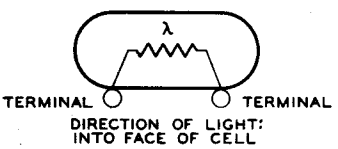
6694-A
PHOTOCONDUCTIVE CELL

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 μμf
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 Linotetrar 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.

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▲ 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.

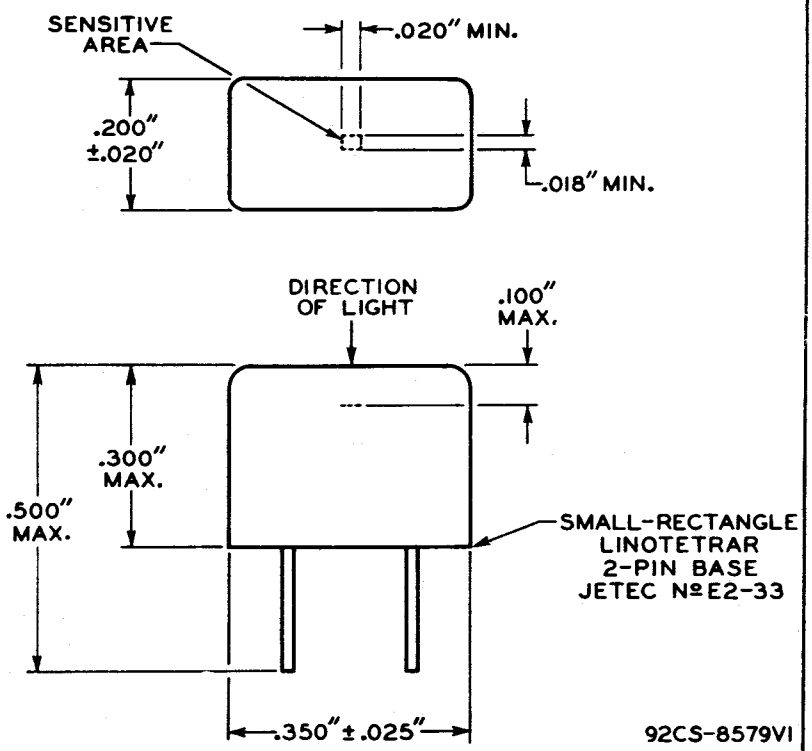
Luminous Intensity Sensitivity. The quotient of output current by the incident luminous intensity, at constant electrode voltages.

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



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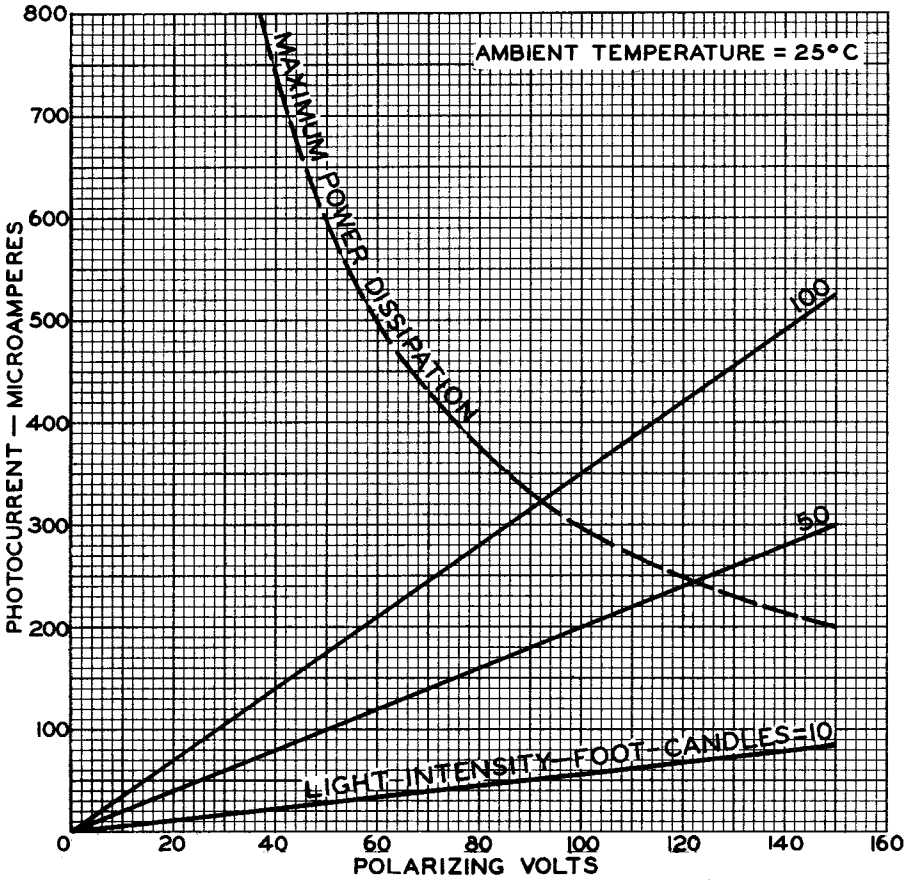
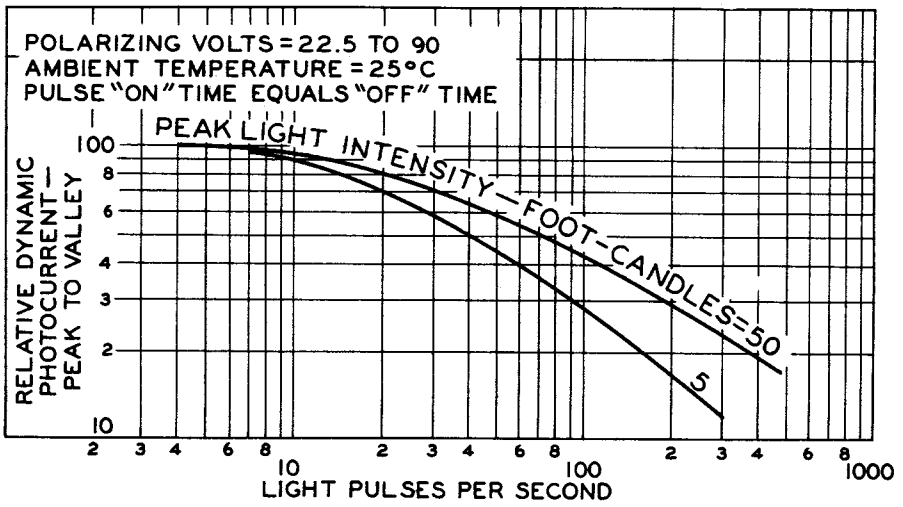
AVERAGE CHARACTERISTICS



92CM-8583VI

DYNAMIC SENSITIVITY CHARACTERISTICS



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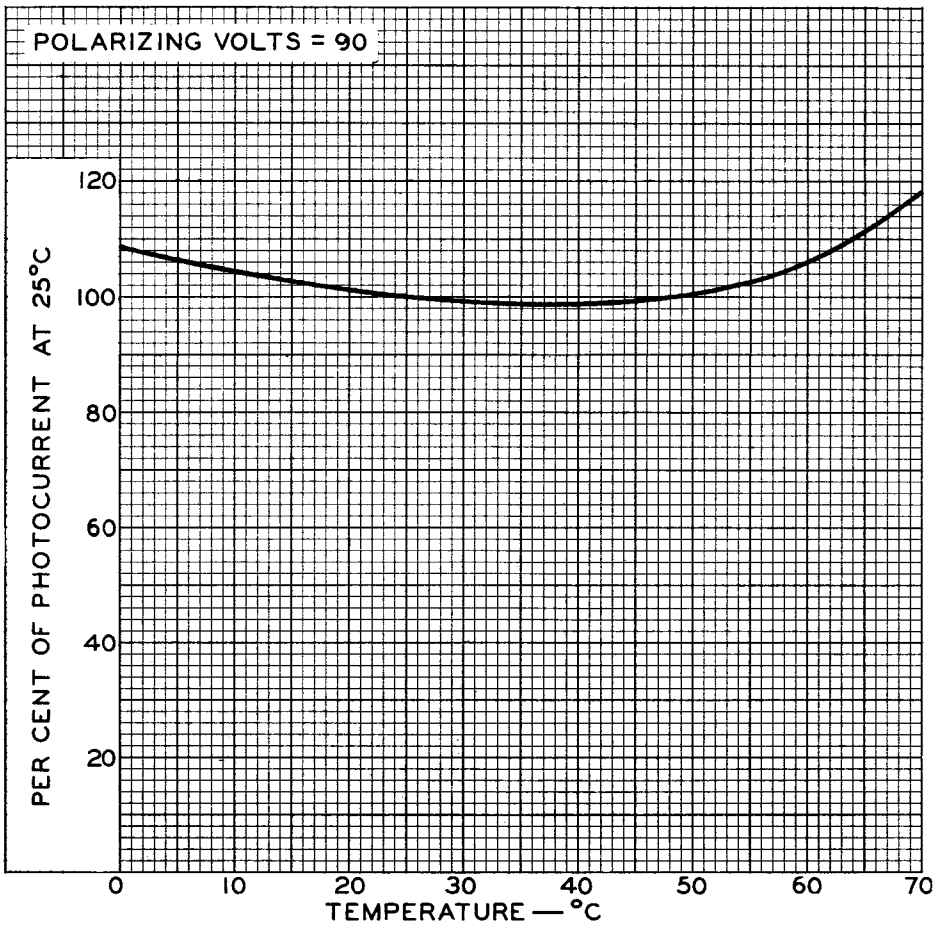
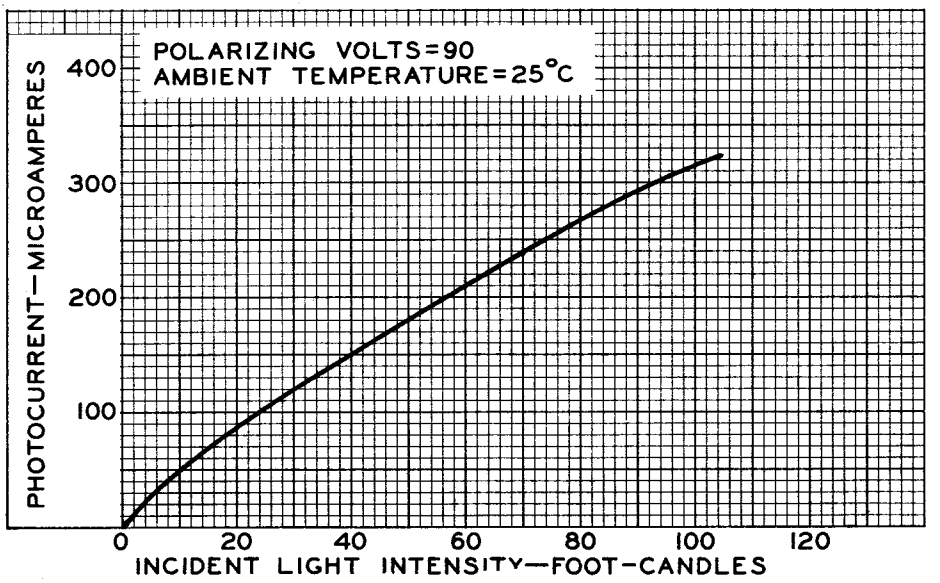
TYPICAL CHARACTERISTICS



92CM-8585RI



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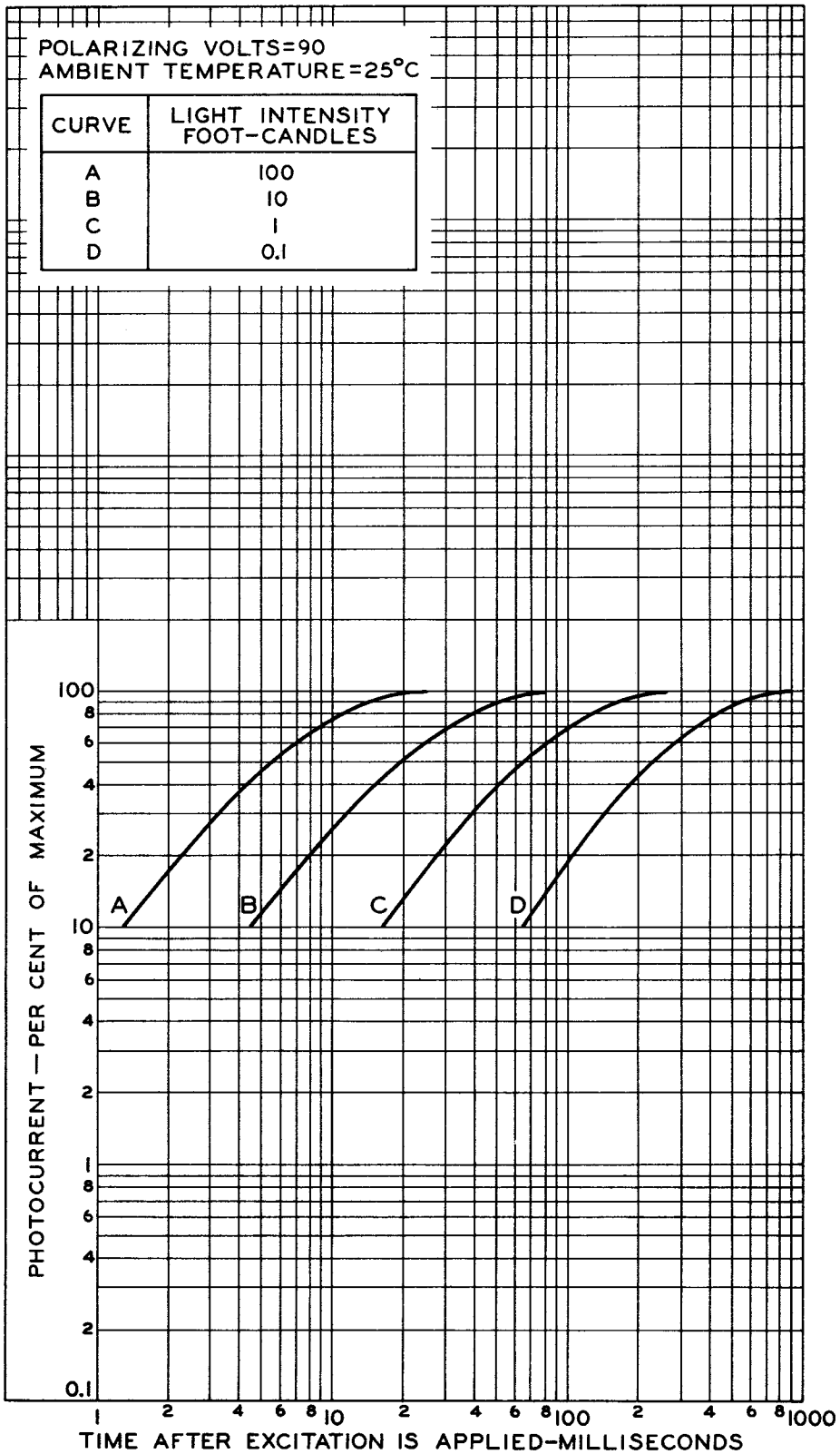
TYPICAL RISE CHARACTERISTICS

POLARIZING VOLTS=90
AMBIENT TEMPERATURE=25°C

CURVE	LIGHT INTENSITY FOOT-CANDLES
A	100
B	10
C	1
D	0.1



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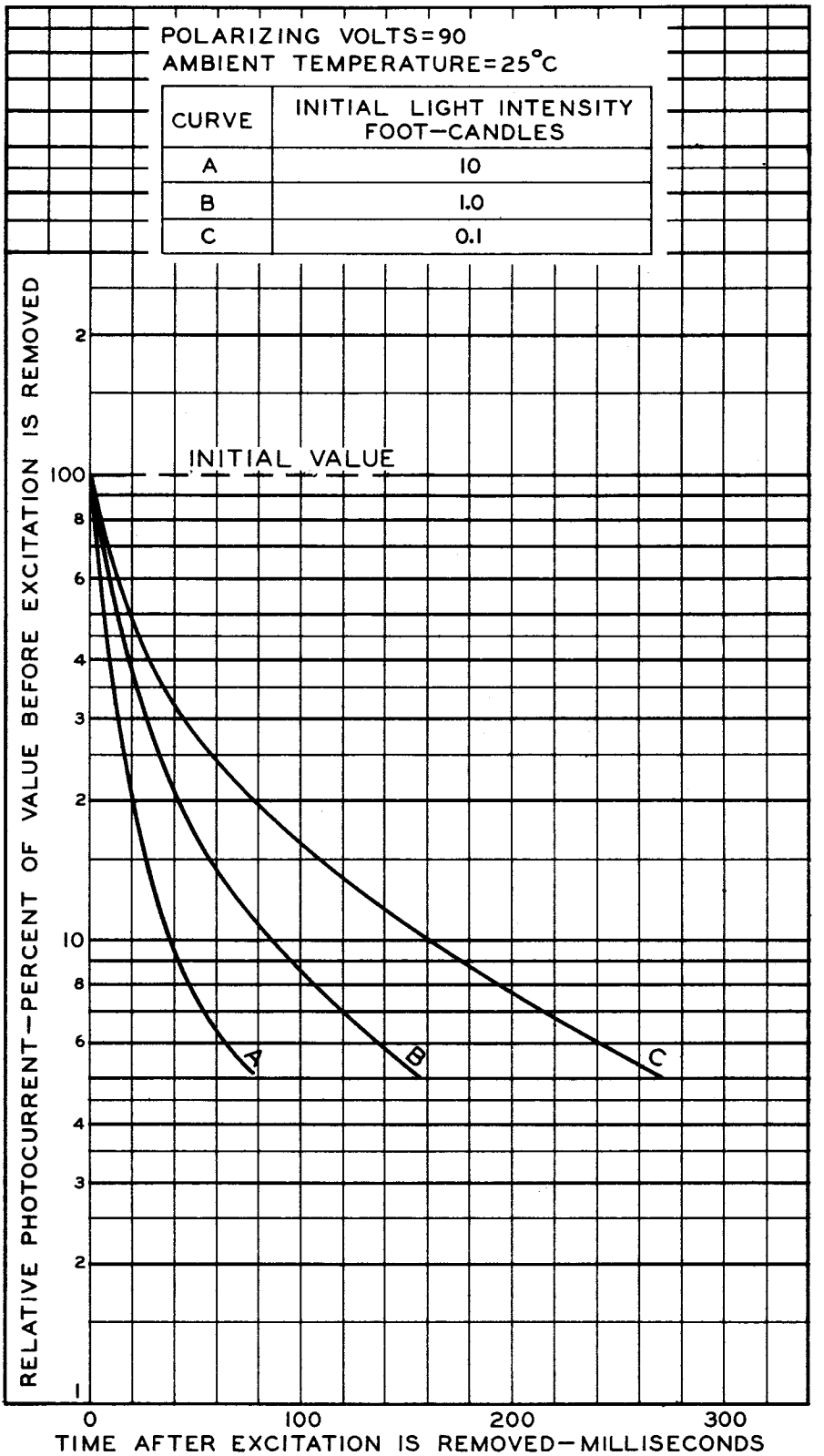
TYPICAL DECAY CHARACTERISTICS



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92CM-8593RI