



**CHARACTERISTICS**

**GENERAL DATA**

Focusing Method	Magnetic		
Deflecting Method	Magnetic		
Deflection Angle (Approx.)	50 Degrees		
<b>Phosphors* Fluorescence</b>	<b>Phosphorescence</b>	<b>Persistence</b>	
P4	White	—	Medium
P7	Blue	Yellow	Long
P16	Violet	—	Extremely Short
P19	Orange	Orange	Long
P25	Orange	Orange	Long

Faceplate . . . . . Gray, Spherical-Aluminized

\*In addition to the types shown, the 10ANP- can be supplied with several other screen phosphors.

**ELECTRICAL DATA**

Heater Voltage	6.3 Volts
Heater Current	0.3 ± 10 % Ampere
Direct Interelectrode Capacitances (Approx.)	
Cathode to All Other Electrodes	5 pf
Grid No. 1 to All Other Electrodes	6 pf
Grid No. 2 to All Other Electrodes	5 pf

**MECHANICAL DATA**

Minimum Useful Screen Diameter	9 Inches	
Overall Length	16 Inches	Max.
Bulb Contact (Recessed Small Cavity Cap)	J1-21	
Base <sup>1</sup>	E9-37	
Basing	9NB	
Bulb Contact Alignment		
Plane of J1-21 cap passes halfway between		
Pins No. 1 and No. 9		± 10 Degrees
J1-21 Cap on Same Side as Pins No. 1 and No. 9		

**RATINGS**

**MAXIMUM RATINGS (Design Maximum Values)**

Anode Voltage	12,000 Volts	dc
Grid No. 2 Voltage	450 Volts	dc
Grid No. 1 Voltage		
Negative Bias Value	200 Volts	dc
Positive Bias Value	0 Volts	dc
Positive Peak Value	0 Volts	
Peak Heater-Cathode Voltage		
Heater Negative with Respect to Cathode	180 Volts	
Heater Positive with Respect to Cathode	180 Volts	

**TYPICAL OPERATING CONDITIONS**

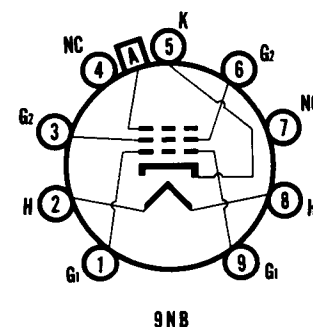
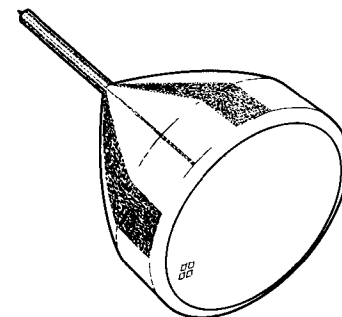
Anode Voltage <sup>2</sup>	9000 Volts	dc
Grid No. 2 Voltage	250 Volts	dc
Grid No. 1 Voltage <sup>3</sup>	-15 to -45 Volts	dc
Focusing Coil Current (Approx.) <sup>6</sup>	40 to 60 Ma	dc
Linewidth A <sup>4</sup>	0.013 Inch	Max.
Spot Position (Undelected) <sup>5</sup>	1/2 Inch	
Modulation <sup>4</sup>	40 Volts	Max.

**CIRCUIT VALUES**

Grid No. 1 Circuit Resistance	1.5 Megohms Max.
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**QUICK REFERENCE DATA**

Special Purpose Tube  
 10" Round Glass Type  
 Spherical Faceplate  
 Gray Glass  
 Aluminized Screen  
 Magnetic Deflection  
 Magnetic Focus  
 7/8" Diameter Neck  
 Miniature Base  
 6.3 Volts—300 Ma Heater



**SYLVANIA ELECTRIC PRODUCTS INC.**

Electronic Components Group  
**ELECTRONIC TUBE DIVISION**  
 SENECA FALLS, NEW YORK

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*File Under*

SPECIAL AND GENERAL  
 PURPOSE CATHODE RAY TUBES

NOTES:

1. A socket with a center opening to clear the tubulation should be used. Care should be taken in handling the tube to avoid damaging the exposed tubulation and bending the base pins.
2. Brilliance and definition decrease with decreasing accelerator voltage. In general, accelerator voltage should not be less than 7000 volts.
3. Visual extinction of the undeflected focused spot.
4. Measured per MIL-E-1 specification at an anode current of 400  $\mu$ a.
5. The center of the undeflected focused spot will fall within a circle of 1/2-inch radius concentric with the center of the tube face with the tube shielded.
6. Focusing coil current measured at an accelerator current of 100  $\mu$ a, with the center of air gap of JEDEC Focus Coil No. 127, or equivalent, located 2-1/2 inches from reference line.
7. The P16, P19, and P25 screens can be permanently damaged if current density is permitted to rise too high. To prevent burning, minimum beam current densities should be employed.

WARNING:

X-ray radiation shielding may be necessary to protect against possible danger of personal injury from prolonged exposure at close range if this tube is operated at higher than the manufacturer's Maximum Rated Anode Voltage or 16,000 volts, whichever is less.

OUTLINE

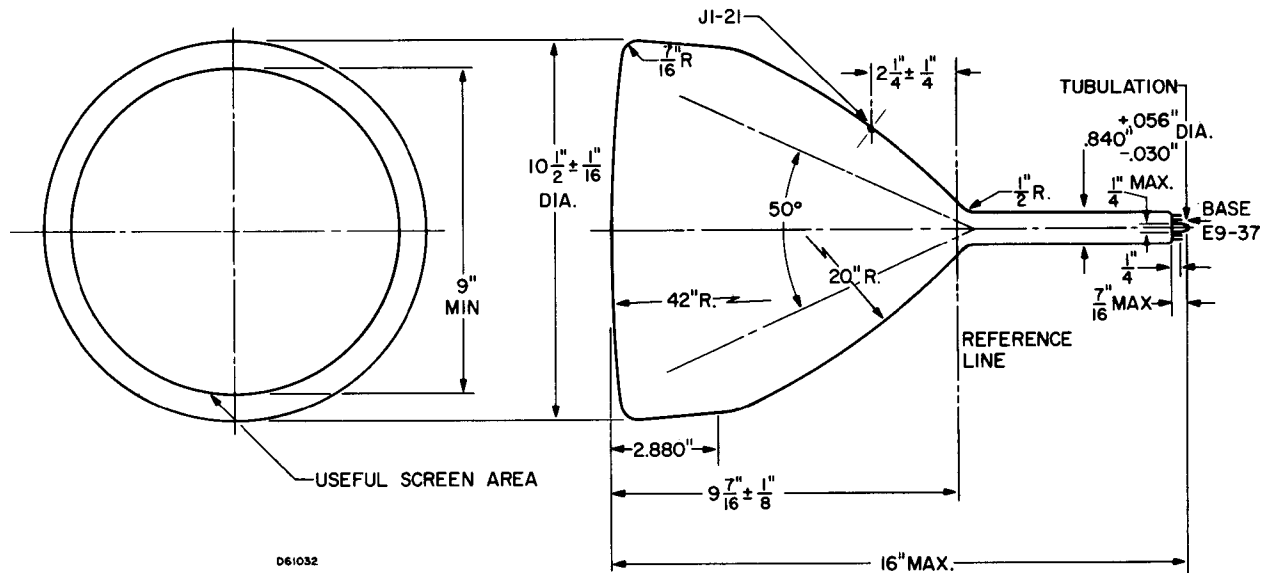


DIAGRAM NOTE:

1. Reference line is determined by the point where leading edge of JEDEC G-112 reference line gauge (a cylinder 2" long and 1.500" + .003-.000" I.D.) will stop.