



6198 VIDICON

600-LINE RESOLUTION

For use in industrial applications

6198

DATA

General:

Heater, for Unipotential Cathode:

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

Current. 0.6 amp

Direct Interelectrode Capacitance:[▲]

Target (Signal Electrode) to all

other electrodes 4.5 μ f

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 plane passing through the tube axis and short index pin.

Focusing Method. Magnetic

Deflection Method. Magnetic

Overall Length 6.25" $\pm$ 0.25"

Greatest Diameter (Excluding side tip) . . . 1.125" $\pm$ 0.010"

Maximum Radius (Including side tip). 0.805"

Weight (Approx.) 2 oz

Operating Position . . . Approx. horizontal, or faceplate up

Bulb T8

Base Connector Cinch No.54A18088, or equivalent

Base Small-Button Ditetra 8-Pin (JETEC No.E8-11)

Basing Designation for BOTTOM VIEW 8HM

Pin 1—Heater

Pin 2—Grid No.1

Pin 3—Internal

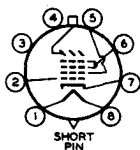
Connection—
Do Not Use

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

(Signal
Electrode)

Short Index Pin —

Same as

Pin 3

Maximum Ratings, Absolute Values:

TARGET (SIGNAL-ELECTRODE) VOLTAGE. 100 max. volts

GRID-No.4 & GRID-No.3 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

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode. 125 max. volts

Heater positive with respect to cathode. 10 max. volts

[▲] See next page.

← Indicates a change.



VIDICON

FACEPLATE:

illumination	1000 max.	ft-c
Temperature	60 max.	°C

→ Typical Operation and Characteristics:

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

Faceplate Illumination (Highlight).	10 to 20	ft-c
Target (Signal-Electrode) Voltage .	10 to 70	volts
Grid-No.4 (Decelerator) & Grid-No.3 (Beam-Focus) Voltage.	250 ^{••} to 300	volts
Grid-No.2 (Accelerator) Voltage . .	300	volts
Grid-No.1 Voltage for picture cutoff [•]	-45 to -100	volts
Highlight Signal-Output Current [*] . .	0.1 to 0.2	μa
Maximum Dark Current.	0.02	μa
Uniform 2870° K Tungsten Illumina- tion on Tube Face to Produce Sig- nal-Output Current of 0.1 to 0.2 μa.	3 to 10	ft-c
Average "Gamma" of Transfer Charac- teristic for Signal-Output Cur- rent between 0.02 and 0.2 μa. . .	0.65	
Visual Equivalent Signal-to-Noise Ratio (Approx.) [*]	300:1	
Minimum Peak-to-Peak Blanking Voltage:		
When applied to grid No.1	40	volts
When applied to cathode	10	volts
Field Strength at Center of Focusing Device	40	gausses
Field Strength of Adjustable Alignment Coil.	0 to 4	gausses

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

•• Definition, focus uniformity, and picture quality decrease with decreasing grid-No.3 and grid-No.4 voltage. In general, grid No.3 and grid No.4 should not be operated below 250 volts.

• With no blanking voltage on grid No.1.

* Measured with a high-gain, low-noise, cascode-input-type amplifier having bandwidth of 5 Mc.

▲ This capacitance, which effectively is the output impedance of the 6198, 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.

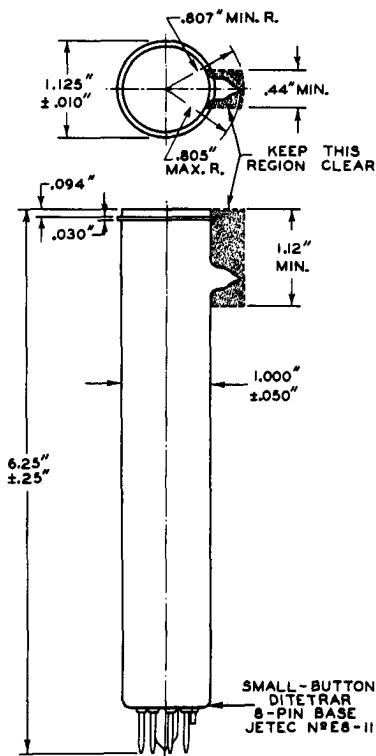
→ Indicates a change.



6198

VIDICON

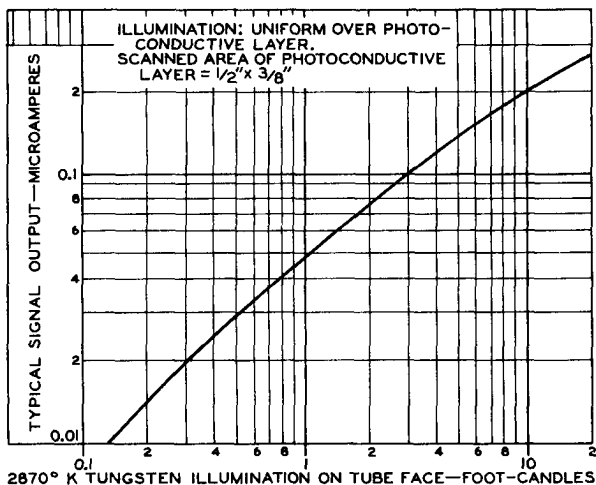
6198



92CS-7772R2

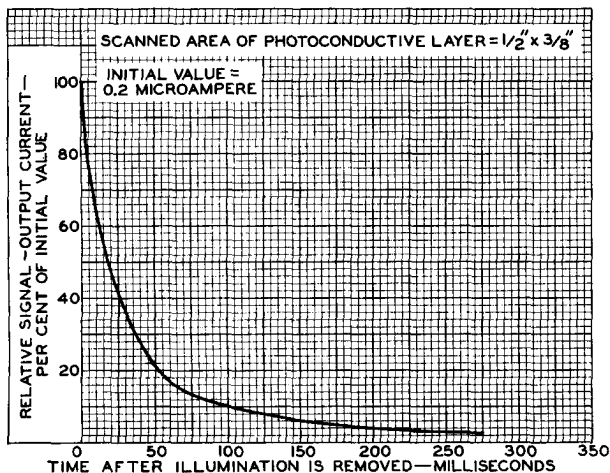


TYPICAL SIGNAL OUTPUT



92CS-7820R1

PERSISTENCE CHARACTERISTIC





6198

6198

SPECTRAL-SENSITIVITY CHARACTERISTICS

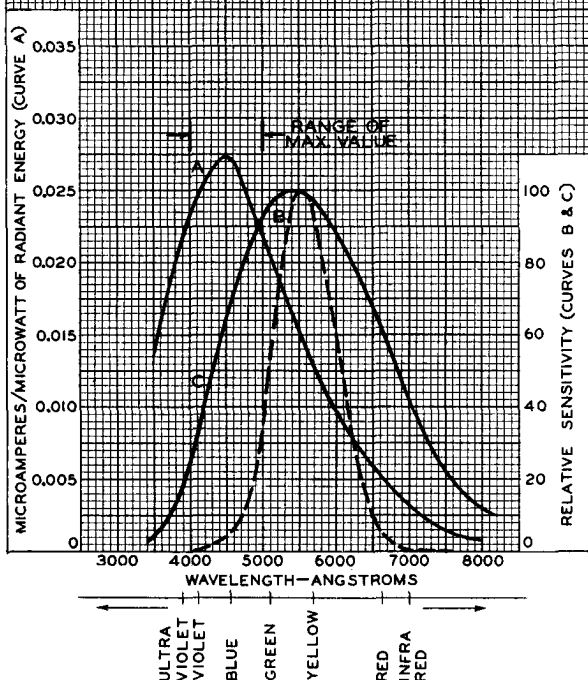
CURVE A: FOR EQUAL VALUES OF SIGNAL-
OUTPUT CURRENT AT ALL WAVELENGTHS.

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

