



1850-A

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ICONOSCOPE

FOR PICKUP FROM MOTION-PICTURE FILM OR SLIDES

DATA

General:

Heater, for Unipotential Cathode:

Voltage. 6.3 $\pm$ 10% ac or dc volts

Current. 0.6 amp

Direct Interelectrode Capacitances (Approx.):

Grid No.1 to All Other Electrodes. 6.5 μf Signal Electrode to Grid No.4^o 10 μf

Mosaic, Photosensitive:

Response See Curve

Useful Size of Rectangular Image

(4 x 3 Aspect Ratio). 5.75" max. diagonal ←

Focusing Method. Electrostatic

Deflection Method. Magnetic

Deflection Angle (Approx.) 55° ←

Max. Width of Mounted Tube 8-1/8"

Height of Mounted Tube 10-3/16" $\pm$ 3/4"Depth of Mounted Tube. 12-13/16" $\pm$ 3/4"

Mounting Position. Mosaic in vertical plane

Minimum Deflecting-Coil Inside Diameter. 1-1/2" ←

Maximum Deflecting-Coil Length 2-1/4" ←

Caps (Two) Medium (JETEC No.C1-5)

Base Long Medium-Shell Small 6-Pin

BOTTOM VIEW

Pin 1 - Heater

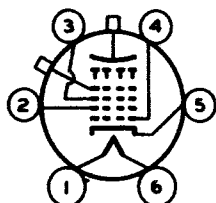
Pin 2 - Grid No.2

Pin 3 - Grid No.3

Pin 4 - Grid No.1

Pin 5 - Cathode

Pin 6 - Heater

DIRECTION OF LIGHT
IS NORMAL TO MOSAIC

Caps { See Outline
Drawing
S_J - Signal
Electrode
G₄ - Grid No.4
(Collector)

Maximum Ratings, Absolute Values:

AVERAGE-MOSAIC ILLUMINATION^o 50 max. ft-c ←

OPERATING TEMPERATURE OF BULB

AT LARGE END OF TUBE. 40 max. °C ←

SIGNAL-ELECTRODE VOLTAGE 1200 max. volts

GRID-No.4 (COLLECTOR) VOLTAGE. 1200 max. volts

GRID-No.3 VOLTAGE. 450 max. volts

GRID-No.2 VOLTAGE. 1200 max. volts

GRID-No.1 VOLTAGE:

Negative bias value. 125 max. volts

Positive bias value. 0 max. volts

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode. 125 max. volts

Heater positive with respect to cathode. 10 max. volts

GRID-No.4 CURRENT 0.5 max. μamp ^o With external shield.

• Averaged over any interval of 1 sec. max.

← Indicates a change.

MAY 1, 1951

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Typical Operation and Characteristics:

Signal-Electrode Voltage	1000	volts
Grid-No.4 Voltage.	1000	volts
Grid-No.3 Voltage (Beam Focus)— 24% to 36% of Grid-No.4 Voltage.	240 to 360	volts
Grid-No.2 Voltage.	1000	volts
→ Max. Grid-No.1 Voltage for Pattern Cutoff— 7% of Grid-No.4 Voltage	-70	volts
→ Grid-No.4 Current (With no illumination on mosaic)*.	0.1 to 0.2	μamp
External Load Resistance	0.1	megohm
→ Illumination on Mosaic: Steady Highlight Value for Slides.	4 to 6	ft-c
Average Pulsed Highlight Value for Motion-Picture Film.	10 to 20	ft-c
→ Ratio of Peak-to-Peak Highlight Video-Signal Current to RMS Noise Current (Approx.).	100	
→ Minimum Peak-to-Peak Blanking Voltage.	20	volts
→ Deflecting-Coil Current (Approx.):** Horizontal (Peak to peak).	600	ma
Vertical (Peak to peak).	140	ma

Maximum Circuit Values:

Grid-No.1-Circuit Resistance	1.0 max. megohm
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* Allowance should be made for leakage currents.

** For RCA Deflecting Yoke No. 201D76.

→ Indicates a change.

MAY 1, 1951

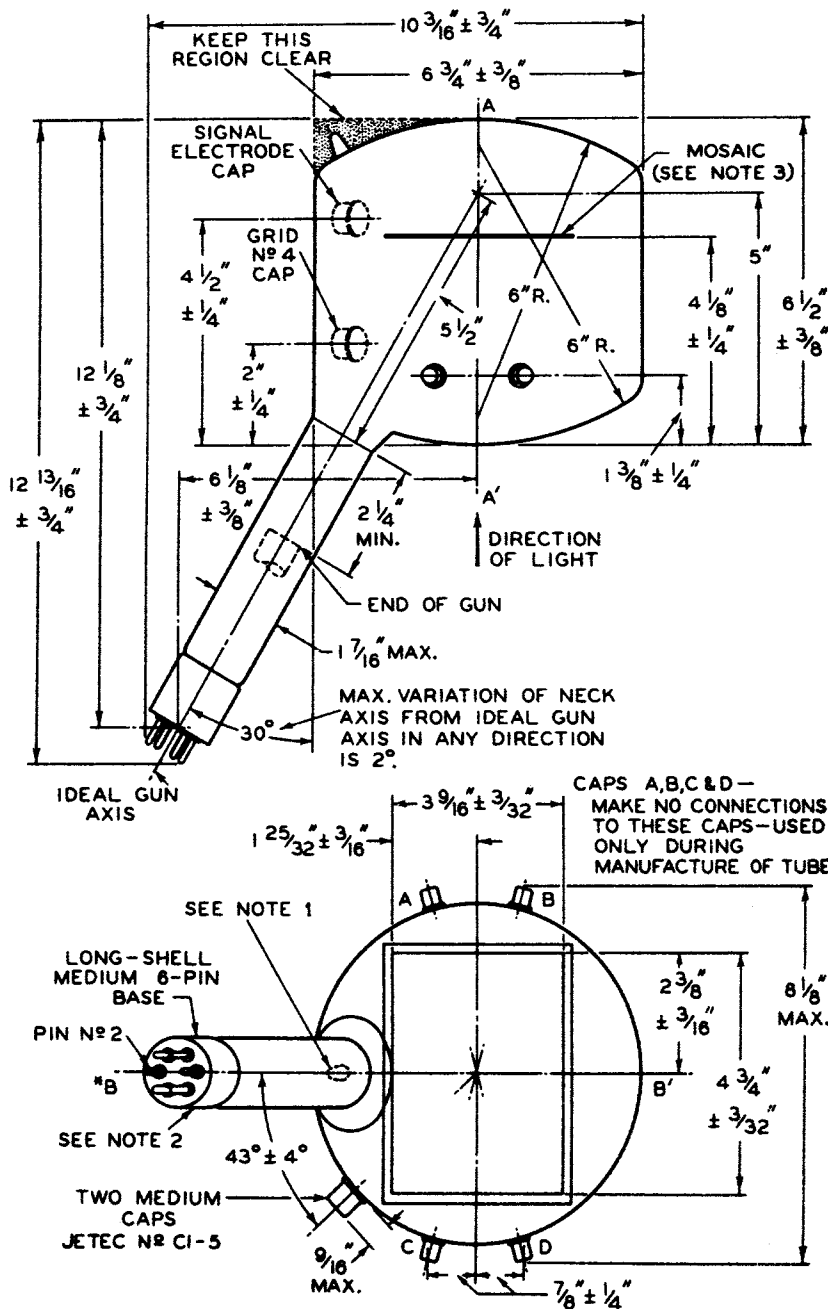
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* BB* IS THE PLANE THROUGH THE BULB AXIS AA* AND THE IDEAL GUN AXIS.

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CE-4891R3A

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NOTE 1: VARIATION OF TIP CENTER FROM PLANE BB' IS 1/2".

NOTE 2: MAXIMUM ROTATION OF LINE THROUGH PINS 2 AND 5 ABOUT IDEAL GUN AXIS IS $\pm 10^\circ$, MEASURED FROM PLANE BB'.

NOTE 3: DEVIATION OF PLANE OF MOSAIC FROM PLANE PERPENDICULAR TO THE BULB AXIS AA' IS 2.5° MAX. ROTATION OF MOSAIC ABOUT THE BULB AXIS AA' WITH RESPECT TO A LINE OF INTERSECTION FORMED BY MOSAIC PLANE AND PLANE BB' IS 2.5° MAX.

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CE-4891R3B

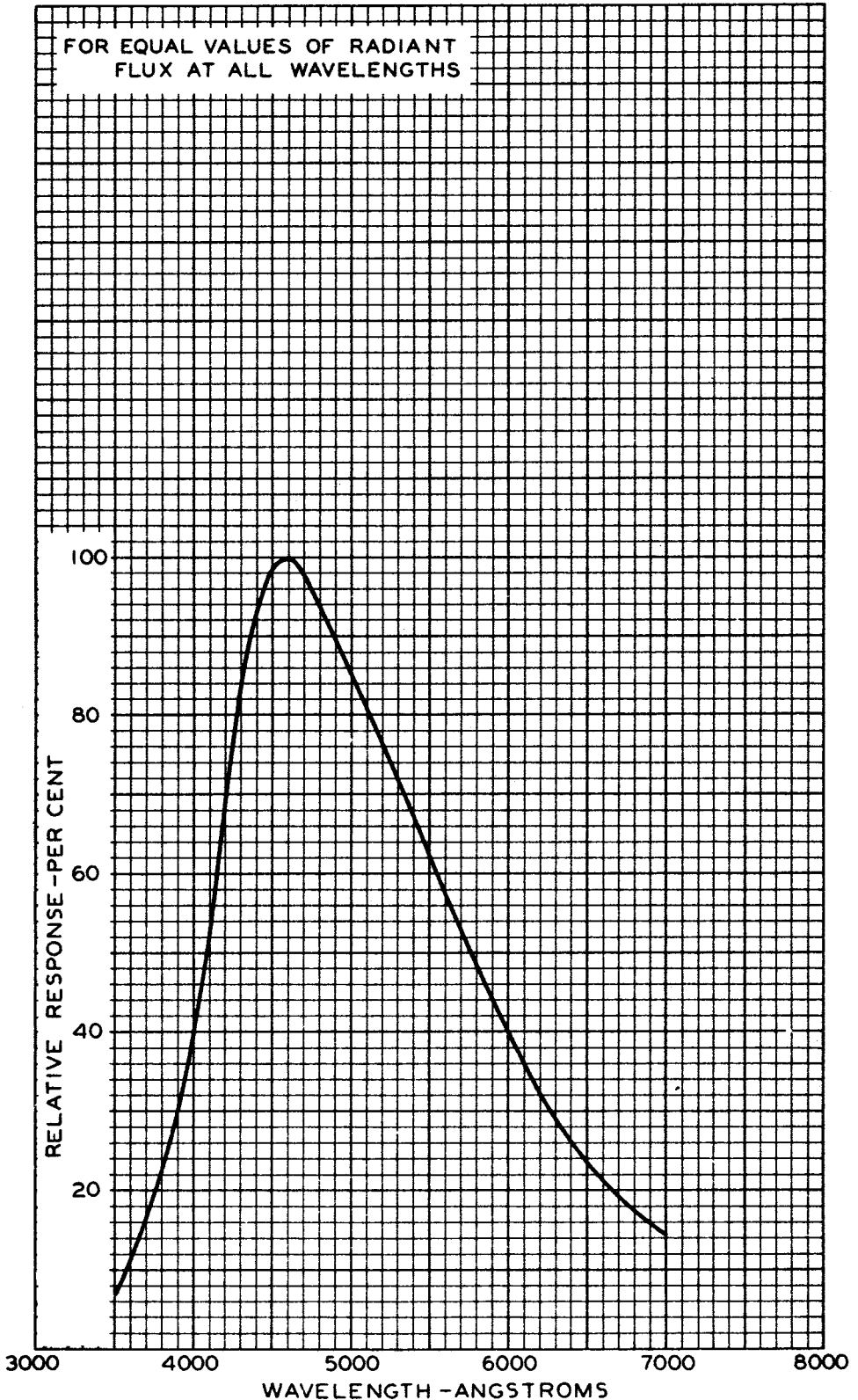


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SPECTRAL SENSITIVITY CHARACTERISTIC

FOR EQUAL VALUES OF RADIANT
FLUX AT ALL WAVELENGTHS



JUNE 18, 1951

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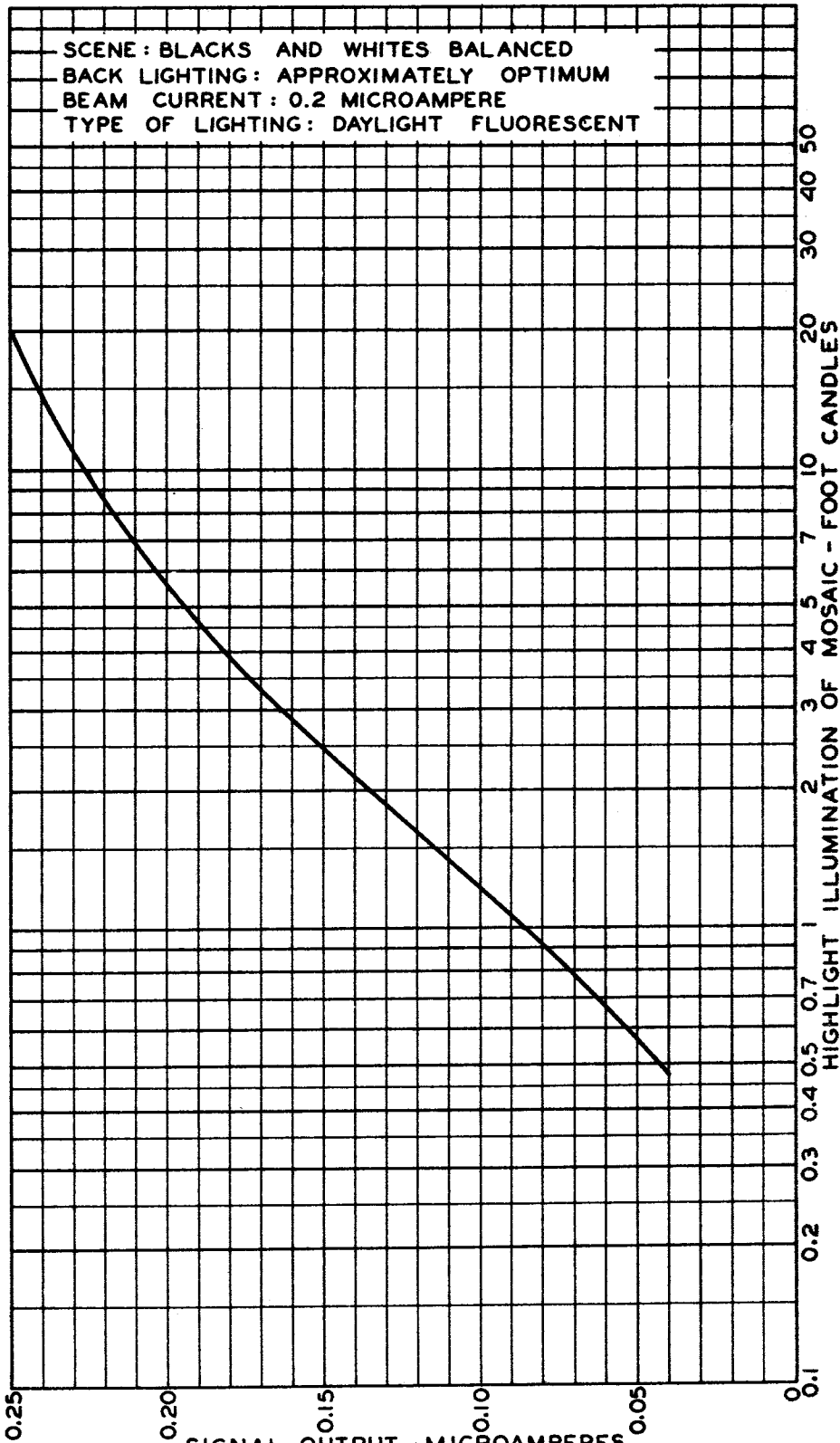
92CM-6404RI

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TYPICAL SIGNAL-OUTPUT CHARACTERISTIC



JAN. 2, 1951

SIGNAL OUTPUT - MICROAMPERES
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92CM - 658IRI