Display Cathode-Ray Tube

12"-Rectangular 70°-Magnetic Deflection Display Cathode-Ray Tube Having Integral Protective Window and P4 Phosphor Screen

ELECTRICAL

Heater Current at 6.3 volts	0.6 A
Focus Method	Electrostatic
Deflection Method	Magnetic
Direct Interelectrode Capacitances (Typical):	
Grid No.1 to all other electrodes	6 pF
Cathode to all other electrodes	5 pF
External conductive coating to anode	1300 max. pF 700 min. pF

OPTICAL

Faceplate, Spherical	Filterglass
Light transmission at center (Approx.)	37%
Phosphor	P4-Sulfide Type, Aluminized
Tube Dimensions:	
Overall length	16.60 max. in
Neck length	7.56 ± 0.25 in
Greatest width	10.94 ± 0.12 in
Greatest height	8.56 ± 0.12 in
Bulb	See Dimensional Outline
Anode Cap	Recessed Small Cavity Cap (JEDEC No.J1-21)
Base	Small-Shell Duodecal, Arrangement 1, 6-Pin (JEDEC No.B6-63)
Operating Position	Any
Weight (Approx.)	9-1/2 lb

MAXIMUM AND MINIMUM RATINGS, *Absolute-Maximum Values*

Unless otherwise specified, values are positive with respect to cathode.

Anode Voltage	16,000 max. V
Grid-No.3 (Focusing-Electrode) Voltage	2700 max. V
Grid-No.2 Voltage	400 max. V
Grid-No.1 Voltage:	
Negative bias value	80 max. V
Positive bias value	0 max. V

Positive peak value	2 max. V
Peak Heater-Cathode Voltage:	
Heater negative with respect to cathode	180 max. V
Heater positive with respect to cathode	180 max. V
Heater Voltage (ac or dc):	
Under operating conditions[b]	6.9 max. V 5.7 min. V

RECOMMENDED OPERATING VALUES

Unless otherwise specified, values are positive with respect to cathode. Raster size 6 inches by 8 inches. Standard TV Scan.

Anode Voltage	12000 V
Anode Current	100 μA
Grid-No.3 (Focusing-Electrode) Voltage for an Anode Current of 100 microamperes	1400 to 1800 V
Grid-No.2 Voltage	340 V
Grid-No.1 Voltage for Visual Extinction of Focused Raster	-68 to -38 V
	See accompanying *Cutoff Design Chart*

TYPICAL PERFORMANCE DATA

At recommended operating values, unless otherwise specified.

Anode Current	70 to 30% of cathode current
Grid-No.3 Current	30 to 70% of cathode current
Typical Trace Luminance[c]	See accompanying *Typical Trace Luminance Characteristic*
Typical Center Line Width[d]	0.010 in
Spot Position	See footnote e

MAXIMUM CIRCUIT VALUE

Grid-No.1 Circuit Resistance	1.5 max. MΩ

[b] For maximum cathode life, it is recommended that the heater supply be regulated at 6.3 volts.

[c] Average luminance (brightness) at the center of a single trace scanned at a given sweep speed and refreshed at a given rate.

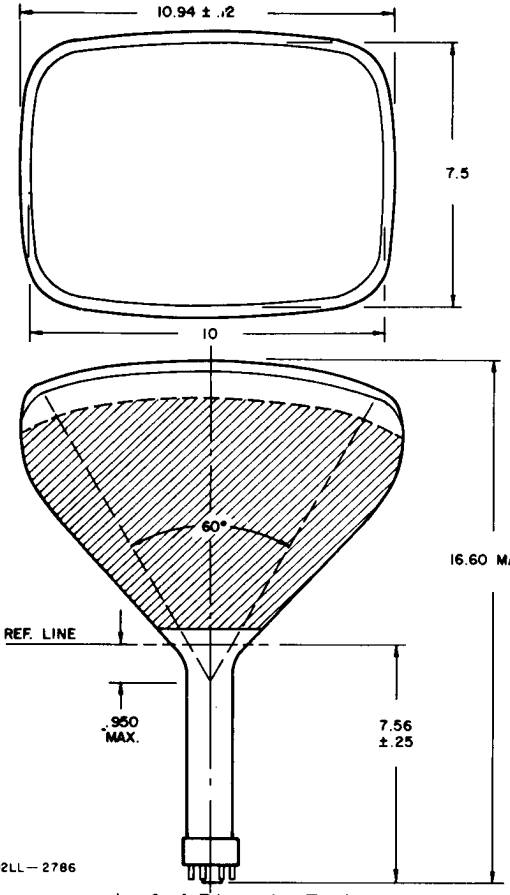
[d] Measured by shrinking raster technique at an anode current of 100 microamperes.

[e] The center of the undeflected, unfocused spot will fall within a circle having a 0.8 inch diameter concentric with the center of the tube face.

X-RADIATION WARNING

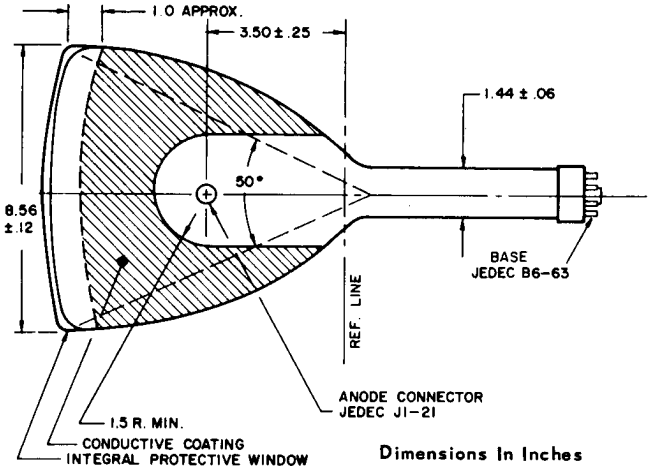
Because the 4557 is designed to be operated at anode voltages as high as 16,000 volts, shielding of the 4557 for X-radiation may be needed to protect against possible injury from prolonged exposure at close range.

DIMENSIONAL OUTLINE Dimensions In Inches



See accompanying *Inch Dimension Equivalents in Millimeters.*

DIMENSIONAL OUTLINE(Top Right Side View)

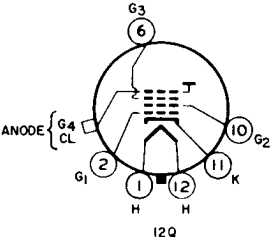


Dimensions In Inches

Inch Dimension Equivalents in Millimeters					
Inch	mm	Inch	mm	Inch	mm
.06	1.5	1.44	36.5	8.56	217.4
.12	3	1.5	38.1	10	254
.25	6.3	3.50	88.9	10.94	277.8
.950	24.1	7.5	190.5	16.60	421.6
1.0	25.4	7.56	192		

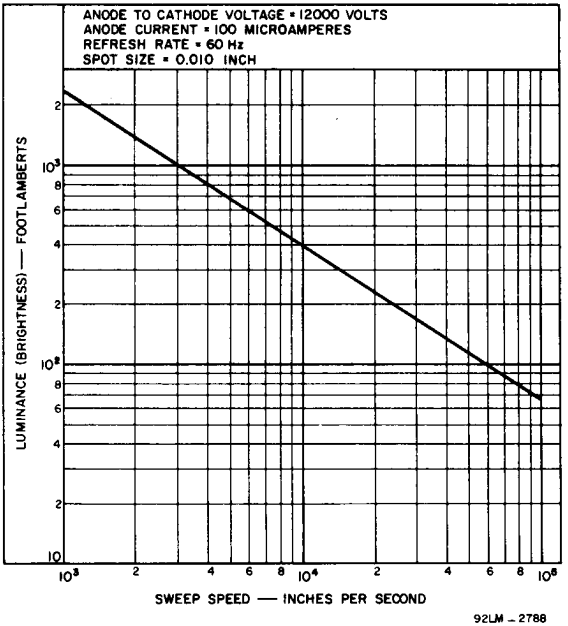
TERMINAL DIAGRAM (Bottom View)

Pin 1: Heater
Pin 2: Grid No.1
Pin 6: Grid No.3
Pin 10: Grid No.2
Pin 11: Cathode
Pin 12: Heater
Cap: Anode (Grid No.4 and Collector)



TYPICAL TRACE LUMINANCE CHARACTERISTIC

(Average brightness at center of single trace scanned at the refreshed at the indicated rate)



CUTOFF DESIGN CHART