

5VP7 CATHODE RAY TUBE

Radio Valve Company of Canada Limited  
April 1948

The 5VP7 is an electrostatic focus and electrostatic deflection tube for oscillograph applications. Other features are a zero first anode current electron gun, and a clear region in the bulb cone.

GENERAL CHARACTERISTICS	<u>Electrical</u>
Heater voltage	6.3 ± 10% volts
Heater current	0.6 ± 10% amperes
Focusing method	Electrostatic
Deflecting method	Electrostatic
Phosphor	P7
Fluorescence	Blue
Phosphorescence	Yellow
Persistence	Long
Direct interelectrode capacitances, approx.	
Grid to all other electrodes	8 uuf
D1 to D2	1 uuf
D3 to D4	1 uuf
D1 to all other electrodes except D2	8 uuf
D2 to all other electrodes except D1	8 uuf
D3 to all other electrodes except D4	10 uuf
D4 to all other electrodes except D3	8 uuf
<u>Mechanical</u>	
Overall length	16 3/4 ± 3/8 inches
Minimum useful screen diameter	4 1/2 inches
Base	Medium shell magnal 11 pin
Basing	11 N
Base alignment	
3D4 trace aligns with pin 1 and tube axis ± 10 degrees.	
Positive voltage on D1 deflects beam approximately towards pin 4.	
Positive voltage on D3 deflects beam approximately towards pin 1.	

MAXIMUM RATINGS	(Design center values)
Anode No. 2 voltage	2500 max. volts DC
Anode No. 1 voltage	1000 max. volts DC
Grid voltage	- 125 to 0 volts
Peak voltage between Anode No. 2 and any deflecting electrode	500 max. volts

TYPICAL OPERATING CONDITIONS			
Anode No. 2 voltage	1500	2000	volts DC
Anode No. 1 voltage for focus	236 to 422	315 to 562	volts DC
Grid voltage (1)	-15 to -45	-20 to -60	volts DC
D1 and D2 deflection factor	52 to 74	70 to 98	volts DC/inch
D3 and D4 deflection factor	47 to 67	63 to 89	volts DC/inch
Anode No. 1 current for any operating condition		-50 to +10	microamperes
Spot position (2)		Within 15 mm.	square

MAXIMUM CIRCUIT VALUES	
Grid circuit resistance	1.5 max. megohms
Resistance in any deflecting electrode circuit (3)	5.0 max. megohms

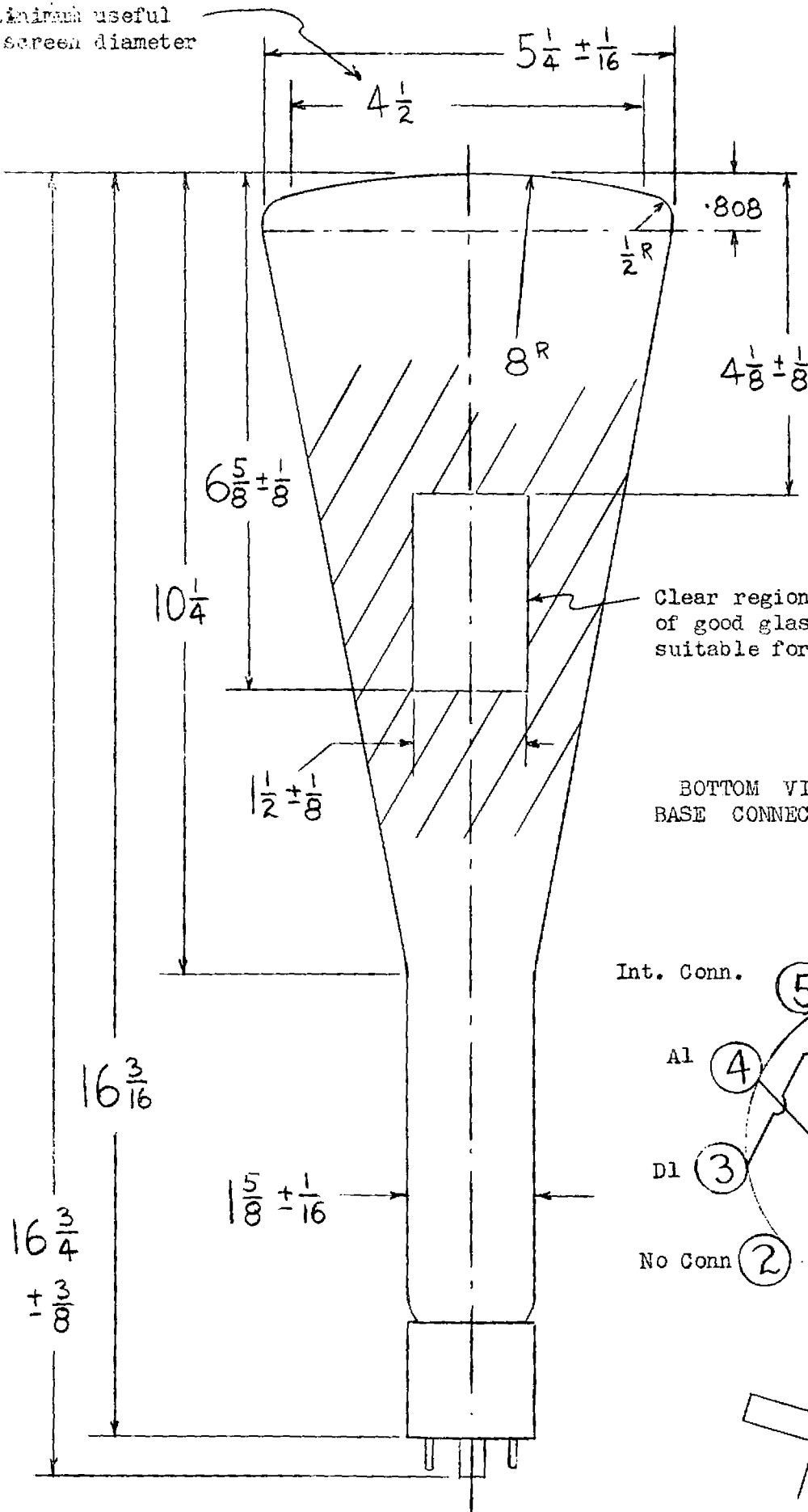
- NOTES
1. For visual extinction of undeflected focused spot.
  2. Connect free deflecting electrodes to Anode No. 2.
  3. It is recommended that the deflecting electrode circuit resistances be approximately equal.

EVP7 CATHODE RAY TUBE

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Minimum useful  
screen diameter

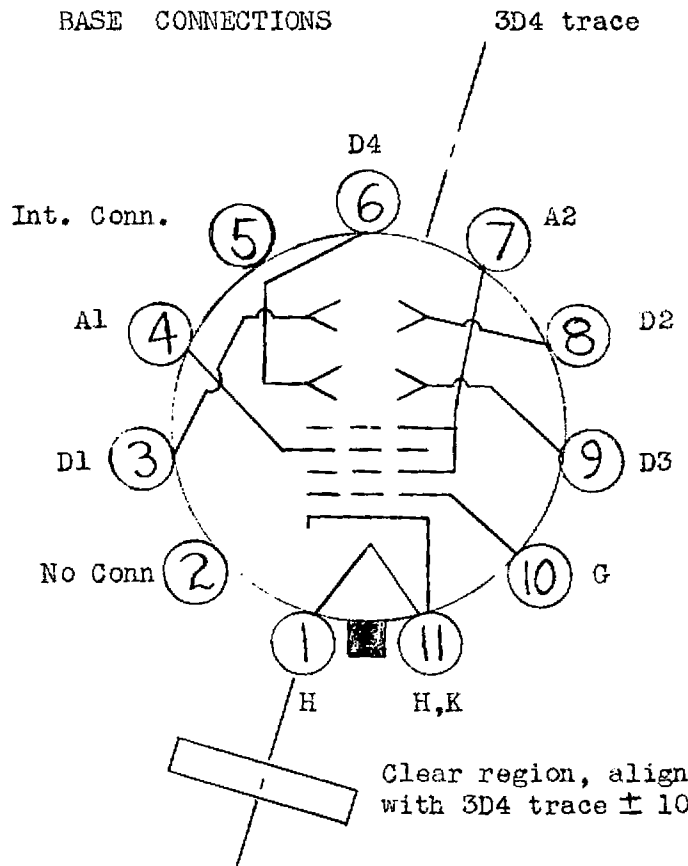


All dimensions  
in inches

D1 and D2 are the  
deflecting electrodes  
nearer the screen

Clear region,  
of good glass quality  
suitable for photography

BOTTOM VIEW OF  
BASE CONNECTIONS



Clear region, aligned  
with 3D4 trace  $\pm 10^\circ$