GAS PHOTOTUBE
END TYPE WITH S-1 RESPONSE

DATA

General:
Spectral Response ........................................... S-1
Wavelength of Maximum Response .... 8000 ± 1000 angstroms
Cathode:
- Shape ...................................................... Circular
- Minimum Diameter ...................................... 9/16"
- Direct Interelectrode Capacitance ........ 1.8 μF
- Maximum Overall Length ......................... 2-1/16" ←
- Maximum Seated Length ............................ 1-19/32"
- Maximum Diameter .................................... 13/16"
- Bulb ...................................................... T-6
- Mounting Position ...................................... Any
- Base ....................................................... Small-Shell Peepee 3-Pin
- Basing Designation for BOTTOM VIEW ............. 2F2

Pin 1—No Connection
Pin 2—Anode
Pin 3—Cathode

Maximum Ratings, Absolute Values:
- ANODE—SUPPLY VOLTAGE (DC or Peak AC) .... 90 max. .... volts
- PEAK CATHODE CURRENT ............................ 5 max. .... μamp
- PEAK CATHODE—CURRENT DENSITY ........... 75 max. μamp/sq.in.
- AVERAGE CATHODE CURRENT° .................. 1.5 max. .... μamp
- AMBIENT TEMPERATURE ............................... 100 max. .... °C

Characteristics:

<table>
<thead>
<tr>
<th>Min.</th>
<th>Av.</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC Dark Current at 90 Volts:</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

Sensitivity:
- At 8000 angstroms .......... | - | 0.009 | - |  μamp/μwatt |

Luminous:
- At 0 cps. ........ | 50 | 90 | 145 | μamp/lumen |
- At 5000 cps .......... | - | 77 | - | μamp/lumen |
- At 10000 cps .......... | - | 67 | - | μamp/lumen |

Gas Amplification Factor .... | - | - | 8.5 |

° Averaged over any interval of 30 seconds maximum. Average current may be doubled when anode-supply voltage is limited to 70 volts.
△ Measured with .06 lumen.

← Indicates a change.
GAS PHOTOTUBE

Minimum Circuit Values:

DC Load Resistance:

With anode-supply voltage of 70 volts or less:

For dc currents

- above 1.5 μamp: 0.1 megohm
- below 1.5 μamp: No Minimum

With anode-supply voltage of 90 volts:

For dc currents

- above 1.0 μamp: 2.5 megohms
- below 1.0 μamp: 0.1 megohm

SPECTRAL-SENSITIVITY CHARACTERISTIC of Phototube having S-1 Response and
FREQUENCY-RESPONSE CHARACTERISTICS of Gas Phototubes are shown at the front of this Section

92CS-6676RI

Indicates a change.
GAS PHOTOTUBE
HEAD-ON TYPE WITH S-1 RESPONSE

DATA

General:
Spectral Response ............... S-1
Wavelength of Maximum Response .......... 8000 ± 1000 angstroms
Cathode:
  Shape .................................. Circular
  Minimum diameter ...................... 9/16"
Direct Interelectrode Capacitance ........ 1.8 μfd
Maximum Overall Length ............... 2-1/16"
Maximum Seated Length ............... 1-19/32"
Axial Distance from Bulb Top to Plane through Periphery of Cathode Area ........... 5/16" ± 3/32"
Maximum Diameter ...................... 13/16"
Mounting Position ..................... Any
Weight (Approx.) ...................... 0.3 oz
Bulb ..................................... T6
Base .................................. Small-Shell Pee wee 3-Pin (JETEC No. A3-1)
Basing Designation for BOTTOM VIEW ........ 2AR

Pin 1—No Connection
Pin 2—Anode
Pin 3—Cathode

Maximum Ratings, Absolute Values:

<table>
<thead>
<tr>
<th>Rating</th>
<th>I</th>
<th>II</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANODE-SUPPLY VOLTAGE</td>
<td>70 max.</td>
<td>90 max.</td>
</tr>
</tbody>
</table>
| AVERAGE CATHODE-
  CURRENT DENSITY° | 40 max. | 20 max. | μamp/sq.in. |
| AVERAGE CATHODE
  CURRENT° | 3 max. | 1.5 max. | μamp |
| AMBIENT TEMPERATURE | 100 max. | 100 max. | °C |

Characteristics, With 90 Volts on Anode:

Min. Median Max.

Sensitivity:
  Radiant, at 8000 angstroms .......... 0.008 μamp/μwatt
  Luminous:
    At 0 cps. ......................... 50 90 145 μamp/lumen
    At 5000 cps ....................... 77  μamp/lumen
    At 10000 cps ...................... 67  μamp/lumen
Gas Amplification Factor .............. 8.5
Anode Dark Current
  at 25 °C ......................... 0.1 μamp

°: See next page.

Indicates a change.

TUBE DIVISION
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY
GAS PHOTOTUBE

Minimum Circuit Values:

With anode-supply voltage of 70 or less 90 volts

DC Load Resistance:
For dc currents above
1.5 µamp. 0.1 min. - megohm
For dc currents below
1.5 µamp. 0 min. - megohm
For dc currents above
1 µamp. 2.5 min. megohms
For dc currents below
1 µamp. 0.1 min. megohm

* 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 dc anode supply of 90 volts and a 1-megohm load resistor are used. For the 0-cycle measurements, a light input of 0.06 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.

SPECTRAL-SENSITIVITY CHARACTERISTIC of Phototube having S-1 Response
and FREQUENCY-RESPONSE CHARACTERISTICS of Gas Phototubes are shown at the front of this Section.