



7262

7262 VIDICON

LOW-POWER (0.6-WATT) HEATER

600-LINE RESOLUTION

For use in small, compact, transistorized TV cameras

DATA

General:

Heater, for Unipotential Cathode:

Voltage 6.3 ± 10% ac or dc volts

Current 0.095 amp

Direct Interelectrode Capacitance: ¹

Target to all other electrodes 4.6 μf

Spectral Response See Curves

Photoconductive Layer:

Maximum useful diagonal of rectangular image (4 x 3 aspect ratio) 0.62"

Orientation of quality rectangle—Proper orientation is obtained when the horizontal scan is essentially parallel to the straight sides of the masked portions of the faceplate. The straight sides are parallel to the plane passing through the tube axis and short index pin. The masking is for orientation only and does not define the proper scanned area of the photoconductive layer.

Focusing Method Magnetic

Deflection Method Magnetic

Overall Length 5.12" ± 0.06"

Greatest Diameter 1.125" ± 0.010"

Weight (Approx.) 2 oz

Operating Position Any

Bulb T8

Base Connector Cinch No. 54A18088, or equivalent

Base Small-Button Ditetrar 8-Pin (JEDEC No. E8-11)

Basing Designation for BOTTOM VIEW 8HM

Pin 1 - Heater

Pin 2 - Grid No. 1

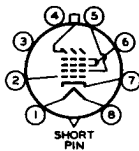
Pin 3 - Internal

Connection—
Do Not Use

Pin 4 - Same as Pin 3

Pin 5 - Grid No. 2

Pin 6 - Grid No. 4,
Grid No. 3



DIRECTION OF LIGHT:
INTO FACE END OF TUBE

Pin 7 - Cathode

Pin 8 - Heater

Flange - Target

Short Index Pin -
Same as
Pin 3

Maximum Ratings, Absolute Values:

For scanned area of 1/2" x 3/8"

GRID-No. 3 & GRID-No. 4 VOLTAGE 350 max. volts

GRID-No. 2 VOLTAGE 350 max. volts

GRID-No. 1 VOLTAGE:

Negative-bias value 125 max. volts

Positive-bias value 0 max. volts

¹: See next page.



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PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode.	125 max.	volts
Heater positive with respect to cathode.	10 max.	volts
DARK CURRENT	0.25 max.	μ a
PEAK TARGET CURRENT.	0.55 max.	μ a
FACEPLATE:		
Illumination	1000 max.	ft-c
Temperature.	60 max.	$^{\circ}$ C

Typical Operation:

*For scanned area of 1/2" x 3/8" and
faceplate temperature of 30 $^{\circ}$ to 35 $^{\circ}$ C*

Grid-No.4 (Decelerator) & Grid-No.3 (Beam-focus electrode*) Voltage.	250 $^{\square}$ to 300	volts
Grid-No.2 (Accelerator) Voltage. . . .	300	volts
Grid-No.1 Voltage for picture cutoff \bullet	-45 to -100	volts
Average "Gamma" of Transfer Characteristic for signal- output current between 0.02 μ a and 0.2 μ a	0.65	
Visual Equivalent Signal-to- Noise Ratio (Approx.) \star	300:1	
Minimum Peak-to-Peak Blanking Voltage:		
When applied to grid No.1.	75	volts
When applied to cathode.	20	volts
Field Strength at Center of Focusing Coil (Approx.).	40	gausses
Field Strength of Adjustable Alignment Coil \oplus	0 to 4	gausses

Maximum-Sensitivity Operation for Live-Scene Pickup

Faceplate Illumination (Highlight) . .	2	ft-c
Maximum Target Voltage required to produce dark current of 0.2 μ a in any tube $\star\star$	110	volts
Target Voltage \dagger	60 to 100	volts
Dark Current \blacktriangle	0.2	μ a
Target Current (Highlight) \blacksquare	0.4 to 0.5	μ a
Signal-Output Current: $\#$		
Peak	0.2 to 0.3	μ a
Average.	0.08 to 0.1	μ a

Average-Sensitivity Operation for Live-Scene Pickup

Faceplate Illumination (Highlight) . .	15	ft-c
Maximum Target Voltage required to produce dark current of 0.02 μ a in any tube $\star\star$	60	volts
Target Voltage \dagger	30 to 50	volts

\bullet , \star , \square , \blacktriangle , \oplus , $\star\star$, \dagger , \blacktriangle , \blacksquare , $\#$: See next page.



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Dark Current	0.02	μ a
Target Current (Highlight) [■]	0.3 to 0.4	μ a
Signal-Output Current: [*]		
Peak	0.3 to 0.4	μ a
Average	0.1 to 0.2	μ a

Minimum-Lag Operation for Film Pickup

Faceplate Illumination (Highlight) . .	100	ft-c
Maximum Target Voltage required to produce dark current of 0.004 μ a in any tube ^{**}	30	volts
Target Voltage [†]	15 to 25	volts
Dark Current	0.004	μ a
Target Current (Highlight) [■]	0.3 to 0.4	μ a
Signal-Output Current: [*]		
Peak	0.3 to 0.4	μ a
Average	0.1 to 0.2	μ a

• This capacitance, which effectively is the output impedance of the 7262, is increased when the tube is mounted in the deflecting-yoke and focusing-coil assembly. The resistive component of the output impedance is in the order of 100 megohms.

• Beam focus is obtained by combined effect of grid-No.3 voltage which should be adjustable over indicated range, and a focusing coil having an average field strength of 40 gauss.

□ Definition, focus uniformity, and picture quality decrease with decreasing grid-No.4 and grid-No.3 voltage. In general, grid No.4 and grid No.3 should be operated above 250 volts.

• With no blanking voltage on grid No.1.

★ Measured with high-gain, low-noise, cascode-input-type amplifier having bandwidth of 5 Mc. Because the noise in such a system is predominately of the high-frequency type, the visual equivalent signal-to-noise ratio is taken as the ratio of the highlight video-signal current to rms noise current, multiplied by a factor of 3.

• The alignment coil should be located on the tube so that its center is at a distance of 3-11/16 inches from the face of the tube, and be positioned so that its axis is coincident with the axis of the tube, the deflecting yoke, and the focusing coil.

** The target voltage for each 7262 must be adjusted to that value which gives the desired operating dark current.

† Indicated range for each type of service serves only to illustrate the operating target-voltage range normally encountered.

▲ The deflecting circuits must provide extremely linear scanning for good black-level reproduction. Dark-current signal is proportional to the scanning velocity. Any change in scanning velocity produces a black-level error in direct proportion to the change in scanning velocity.

• Video amplifiers must be designed properly to handle target currents of this magnitude to avoid amplifier overload or picture distortion.

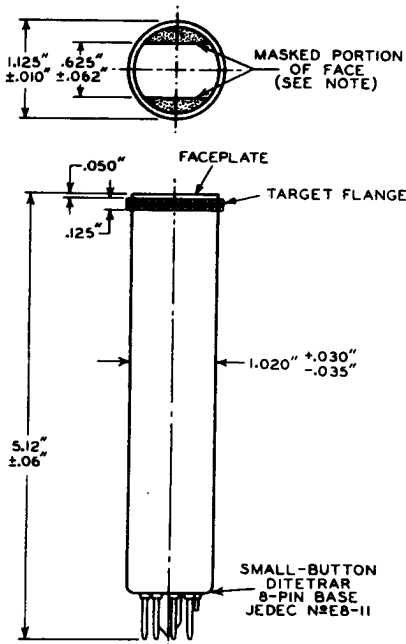
* Defined as the component of the target current after the dark-current component has been subtracted.

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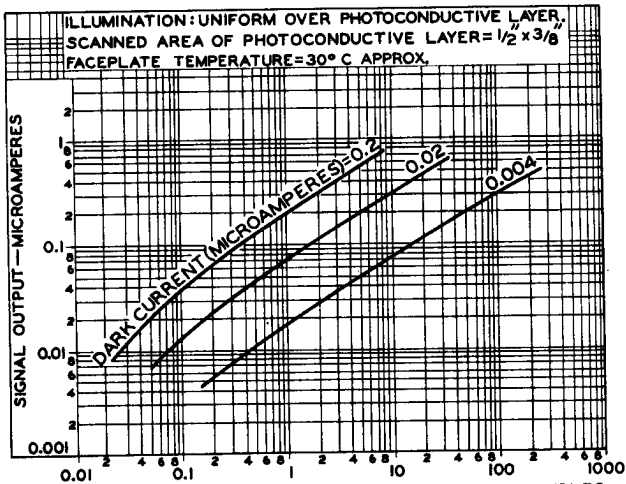
NOTE: STRAIGHT SIDES OF MASKED PORTIONS ARE PARALLEL TO THE PLANE PASSING THROUGH TUBE AXIS AND SHORT INDEX PIN.



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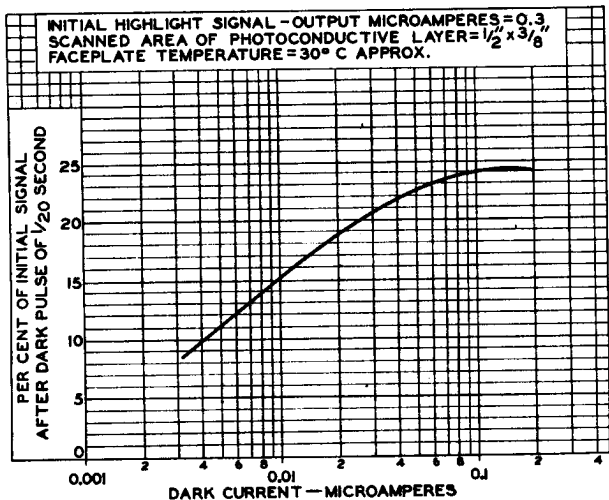
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TYPICAL LIGHT-TRANSFER CHARACTERISTICS



2870° K TUNGSTEN ILLUMINATION ON TUBE FACE — FOOT - CANDLES
92CS-9495

TYPICAL PERSISTENCE CHARACTERISTIC



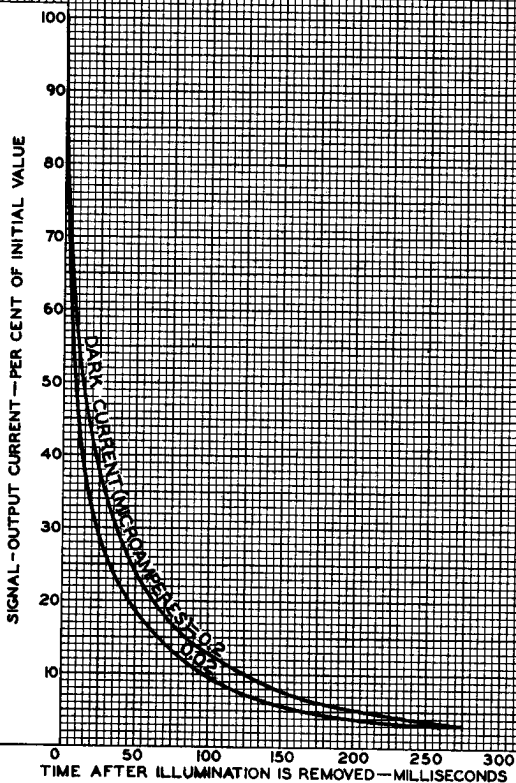
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TYPICAL PERSISTENCE CHARACTERISTICS

INITIAL HIGHLIGHT SIGNAL-OUTPUT MICROAMPERES=0.3
 SCANNED AREA OF PHOTOCONDUCTIVE LAYER= $1/2'' \times 3/8''$
 FACEPLATE TEMPERATURE= 30°C APPROX.





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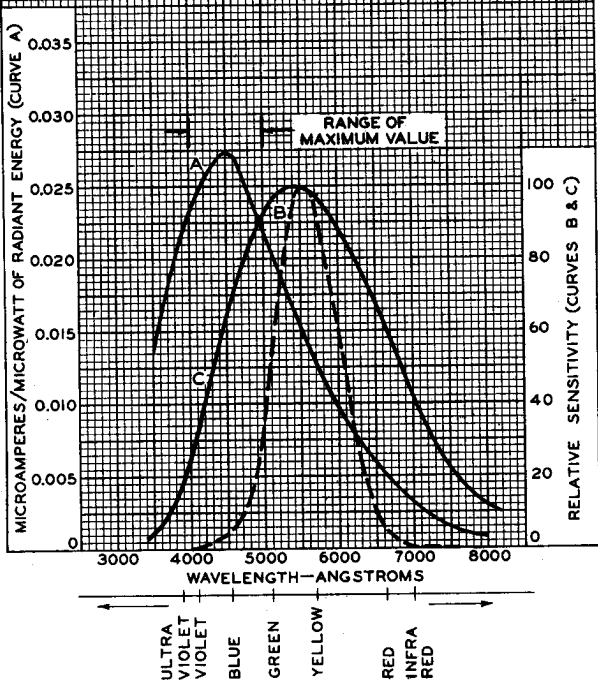
SPECTRAL-SENSITIVITY CHARACTERISTICS

CURVE A: FOR EQUAL VALUES OF SIGNAL-OUTPUT CURRENT AT ALL WAVELENGTHS.

SIGNAL-OUTPUT MICROAMPERES FROM SCANNED AREA OF $\frac{1}{2}'' \times \frac{3}{8}'' = 0.02$
DARK CURRENT (MICROAMPERES) = 0.02

CURVE B: SPECTRAL CHARACTERISTIC OF AVERAGE HUMAN EYE.

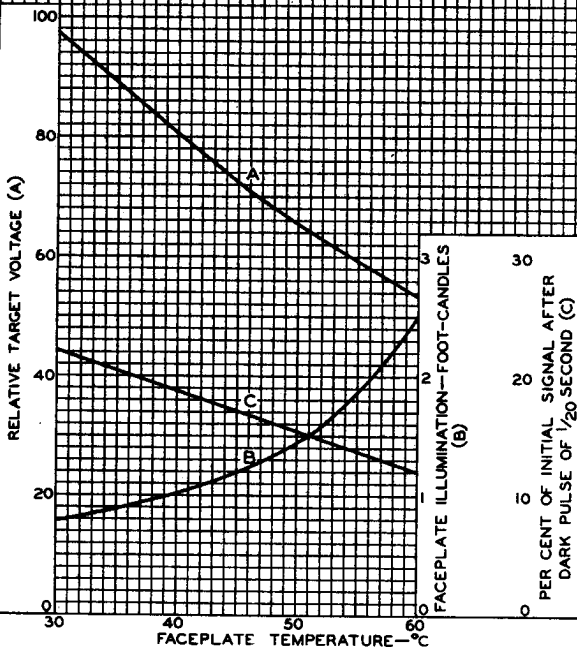
CURVE C: FOR EQUAL VALUES OF SIGNAL-OUTPUT CURRENT WITH RADIANT FLUX FROM TUNGSTEN SOURCE AT 2870° K.





TYPICAL CHARACTERISTICS

HIGHLIGHT SIGNAL - OUTPUT MICROAMPERES = 0.2
 DARK CURRENT (MICROAMPERES) = 0.2
 SCANNED AREA OF PHOTOCONDUCTIVE LAYER = $1/2'' \times 3/8''$
 CURVE A: RELATIVE TARGET VOLTAGE REQUIRED TO MAINTAIN DARK CURRENT OF $0.2 \mu\text{A}$.
 CURVE B: 2870° K INCANDESCENT ILLUMINATION REQUIRED TO PRODUCE SIGNAL - OUTPUT CURRENT OF $0.2 \mu\text{A}$.
 CURVE C: PERSISTENCE (LAG) CHARACTERISTIC FOR AN INITIAL SIGNAL-OUTPUT CURRENT OF $0.2 \mu\text{A}$.

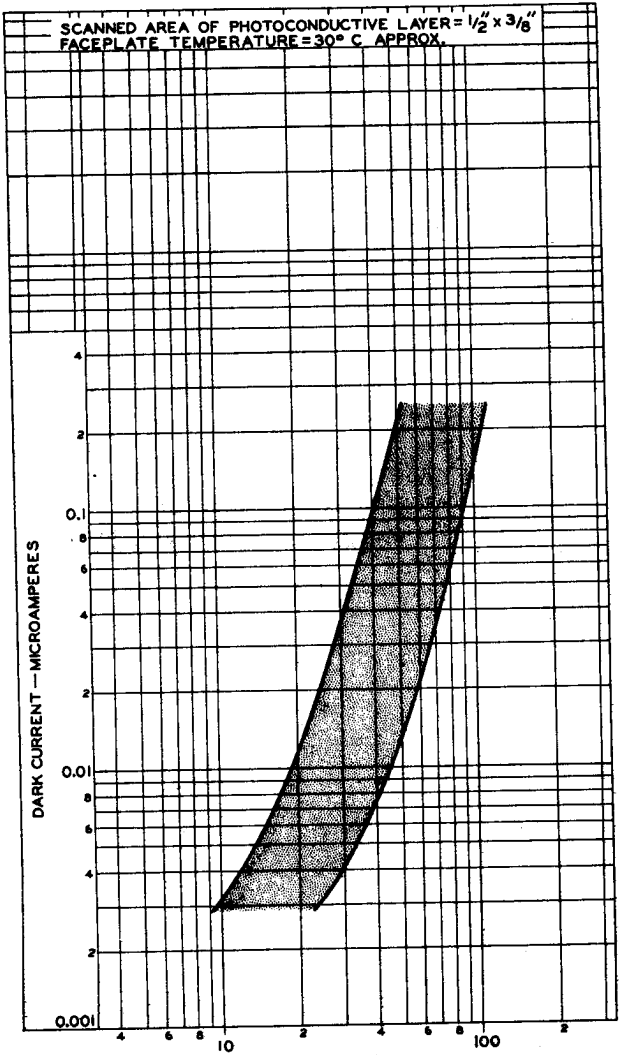




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DARK-CURRENT RANGE



ELECTRON TUBE DIVISION

RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

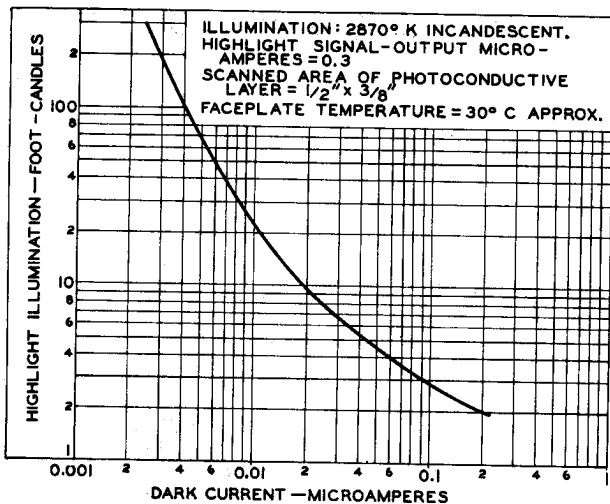
92CM-9497

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TYPICAL CHARACTERISTIC



92CS-9493