



1850-A

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# ICONOSCOPE

FOR PICKUP FROM MOTION-PICTURE FILM OR SLIDES

## DATA

### General:

Heater, for Unipotential Cathode:

Voltage . . . . . 6.3 ± 10% . . . . . ac or dc volts

Current . . . . . 0.6 . . . . . amp

Direct Interelectrode Capacitances (Approx.):

Grid No.1 to All Other Electrodes . . . . . 6.5 μμf

Signal Electrode to Grid No.4<sup>o</sup> . . . . . 10 μμf

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" ± 3/4"

Depth of Mounted Tube . . . . . 12-13/16" ± 3/4"

Mounting Position . . . . . Mosaic in vertical plane

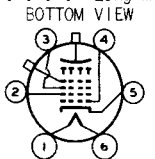
Minimum Deflecting-Coil Inside Diameter . . . . . 1-1/2" ←

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

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

Base . . . . . Long Medium-Shell Small 6-Pin

- Pin 1 - Heater
- Pin 2 - Grid No.2
- Pin 3 - Grid No.3
- Pin 4 - Grid No.1
- Pin 5 - Cathode
- Pin 6 - Heater



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

DIRECTION OF LIGHT IS NORMAL TO MOSAIC

### Maximum Ratings, Absolute Values:

AVERAGE MOSAIC ILLUMINATION\* . . . . . 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

<sup>o</sup> With external shield.

\* Averaged over any interval of 1 sec. max.

← Indicates a change.

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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

TUBE DEPARTMENT  
RADIO CORPORATION OF AMERICA, HARRISON, NEW JERSEY

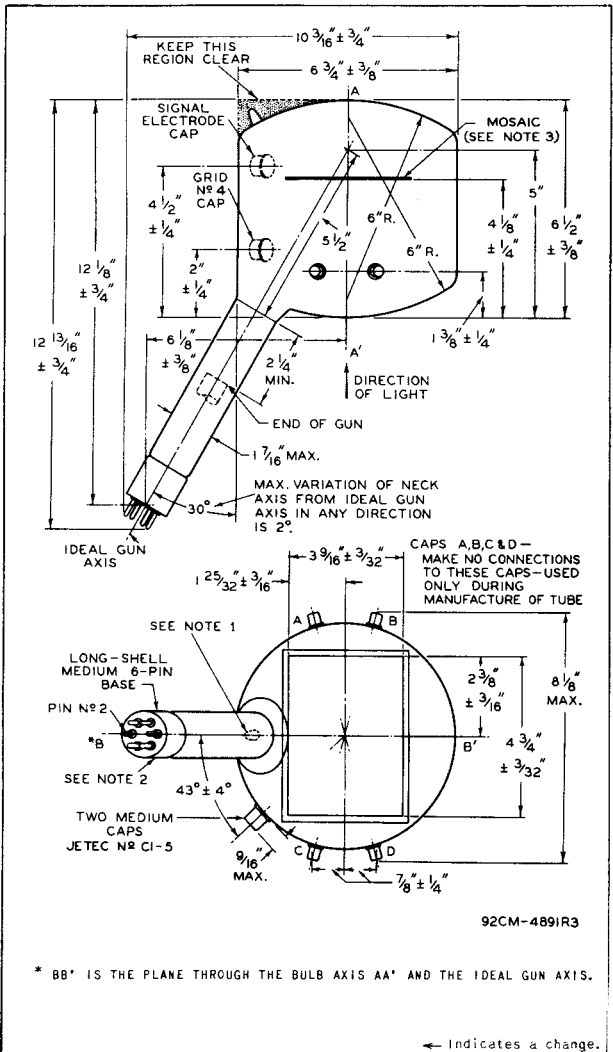
DATA



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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  $2.5^\circ$  MAX. ROTATION OF MOSAIC ABOUT THE BULB AXIS AA' WITH RESPECT TO A LINE OF INTERSECTION FORMED BY MOSAIC PLANE AND PLANE BB' IS  $2.5^\circ$  MAX.

MAY 1, 1951

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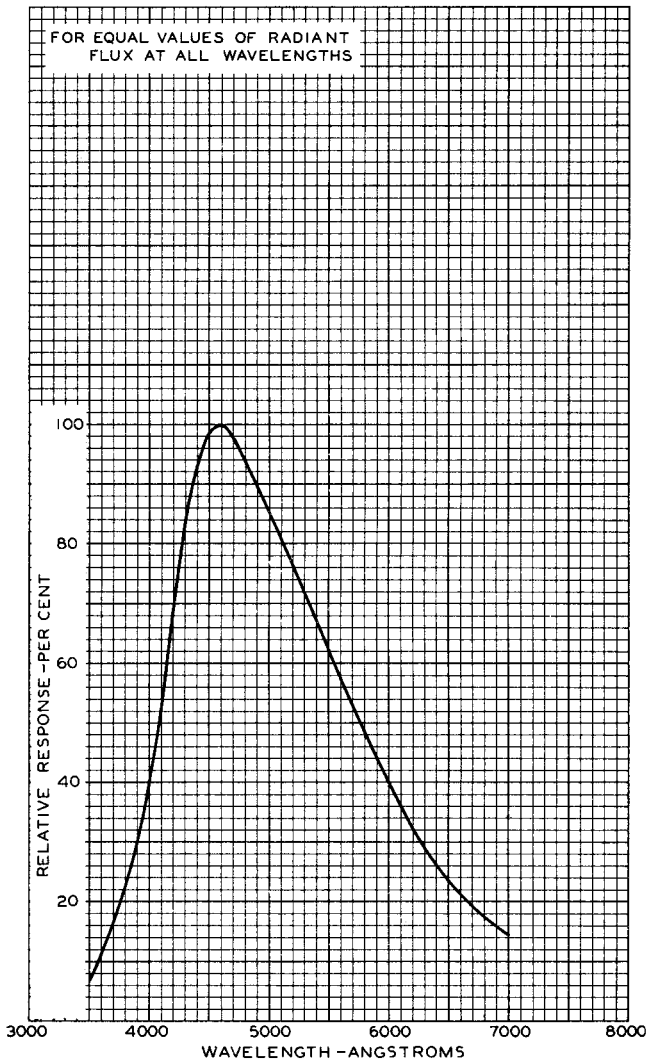


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### SPECTRAL SENSITIVITY CHARACTERISTIC

FOR EQUAL VALUES OF RADIANT  
FLUX AT ALL WAVELENGTHS



JUNE 18, 1951

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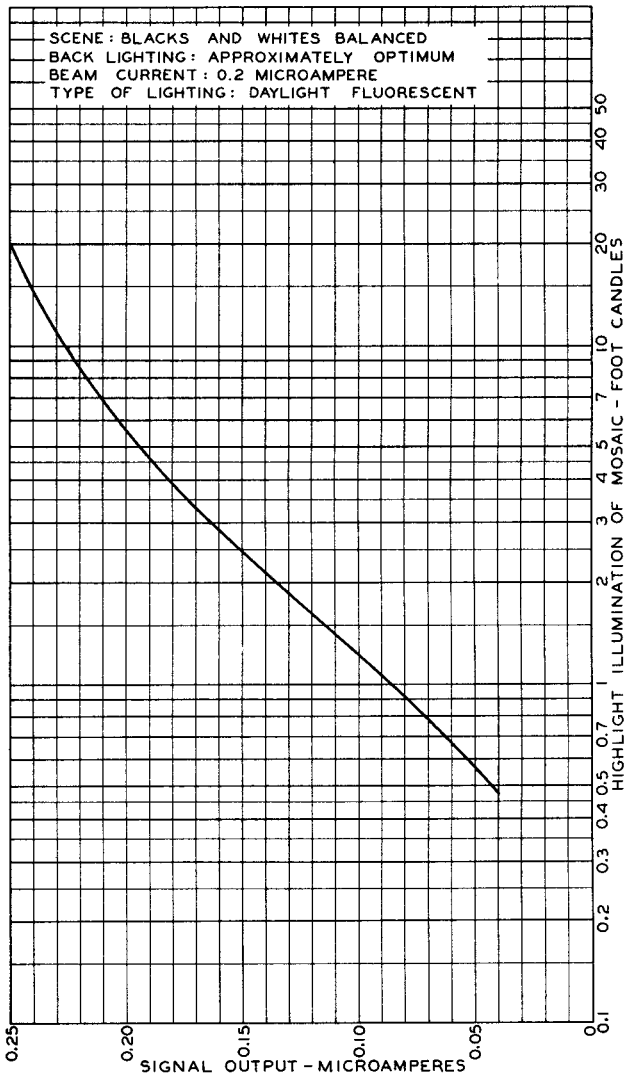
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### TYPICAL SIGNAL-OUTPUT CHARACTERISTIC



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92CM-658IRI

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