HIGH-VACUUM PHOTOTUBE
SHORT TYPE

Cathode
Photosurface
Window Area
Direct Interelectrode Capacitance
Maximum Overall Length
Maximum Seated Height
Maximum Diameter
Bulb (lume glass)
Base
Pin 1-No Connection
Pin 2-No Connection
Pin 4-Anode (+)
Mounting Position

Semi-cylindrical
S1
0.4 sq. in.
1.0 μf
2-5/8"
2-1/16"
1-5/16"
T-9
Intermed. Sh. Octal 5-Pin
Pin 7-No Connection
Pin 8-Cathode (-)
Any

BOTTOM VIEW

Maximum Ratings Are Absolute Values

MAXIMUM RATINGS and CHARACTERISTICS

- Anode-Supply Voltage (u.C. or Peak A.C.) 250 max. volts
- Anode Current* 20 max. μamp.
- Ambient Temperature 100 max. °C
- Luminous Sensitivity* 15 μamp./lumen
- Sensitivity at 7500 Angstroms 0.0020 μamp./μwatt
- D-C Resistance of Load: With anode-supply voltage of 250 volts 1 min. megohm

* On the basis of the use of a sensitive cathode area 1/2" in diameter.
* Subject to variations as explained on sheet PHOTOTUBE SENSITIVITY MEASUREMENTS in the front of this section.

Spectral Sensitivity Characteristic of S1 Photosurface in lume-glass bulb is shown at the beginning of this section.

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DECEMBER 1, 1943

RCA VICTOR DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY
Vacuum Phototube

SIDE-ON TYPE HAVING S-1 RESPONSE

DATA

General:
Spectral Response.......................... S-1
Wavelength of Maximum Response......... 8000 ± 1000 angstroms
Cathode:
Shape........................................ Semicylindrical
Minimum projected length\(\text{a}\).................. 13/16"
Minimum projected width\(\text{b}\).................... 5/8"
Direct Interelectrode Capacitance (Approx.)........ 1.6 \(\mu\)F
Maximum Overall Length..................... 2-5/8"
Maximum Seated Length...................... 2-1/16"
Seated Length to Center of Cathode........ 1-13/32" ± 3/32"
Maximum Diameter............................ 1-9/32"
Operating Position........................... Any
Weight (Approx.)............................. 0.8 oz\(\text{c}\)
Bulb........................................... T9
Socket........................................ Cinch No.8JM-1, or equivalent
Base ........................................ Intermediate-Shell Octal 5-Pin, Arrangement 1
(JEDEC Group 1, No.85-10)
Basing Designation for BOTTOM VIEW......... 3J

DIRECTION OF RADIATION

Pin 1—No Internal Connection
Pin 2—No Internal Connection
Pin 4—Anode Connection
Pin 6—No Internal Connection
Pin 8—Photocathode

Maximum Ratings, Absolute-Maximum Values:

ANODE-SUPPLY VOLTAGE
(DC or Peak AC)............................. 250 max. volts
AVERAGE CATHODE-CURRENT DENSITY\(\text{b}\)............ 30 max. \(\mu\)A/sq.in.
AVERAGE CATHODE CURRENT\(\text{b}\).................. 5 max. \(\mu\)A
AMBIENT TEMPERATURE.......................... 100 max. \(\circ\)C

Characteristics:

With an anode-supply voltage of 250 volts
Min. Median Max.

Sensitivity:
Radiant, at 8000 angstroms.............. 0.0019 — amp/watt
Luminous...................................... 12 20 40 \(\mu\)A/lumen
Anode Dark Current at 25\(\circ\) C.............. 0.0125 \(\mu\)A

\(\text{a}\) Indicates a change.
a On plane perpendicular to indicated direction of 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 1-megohm load resistor and a light input of 0.1 lumen are used.

SPECTRAL-SENSITIVITY CHARACTERISTIC OF PHOTOSENSITIVE DEVICE HAVING S-1 RESPONSE is shown at the front of this section.