RCA-6323 is a 9-stage multiplier phototube intended especially for automobile headlight-dimming service. Small in size and ruggedly constructed, the 6323 features high luminous sensitivity which allows use of an amplifier with relatively low-impedance input and fewer stages, and provides instantaneous response to meet the critical timing requirements of headlight-control service. In addition, the 6323 has low electrode dark current which permits the use of high-resistance voltage-divider networks. When thus used, the 6323 is capable of providing stable performance over long periods in 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 (Approx.):**

- Anode to Dynode No. 9 .......................... 4 μF 
- Anode to All Other Electrodes .............. 6.5 μF 

**Maximum Overall Length** .................. 3-11/16" 
**Maximum Seated Length** .................. 3-1/8" 
**Length from Base Seat to Center of** 
  Useful Cathode Area .................................. 1-15/16" ± 3/32" 
**Maximum Diameter** .......................... 1-5/16" 
**Bulb.** .................................................. T-9 
**Base.** ............................................... Small-Shell Submagnal II-Pin, Non-hygroscopic (JETEC No.B11-88) 

**Mounting Position** .......................... Any

**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 

**ANODE CURRENT:**

- Peak .................................. 1 max. ma 
- Average* .................................. 0.1 max. ma 
**AMBIENT TEMPERATURE** .................................. 75 max. °C 

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Radio Corporation of America 
TMK R, Marca Registrada 
Harrison, New Jersey 

**TUBE DEPARTMENT** 

6323-7-53 

from RTMA release #1220, Aug. 7, 1953
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

<table>
<thead>
<tr>
<th></th>
<th>Min.</th>
<th>Av.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Radiant at 4000 angstroms</td>
<td>-</td>
<td>32500</td>
<td>-</td>
</tr>
<tr>
<td>Luminous</td>
<td>5</td>
<td>35</td>
<td>250</td>
</tr>
<tr>
<td>Electrode Dark Current at 25°C:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Anode</td>
<td>-</td>
<td>-</td>
<td>0.1</td>
</tr>
<tr>
<td>Any Other Electrode</td>
<td>-</td>
<td>-</td>
<td>0.75</td>
</tr>
</tbody>
</table>

* On plane perpendicular to indicated direction of incident light.

O Referred to cathode.

# The 6323 is processed during manufacture and tested under simulated headlight-control operating conditions to provide the high stability needed in headlight-control service.

• The radiant sensitivity of a phototube is the quotient of output current by incident radiant energy of a given wavelength at constant electrode voltages.

▲ 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.

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**DIMENSIONAL OUTLINE**

**SOCKET CONNECTIONS**

**Bottom View**

**Direction of Light**

PIN 1: DYNOE No. 1
PIN 2: DYNOE No. 2
PIN 3: DYNOE No. 3
PIN 4: DYNOE No. 4
PIN 5: DYNOE No. 5
PIN 6: DYNOE No. 6
PIN 7: DYNOE No. 7
PIN 8: DYNOE No. 8
PIN 9: DYNOE No. 9
PIN 10: ANODE
PIN 11: CATHODE

92CM-6254R3

© OF BULB WILL NOT DEVIATE MORE THAN 2° IN ANY DIRECTION FROM THE PERPENDICULAR ERECTED AT CENTER OF BOTTOM OF BASE.
Range of Luminous Sensitivity of Type 5323.

Average Anode Characteristics of Type 5323.
Spectral Sensitivity Characteristic of Type 6323 which has S-4 Response. Curve is shown for Equal Values of Radiant Flux at All Wavelengths.

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