



5584

5584 GAS PHOTOTUBE

BLUE SENSITIVE, TWIN TYPE

| General: | | <u>DATA</u> |
|--|----------------------|-------------|
| Spectral Response | | S-4 |
| Wavelength of Maximum Response | 4000 ± 500 Angstroms | |
| Cathode (Each): | | |
| Shape | Quarter-Cylindrical | |
| Minimum Projected Length* | 1-3/16" | |
| Minimum Projected Width* | 1/4" | |
| Direct Interelectrode Capacitances: | | |
| Cathode to Anode ♦ | 1.6 | μf |
| Cathode to Cathode ■ | 1.8 | μf |
| Anode to Anode ● | 0.44 | μf |
| Maximum Overall Length | | 4" |
| Maximum Seated Length | | 3-3/8" |
| Seated Length to Center of Cathode | 2-1/8" ± 3/32" | |
| Maximum Diameter | | 1-3/16" |
| Bulb | | T-9 |
| Mounting Position | | Any |
| Base | Small-Shell Small | 4-Pin |
| Basing Designation for BOTTOM VIEW | | 4B6 |

Pin 1 - Cathode,
Unit No.2
Pin 2 - Anode,
Unit No.2



Pin 3 - Anode,
Unit No.1
Pin 4 - Cathode,
Unit No.1

DIRECTION OF LIGHT

Maximum Ratings, Absolute Values (Each Unit):

| | | |
|--------------------------------------|----------|-------------|
| ANODE-SUPPLY VOLTAGE (DC or Peak AC) | 100 max. | volts |
| PEAK CATHODE CURRENT | 10 max. | μamp |
| PEAK CATHODE-CURRENT DENSITY | 50 max. | μamp/sq.in. |
| AVERAGE CATHODE CURRENT ^o | 2 max. | μamp |
| AMBIENT TEMPERATURE | 75 max. | °C |

Characteristics (Each Unit):

| | <u>Min.</u> | <u>Av.</u> | <u>Max.</u> | |
|------------------------------|-------------|------------|-------------|------------|
| Dark Current at 90 Volts . . | - | - | 0.050 | μamp |
| Sensitivity: | | | | |
| At 4000 Angstroms | - | 0.11 | - | μamp/μwatt |
| Luminous: | | | | |
| At 0 Cycles | 80 | 120 | 175 | μamp/lumen |
| At 5000 Cycles | - | 110 | - | μamp/lumen |
| At 10000 Cycles | - | 96 | - | μamp/lumen |
| Gas Amplification Factor . . | - | - | 5.5 | |

Minimum Circuit Values (Each Unit):

DC Load Resistance:

With anode-supply voltage of 80 volts or less

| | | | |
|-------------------|------------------------|------------|--------|
| For dc currents { | above 3 μamp | 0.1 | megohm |
| | below 3 μamp | No Minimum | |

* , ♦ , ■ , ● , °: See next page.

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GAS PHOTOTUBE

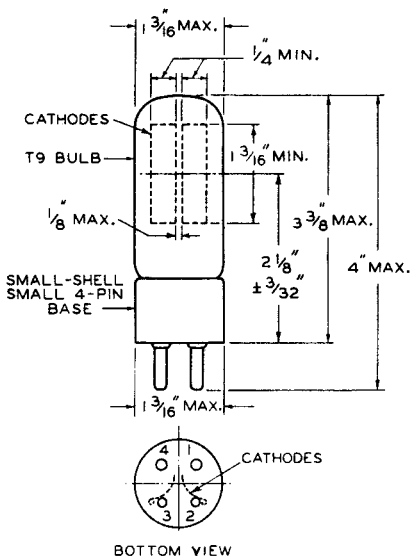
With anode-supply voltage of 100 volts

For dc currents { above 1 μ amp . . . 2.5 megohms
below 1 μ amp . . . 0.1 megohm

- * On plane perpendicular to indicated direction of incident light.
- ◆ Each unit, with other unit grounded.
- Anodes grounded.
- Cathodes grounded.
- Averaged over any interval of 30 seconds maximum. Average current may be doubled when anode-supply voltage is limited to 80 volts.

SPECTRAL-SENSITIVITY CHARACTERISTIC
and
FREQUENCY-RESPONSE CHARACTERISTIC
of Gas Phototube having S-4 Response
are shown at beginning of this Section

AVERAGE ANODE CHARACTERISTICS
of Type 5584 are the same
as those shown under Type 5582



92CM-4561R3

Gas Phototube

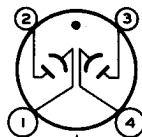
SIDE-ON, TWIN-UNIT TYPE HAVING S-4 RESPONSE

DATA

General:

| | |
|---|---|
| Spectral Response. | S-4 |
| Wavelength of Maximum Response | 4000 ± 500 angstroms |
| Cathode (Each): | |
| Shape. | Quarter-Cylindrical |
| Minimum projected length ^a | 1-3/16" |
| Minimum projected width ^a | 1/4" |
| Direct Interelectrode Capacitances (Approx.): | |
| Cathode to cathode ^b | 1.8 μf |
| Cathode to anode ^c | 1.6 μf |
| Anode to anode ^d | 0.4 μf ← |
| Maximum Overall Length | 4" |
| Maximum Seated Length. | 3-3/8" |
| Seated Length to Center of Cathode | 2-1/8" ± 3/32" |
| Maximum Diameter | 1-3/16" |
| Operating Position | Any |
| Weight (Approx.) | 1.1 oz ← |
| Bulb | T9 |
| Socket | Amphenol No.77-MIP-4-T, or equivalent ← |
| Base | Small-Shell Small 4-Pin (JEDEC No.A4-5) |
| Basing Designation for BOTTOM VIEW | .4BG |

Pin 1 - Photocathode
of Unit No.2
Pin 2 - Anode of
Unit No.2



Pin 3 - Anode of
Unit No.1
Pin 4 - Photocathode
of Unit No.1

↑
DIRECTION OF LIGHT

Maximum Ratings, Absolute-Maximum Values:

Values are for Each Unit

| | Rating I | Rating II | |
|---|----------|-----------|-----------|
| ANODE-SUPPLY VOLTAGE (DC or Peak AC). | 80 max. | 100 max. | volts |
| AVERAGE CATHODE-CURRENT DENSITY ^e | 20 max. | 10 max. | μa/sq.in. |
| AVERAGE CATHODE CURRENT ^e | 4 max. | 2 max. | μa |
| AMBIENT TEMPERATURE. | 75 max. | 75 max. | °C |

← Indicates a change.



Characteristics:

Values are for each unit with an anode-supply voltage of 90 volts unless otherwise specified

| | Min. | Median | Max. | |
|--|------|--------|-------|---------------------|
| Sensitivity: | | | | |
| Radiant, at 4000 angstroms. | - | 0.12 | - | amp/watt |
| Luminous: ^f | | | | |
| At 0 cps. | 80 | 120 | 175 | $\mu\text{a/lumen}$ |
| At 5000 cps | - | 110 | - | $\mu\text{a/lumen}$ |
| At 10000 cps. | - | 96 | - | $\mu\text{a/lumen}$ |
| Ratio of Luminous Sensitivities (Unit No.1 to Unit No.2). | 0.5 | 1.15 | 2.0 | |
| Gas Amplification Factor ^g | - | - | 5.5 | |
| Anode Dark Current at 25° C | - | - | 0.050 | μa |

Minimum Circuit Values:

Values are for Each Unit

| With an anode-supply voltage of | 80 or less | 100 | volts |
|---|------------|----------|---------|
| DC Load Resistance: | | | |
| For dc currents above 3 μa | 0.1 min. | - | megohm |
| For dc currents below 3 μa | 0 min. | - | megohm |
| For dc currents above 1 μa | - | 2.5 min. | megohms |
| For dc currents below 1 μa | - | 0.1 min. | megohm |

- ^a On plane perpendicular to indicated direction of incident light.
- ^b with anodes grounded.
- ^c Each unit, with other unit grounded.
- ^d with cathodes grounded.
- ^e Averaged over any interval of 30 seconds maximum.
- ^f 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 measurement, a light input of 0.04 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 value.
- ^g The ratio of luminous sensitivity at an anode-supply voltage of 90 volts to luminous sensitivity at an anode-supply voltage of 25 volts. In each case, sensitivity is obtained under conditions where the light source is a tungsten-filament lamp operated at a color temperature of 2870° K, the light input is 0.04 lumen, and the load resistor has a value of 1 megohm.

SPECTRAL-SENSITIVITY CHARACTERISTIC OF PHOTSENSITIVE DEVICE HAVING S-4 RESPONSE

and

FREQUENCY-RESPONSE CHARACTERISTICS OF GAS PHOTOTUBES

are shown at the front of this section

AVERAGE-ANODE-CHARACTERISTICS CURVE

shown under Type 5582 also applies to each unit of the 5584

→ Indicates a change.



