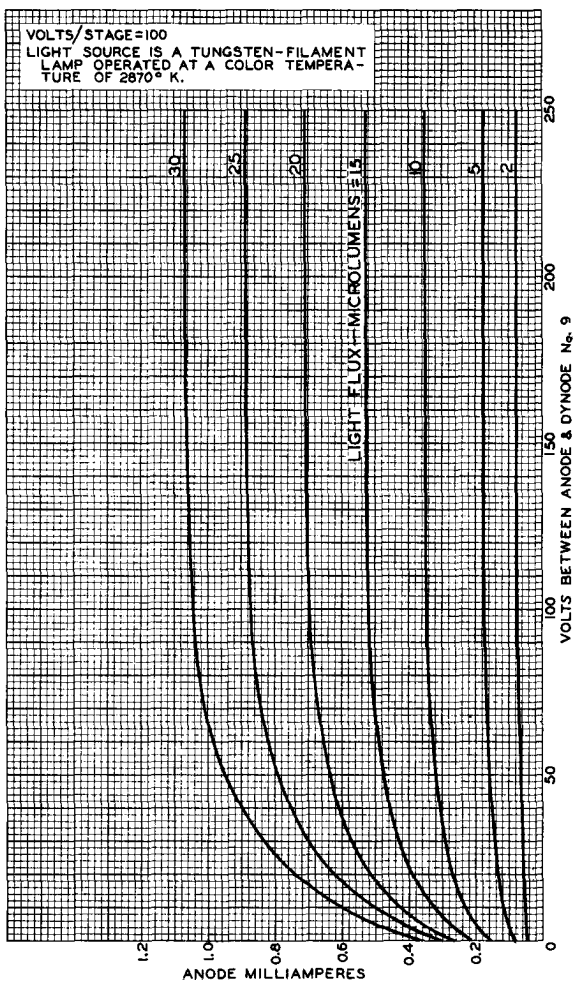
R13 R14 R15 R16

R17 R18 R19 R20: 8.2 megohms, 1/2 watt

R21: 820,000 ohms, 1/2 watt

Note: Adjustable between approximately 500 and 1000 volts
dc or peak ac.

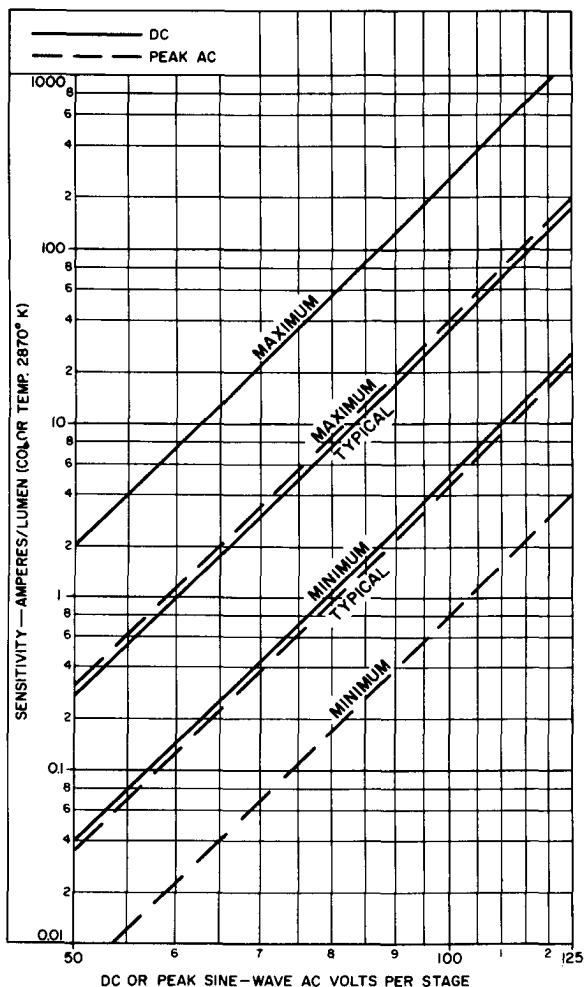
Typical Anode Characteristics



92CM-8029R2



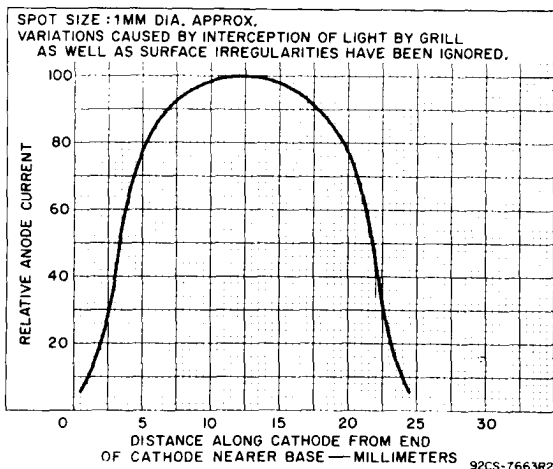
Range of Luminous Sensitivity



92CM-8027R2



Variation in Photocathode Sensitivity Along Its Length



Variation in Photocathode Sensitivity Across Its Projected Width in Plane of Grill

