

National Video Corporation

4300 W. 47TH STREET CHICAGO 32, ILLINOIS
CLIFFSIDE 4-5600

The 23BXP4 is a 23"-92° cathode ray tube laminated with a P.P.G. panel. This tube has a 5 1/2" neck length with a straight gun, which requires no ion trap and a 600 milliampere 6.3 volt filament.

ELECTRICAL DATA

Focusing Method	Electrostatic
Deflection Angles, Approximate	
Horizontal	81 Degrees
Vertical	66 Degrees
Diagonal	92 Degrees
Direct Interelectrode Capacitance	
Cathode to all other electrodes, approximate	5 uuf
Grid #1 to all other electrodes, approximate	6 uuf
External Conductive Coating to Anode	2500 max. uuf
	2000 min. uuf
Heater Current at 6.3 Volts	600 $\pm$ 30 ma
Heater Warm-up Time	11 Seconds

OPTICAL DATA

Phosphor Number JEDEC Designation	P4 Aluminized
Light Transmittance at Center, Approximate	40 Percent

MECHANICAL DATA

Overall Length	18 1/4 $\pm$ 1/4 Inches
Greatest Diameter of Tube	
Greatest Dimensions of Tube	
Diagonal	23 7/16 $\pm$ 5/64
	-1/8 Inches
Width	20 1/2 $\pm$ 3/32
	-5/64 Inches
Height	16 1/2 $\pm$ 1/8
	-1/16 Inches
Minimum Useful Screen Dimensions (Projected)	
Diagonal	22 5/16 Inches
Horizontal Axis	19 5/16 Inches
Vertical Axis	15 1/4 Inches
Area	282 Sq. Inches
Neck Length	5 1/2 $\pm$ 1/8 Inches

MECHANICAL DATA (Con't.)

Bulb EIA designation or equivalent (including shield designation)	FP 187A1
Bulb Contact JEDEC Designation	J1-21
Base JEDEC Designation	B6-203
Basing JEDEC Designation	12L
Bulb Contact Alignment	
J1-21 contact aligns with pin position #4 ± 30 Degrees	

RATINGS (Design Maximum System)

Unless otherwise specified, voltage values are positive and measured with respect to cathode

Maximum Anode Voltage	22,000 Volts
Minimum Anode Voltage	12,000 Volts
Maximum Grid #4 (Focusing Electrode) Voltage	+1100 -550
Maximum Grid #2 Voltage	550 Volts
Minimum Grid #2 Voltage	200 Volts
Grid #1 Voltage	
Maximum Negative Value	155 Volts DC
Maximum Negative Peak Value	220 Volts
Maximum Positive Value	0 Volts DC
Maximum Positive Peak Value	2 Volts
Maximum Heater Voltage	6.9 Volts
Minimum Heater Voltage	5.7 Volts
Maximum Heater-Cathode Voltage	
Heater negative with respect to cathode	
During warm-up period not to exceed	
15 seconds	450 Volts
After equipment warm-up period	200 Volts
Heater positive with respect. to cathode	200 Volts

TYPICAL OPERATING CONDITIONSGRID DRIVE SERVICE

Unless otherwise specified, all voltage values are positive with respect to cathode

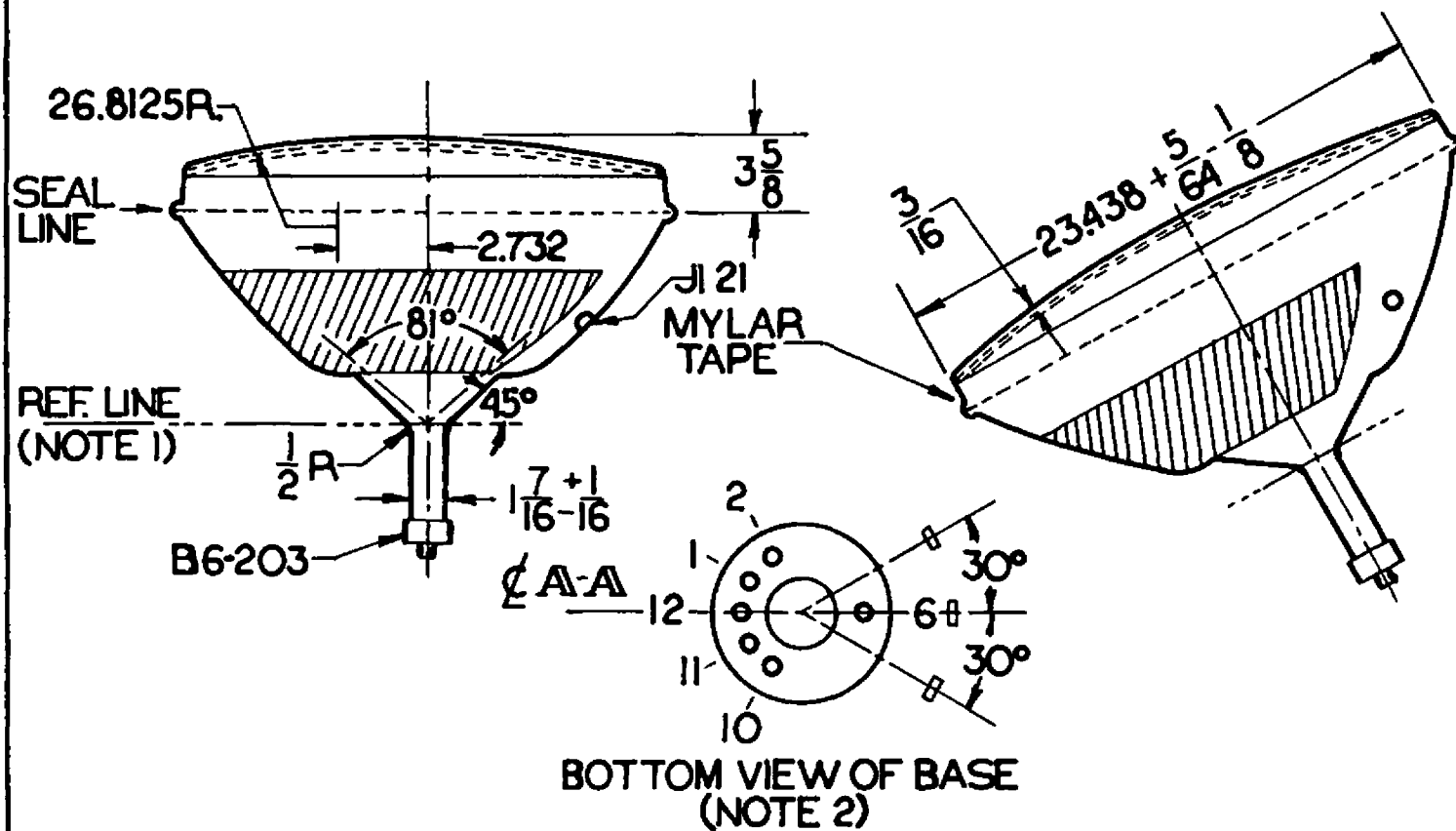
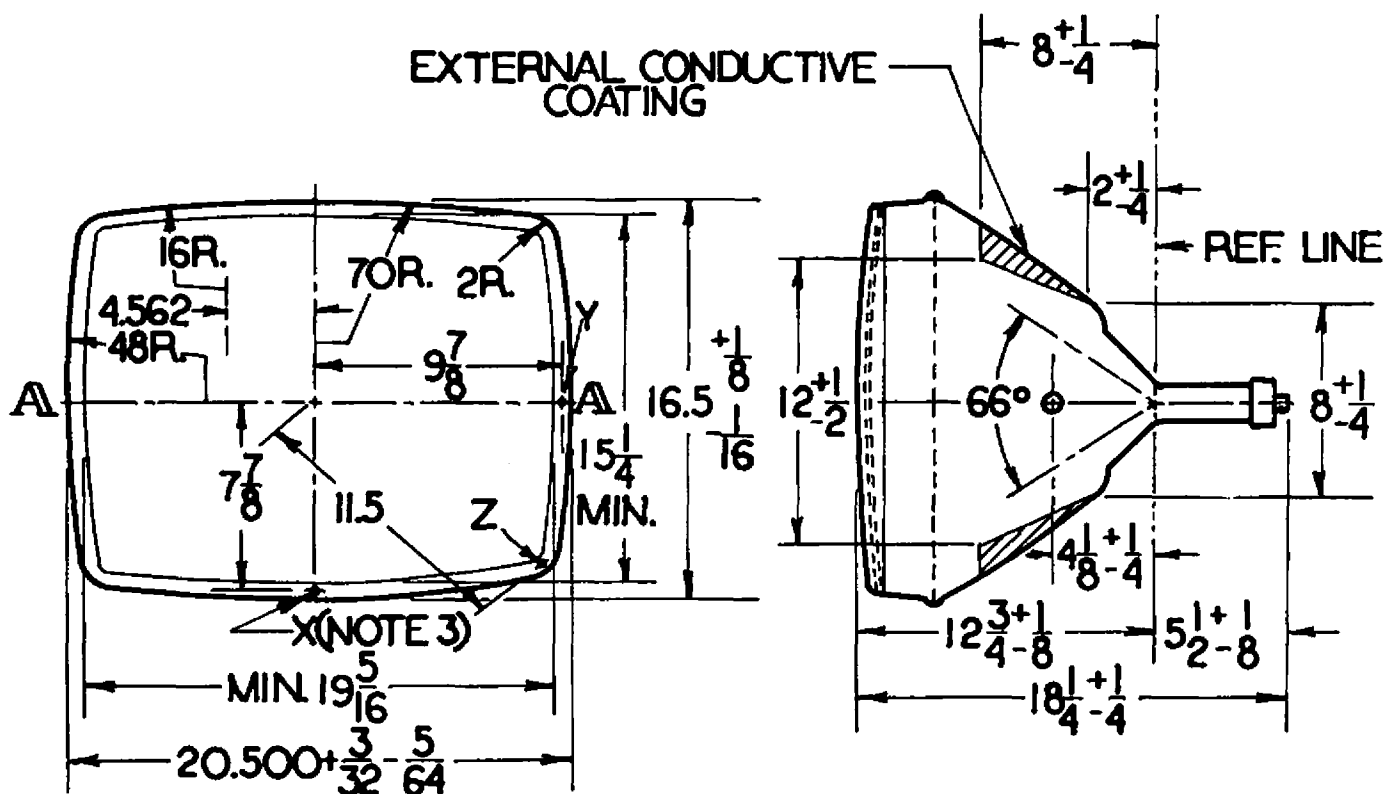
Anode Voltage	16,000 Volts DC
Grid #4 Voltage (Focusing Electrode)	
(Notes 2 & 3)	200 Volts DC
Grid #2 Voltage	300 Volts DC
Grid #1 Voltage (Note 1)	-35 to -72 Volts DC

MAXIMUM CIRCUIT VALUES

Maximum Grid #1 Circuit Resistance	1.5 Megohms
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GRAPHS AND DRAWINGS

Tube Outline with essential dimensions and tolerances.



DRAWN BY	SCALE	EFFECTIVE	DISTRIBUTION	DRAWING NO.
A.L. PRIBYL		8-14-63		23BXP4

GRAPHS AND DRAWINGS (Con't.)

Pin Connections:

Pin 1	Heater	Pin 11	Cathode
Pin 2	G ₁ Grid	Pin 12	Heater
Pin 6	G ₄ Grid		
Pin 10	G ₂ Grid		

NOTES:

1. Visual extinction of focused raster.
2. With the combined grid #1 bias voltage and video-signal voltage adjusted to give an anode current of 100 microamperes on a 19 5/16" X 15 1/4" pattern from RCA 2F21 Monoscope or equivalent.
3. Individual tubes will have satisfactory focus at some value between 0 and +400 volts.

NOTES FOR DIMENSIONAL OUTLINE

1. The plane through the tube axis and pin No. 6 may vary from the plane through the tube axis and ultor terminal by angular tolerance (measured about the tube axis) of $\pm 30^\circ$. Ultor terminal is on same side as Pin No. 6.
2. With tube neck inserted through flared end of reference-line gauge JEDEC No. G-116 and with tube seated in gauge, the reference-line is determined by the intersection of the Plane CC' of the gauge with the glass funnel.
3. Socket for this base should not be rigidly mounted; it should have flexible leads and be allowed to move freely. The design of the socket should be such that the circuit wiring cannot impress lateral strains through the socket contacts on the base pins. Bottom circumference of base wafer will fall within a circle concentric with bulb axis and having a diameter of 2 3/4".
4. External conductive coating must be grounded.
5. To clean this area, wipe only with soft dry lint-less cloth.
6. Measured at the mold-match line.