



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		4BG

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

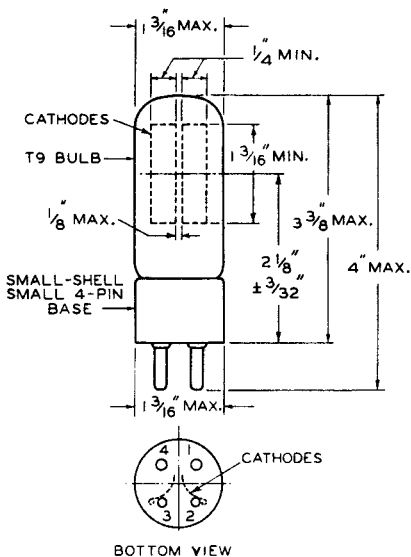
With anode-supply voltage of 100 volts

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

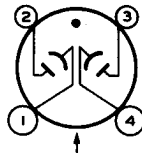
SIDE-ON, TWIN-UNIT TYPE HAVING S-4 RESPONSE

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 VIEW4BG

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.



