



6694-A

6694-A

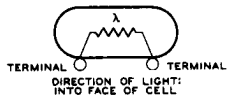
PHOTOCONDUCTIVE CELL

CADMIUM-SULFIDE TYPE

DATA

General:

Spectral Response	S-12
Wavelength of Maximum Response	5000 ± 500 angstroms
Sensitive Area:	
Shape	Rectangular
Dimensions (Minimum)	0.020" x 0.018"
Direct Interelectrode Capacitance	0.6 μmf
Maximum Overall Length	0.500"
Maximum Seated Length	0.300"
Width	0.350" ± 0.025"
Depth	0.200" ± 0.020"
Mounting Position	Any
Weight (Approx.)	0.02 oz
Base	Small-Rectangle Linotetar 2-Pin (JETEC No. E2-33)
Socket	Cinch Part No. 46AZ20248, or equivalent



λ indicates that the primary characteristic of the element within the envelope symbol is designed to vary under the influence of light.

Maximum Ratings, Absolute Values:

POLARIZING VOLTAGE	150 max.	volts
POWER DISSIPATION	30 max.	mw
AMBIENT-TEMPERATURE RANGE	0 to +70	°C

Characteristics:

Under conditions with polarizing voltage of 90 volts and at ambient temperature of 25°C

Min. Median Max.

Sensitivity:

Radiant [♠] , at			
5000 angstroms	-	415	- μamp/μwatt
Luminous*, at 0 cps.	-	1	- amp/lumen
Luminous intensity [♠] , at 0 cps	1.9	4	- μamp/ft-c
Dynamic			See Curves
Dark Current	-	-	0.1 μamp
Dark Noise			Essentially lower than that of associated circuit

Photocurrent:

Rise	See Curves
Decay	See Curves

♠ For conditions where the incident power is 0.2 μwatt.

* For conditions where the light source is a tungsten-filament lamp operated at a color temperature of 2870°K. A light flux of about 100 microlumens is used.

♠: See next page.

6694-A



6694-A

PHOTOCONDUCTIVE CELL

▲ For light conditions the same as shown under (*) except that an incident light intensity of 30 foot-candles is used.

DEFINITIONS

Radiant Sensitivity. The quotient of output current by incident radiant power of a given wavelength, at constant electrode voltages.

Luminous Sensitivity. The quotient of output current by incident luminous flux, at constant electrode voltages.

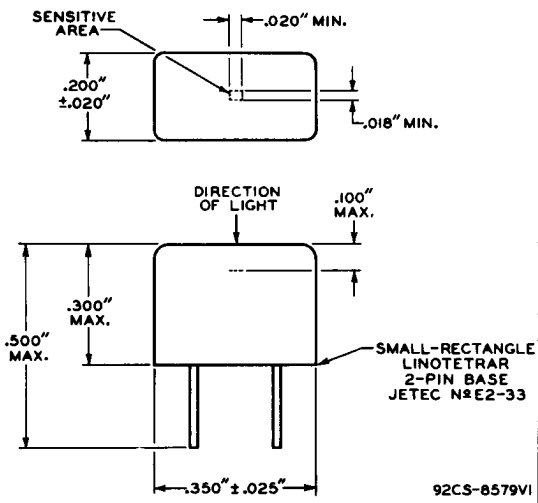
Luminous Intensity Sensitivity. The quotient of output current by the incident luminous intensity, at constant electrode voltages.

Dynamic Sensitivity. The quotient of the modulated component of the electrical output by the modulated component of the incident radiation.

OPERATING CONSIDERATIONS

The *polarizing voltage* for the 6694-A may be applied without regard to polarity. To obtain the full sensitivity of the cell, it is essential that its entire photosensitive area be illuminated. Otherwise, a blocking action produced by the unilluminated area of the cell will occur and cause unsatisfactory operation.

SPECTRAL-SENSITIVITY CHARACTERISTIC of Photoconductive Cell having S-12 Response is shown at the front of this Section



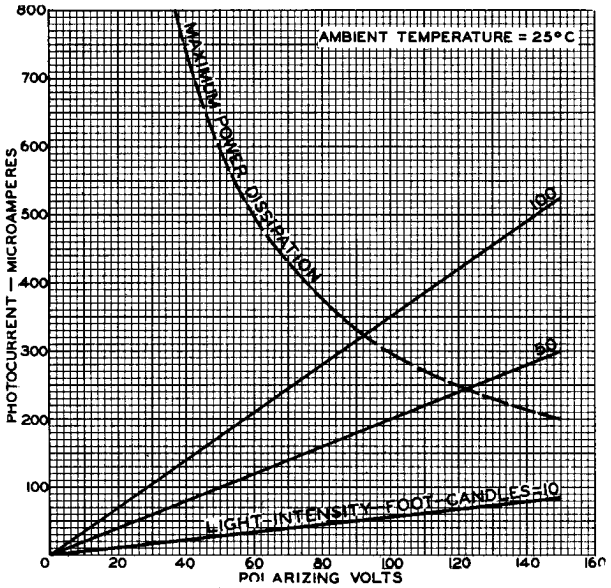
92CS-8579VI



6694-A

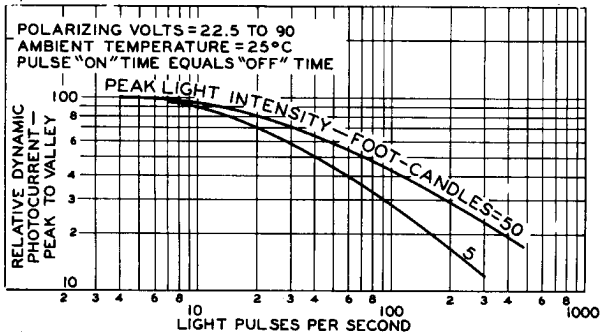
6694-A

AVERAGE CHARACTERISTICS



92CM-8583VI

DYNAMIC SENSITIVITY CHARACTERISTICS



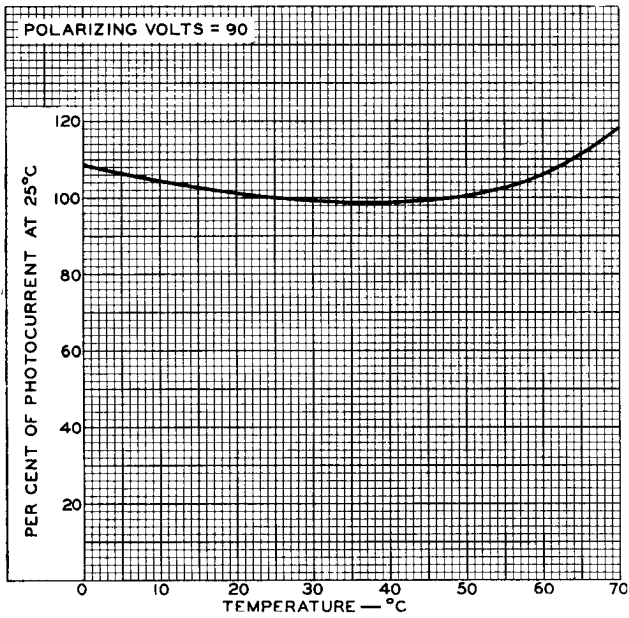
92CM-8872V

6694-A

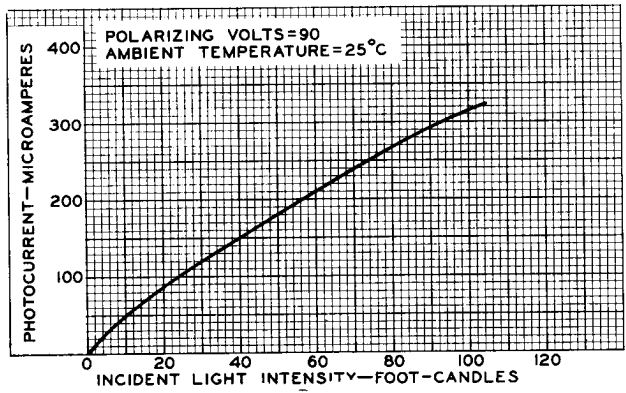


6694-A

TYPICAL CHARACTERISTICS



92CM-8585RI



TUBE DIVISION

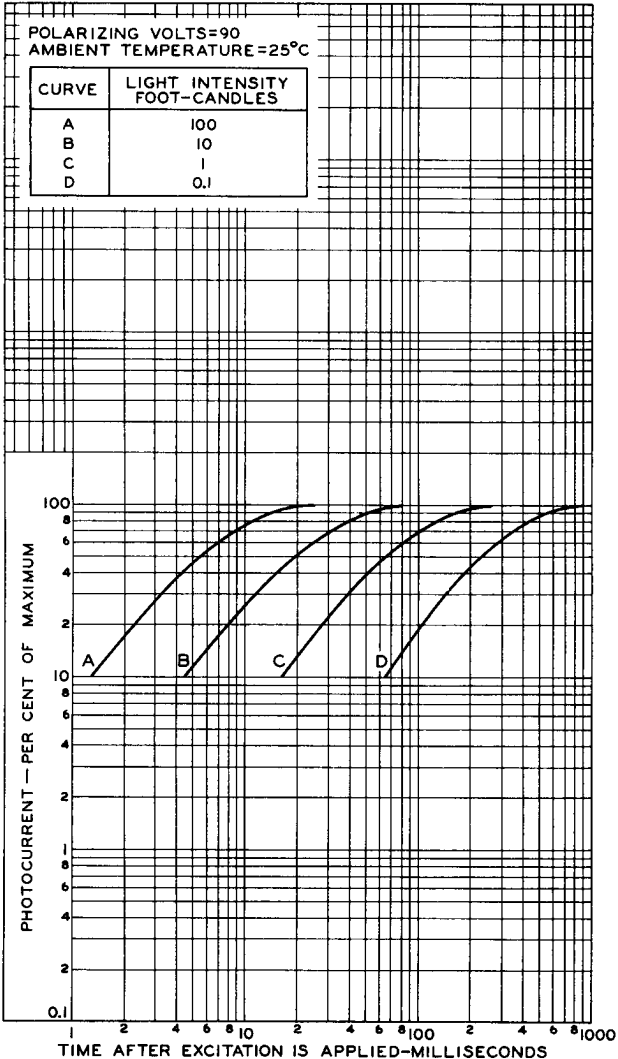
92CM-8584RI



6694-A

6694-A

TYPICAL RISE CHARACTERISTICS



TUBE DIVISION

92CM-8873

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

6694-A



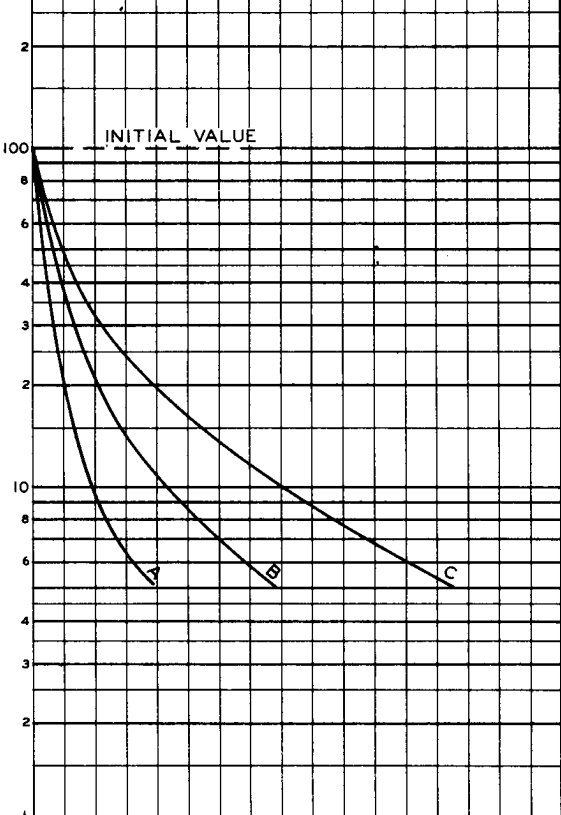
6694-A

TYPICAL DECAY CHARACTERISTICS

POLARIZING VOLTS=90
 AMBIENT TEMPERATURE=25°C

CURVE	INITIAL LIGHT INTENSITY FOOT-CANDLES
A	10
B	1.0
C	0.1

RELATIVE PHOTOCURRENT—PERCENT OF VALUE BEFORE EXCITATION IS REMOVED



0 100 200 300
 TIME AFTER EXCITATION IS REMOVED—MILLISECONDS