6472

MULTIPLIER PHOTOTUBE

RCA-6472 is a short, rugged multiplier phototube of the 9-stage type intended especially for automobile headlight-dimming service.

DATA

General:

Spectral Response	S-4
Wavelength of Maximum Response	4000 ± 500 angstroms
Cathode:	
Minimum projected length*	15/16"
Minimum projected width*	5/16"
Direct Interelectrode Capacitances:	
Anode to dynode No.9	3.8 μμf
Anode to all other electrodes	4.8 μμf
Maximum Overall Length (Excluding leads)	2-3/4"
Maximum Envelope Length (Excluding tip)	2-1/4"
Length from Envelope Seal to Center of Useful Cathode Area	1-1/4" ± 3/32"
Maximum Diameter	1-3/16"
Bulb	T-9
Mounting Position	Any
Weight (Approx.)	2 oz

Maximum Ratings, *Absolute Values*:

ANODE-SUPPLY VOLTAGE (DC or Peak AC)	1250 max.	volts
SUPPLY VOLTAGE BETWEEN DYNODE No.9 AND ANODE (DC or Peak AC)	250 max.	volts
AVERAGE ANODE CURRENT●	0.1 max.	ma
AMBIENT TEMPERATURE	75 max.	°C

Characteristics Range Values for Equipment Design:

Under conditions with supply voltage (E) across 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 volts

	Min.	*Median*	*Max.*	
Sensitivity:				
Radiant, at 4000 angstroms	-	35000	-	μamp/μwatt
Luminous:▲				
At 0 cps	5	35	250	amp/lumen
At 100 Mc.	-	33	-	amp/lumen
Electrode Dark Current (At 25°C):				
Anode	-	-	0.25🌡	μamp
Any electrode	-	-	0.75	μamp

* On plane perpendicular to the indicated direction of light (see *Terminal-Connection Diagram*).

● Averaged over any interval of 30 seconds maximum.

▲ For conditions where the light source is a tungsten-filament lamp operated at a color temperature of 2870°K. A light input of 10 microlumens is used. The load resistor has a value of 0.01 megohm.

🌡 With sine-wave, 60-cycle supply voltage adjusted to give sensitivity of 7.5 amperes per lumen.

OPERATING CONSIDERATIONS

The *maximum ambient temperature* shown in the tabulated data is a tube rating which is to be observed in the same manner as other ratings. This rating should not be exceeded because too high a bulb temperature may cause the volatile cathode surface and dynode surfaces to evaporate with conse-

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quent decrease in the life and sensitivity of the tube.

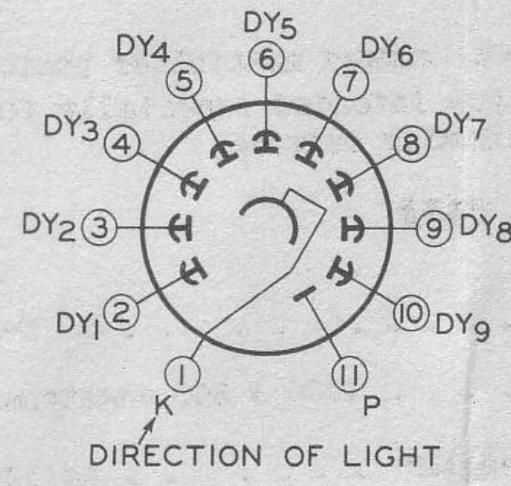
The *flexible leads* of the 6472 may be soldered into the associated circuits. Care should be taken to keep the solder connection at least 1/4 inch from the lead seals. Otherwise, the heat of soldering may crack the seals.

Support for the 6472 may be provided by any suitable arrangement which does not cause the glass bulb to charge to a potential equal to or near that of the anode. When the bulb charges to such a potential, tube performance is adversely affected.

The use of an average anode current well below the maximum rated value of 0.1 milliampere is recommended when stability of operation is important. When maximum stability is required, the anode current should not exceed 10 microamperes.

TERMINAL CONNECTIONS

Bottom View



LEAD 1: CATHODE
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