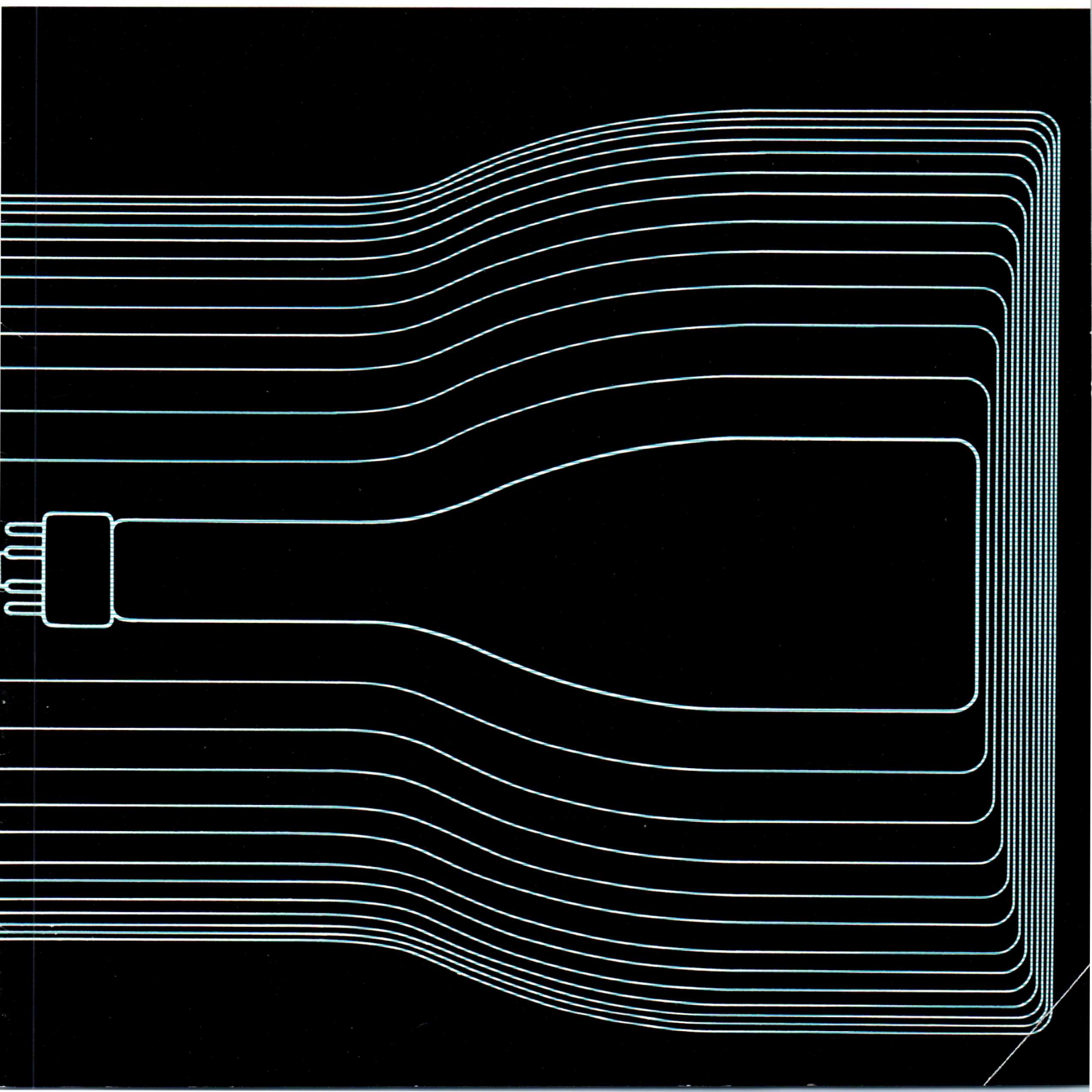
HITACHI

CATHODE RAY TUBES

OSCILLOGRAPH TUBES
RADAR DISPLAY TUBES
MONITOR TUBES
FLYING SPOT TUBES



HITACHI
CATHODE RAY TUBES

INTRODUCTION

This Catalog provides concise technical information on Hitachi Cathode Ray Tubes. Hitachi has been manufacturing many types of Cathode Ray Tubes as well as other electron tubes for the past thirty years. Hitachi Cathode Ray Tubes are the fruits of cooperation of its able engineers and scientists working in its various works and laboratories.

In this catalog are shown condensed technical data such as Maximum Ratings, Typical Operating Conditions, Base Connections and Dimensional Outlines on all the types of Hitachi Cathode Ray Tubes. More complete information is available on request to Electronic Device and Lighting Apparatus Div. Hitachi, Ltd., Marunouchi, Tokyo, Japan.

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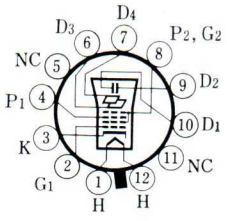
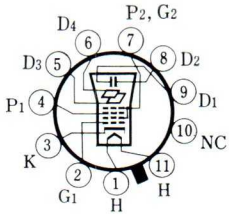
REFERENCE TABLE OF CATHODE RAY TUBES

Dia.	Face	Use: Oscillograph Tubes — Electrostatic Focus • Electrostatic Deflection — Monoaccelerator	Oscillograph Tubes — Electrostatic Focus • Electrostatic Deflection — Post Accelerator	Oscillograph Tubes — Electrostatic Focus • Electrostatic Deflection — Two Beam	Radar Display Tubes — Electrostatic Focus Magnetic Deflection	Radar Display Tubes — Magnetic Focus Magnetic Deflection	Monitor Tubes — Electrostatic Focus Magnetic Deflection	Flying Spot Tubes — Electrostatic Focus Magnetic Deflection
2″	Round Face	2BP- 50HB-						
3″	Round Face	3KP-						
	Round Flat Face	3KP-(F) 3RP-A 3WP- 75AGB-	75WB-					
	Rectangular Flat Face		80CB-					
4″	Rectangular Flat Face		120LB- 120MB-					
5″	Round Face				5AHP7A			
	Round Flat Face	5DEP-(F) 5UP-(F)	5ABP- 5BHP- 5CAP- 5CAP-(M) 5CBP- 5CBP-(M) 130CB- 130HB- 130JB- H8167 130VB H8136 H8129	5SP-A 130DB-				5CNP16
	Rectangular Flat Face	150RB-	140LB-				130AMB4	
7″	Round Face				7ABP7A	7MP7(M)	7TP4	
	Round Flat Face	7VP-(F)						
	Rectangular Face						170AB4	
10″	Round Face				10WP7A	10KP7(M)	10SP4	
	Rectangular Face						270AB4	
12″	Round Face				12ABP7A	12DP7A(M) 12SP7B		
16″	Round Face				16AKP7			

OSCILLOGRAPH TUBES



2BP- · 50HB-



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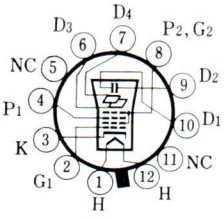

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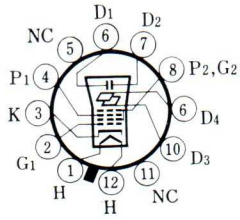

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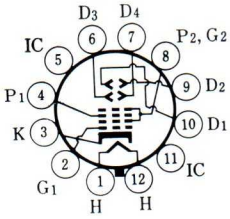
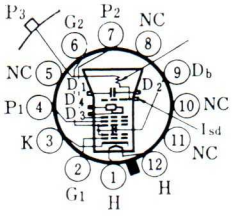


75AGB-



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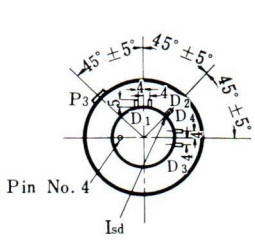
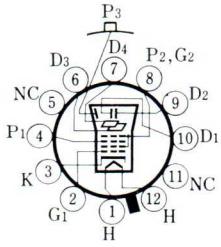
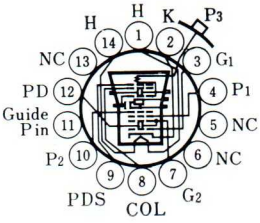




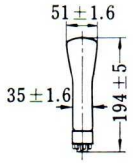
80CB-



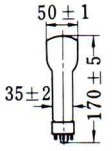
120MB-

Type	Heater		Dimensional Outline		Base & Cap	Direct Interelectrode Capacitances			Screen		Maximum Ratings				
	Voltage (V)	Current (A)	Overall Length (mm)	Greatest Diameter of Bulb (mm)		D_1 to D_2 (pF)	D_3 to D_4 (pF)	G_1 to all other Electrode	Minimum Useful Screen (mm)	Phosphor Numbers	Anode No. 3 (Post Ultor) Voltage (V)	Anode No. 2 (Ultor) Voltage (V)	Anode No. 1 Voltage for Focus (V)	Grid No. 1 Voltage (V)	Ratio of Post Ultor Voltage to Ultor Voltage
2BP-	6.3	0.6	194±5	51±1.6	B12-43	2	2	8	44φ	P 1	—	2,500	1,000	−200	—
50HB-	6.3	0.3	170±5	50±1	B12-43	1.5	1.5	6	44φ	B 1	—	1,500	1,000	−200	—
3KP- 3KP-(F)	6.3	0.6	292±6	76±2	B11-66	2.5	2.5	8	69φ 67φ(F)	P 1 P 7 P 11	—	2,500	1,000	−200	—
3RP-A	6.3	0.6	232±6	76±2	B12-43	2	2	8	67φ	P 1 P 7	—	2,500	1,000	−200	—
3WP-	6.3	0.6	292±6	76±2	B12-43	2.8	1.8	7.8	64×57	P 1 P 7	—	2,500	1,000	−200	—
75AGB-	6.3	0.6	235±5	76.2±2	B12-43	5.2	7.0	7.5	50×50	P 1	—	3,000	1,300	−200	—
75WB-	6.3	0.1	330±10	76±2	B12-207 J1-21	2.1	1.1	8	50×40	B 1 B 2 B 31	7,000	2,000	800	−200	6
80CB-	6.3	0.3	242±6	82.4±2	B12-43 J1-21	4	4	11	60×45	B 1	4,000	2,000	1,000	−200	2
120MB-*	12.6	0.15	318±7	117.5 ±2	J1-21	4.0	3.3	7.4	80×64	P 1 P 2 P 7 P 11 P 31	6,600	1,540	1,540	−200	4.28

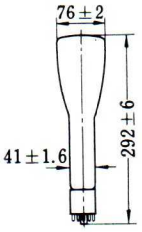
* This type is with the scales inside.



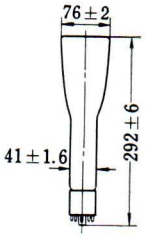
2BP-



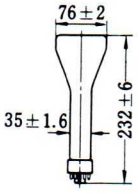
50HB-



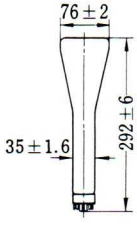
3KP-



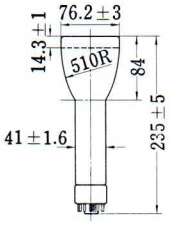
3KP-(F)



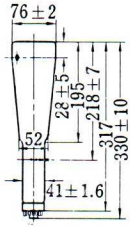
3RP-A



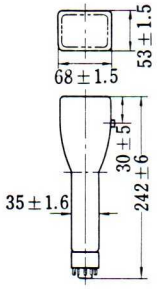
3WP-



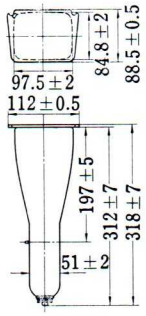
75AGB-



75WB-



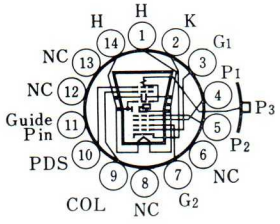
80CB-



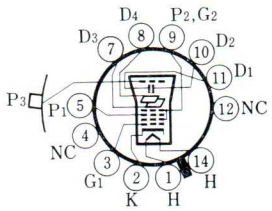
120MB-

Equipment Design Ranges			Typical Operating Conditions						
Anode No. 1 Voltage (V)	Deflection Factors		Anode No. 3 (Post Ultor) Voltage (V)	Anode No. 2 (Ultor) Voltage (V)	Anode No. 1 Voltage for Focus (V)	Pattern Adjustment Electrode Voltage Deflection Plate Shield Voltage (V)	Grid No. 1 Voltage for Visual Cut Off (V)	Deflection Factors	
	D_1 to D_2 (Vdc/cm/kV of Eb_2)	D_3 to D_4 (Vdc/cm/kV of Eb_2)						D_1 to D_2 (Vdc/cm)	D_3 to D_4 (Vdc/cm)
Eb_2× 15～28%	45.3～61.1	29.1～39.4	—	1,000	150～280	—	−67.5 max	45.3～61.1	29.1～39.4
			—	2,000	300～560	—	−135 max	90.6～122.2	58.2～78.8
Eb_2× 14～32%	104 max	90 max	—	500	70～160	—	−34 max	52 max	45 max
			—	1,000	140～320	—	−67.5 max	104 max	90 max
Eb_2× 16～30%	19.7～26.8	15.0～20.5	—	1,000	160～300	—	−45 max	19.7～26.8	15.0～20.5
			—	2,000	320～600	—	−90 max	39.4～53.6	30.0～41.0
Eb_2× 16.5～31%	28.7～39.0	20.5～27.6	—	1,000	165～310	—	−67.5 max	28.7～39.0	20.5～27.6
			—	2,000	330～620	—	−135 max	57.4～78.0	41.0～55.2
Eb_2× 16.5～31%	16.3～19.9	11.2～13.8	—	1,000	165～310	—	−30～−50	16.3～19.9	11.2～13.8
			—	1,500	247～465	—	−45～−75	24.4～29.8	16.9～20.5
			—	2,000	330～620	—	−60～−100	32.6～39.8	22.4～27.6
Eb_2×23.6% max	21.0～26.2	10.5～15.7	—	1,500	350 max	—	−90 max	31.5～39.4	15.8～23.6
Eb_2× 14.0～26.0%	20～28	9.6～14.4	3,000	500	70～130	—	−15～−35	10～14	4.8～7.2
Eb_2× 15～35%	$Eb_3=2Eb_2$ 29～39.4	21～28.6	1,000	500	75～175	—	−20～−40	14.5～19.7	10.5～14.3
Eb_2× 21.4～35.8%	$Eb_3=2Eb_2$ 7.9～11.4	4.3～7.1	6,000	1,400	300～500	1,350～1,450	−40～−100	11.0～16.0	6～10

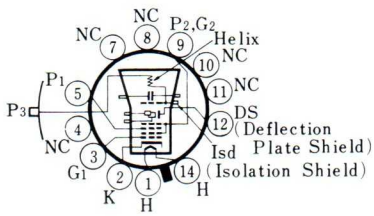
OSCILLOGRAPH TUBES

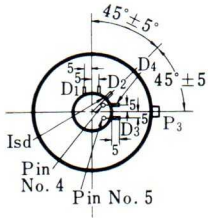


120LB-

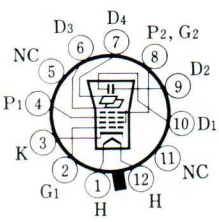


5ABP-





5BHP- · 5CBP- · 130CB- · 5CBP-(M)



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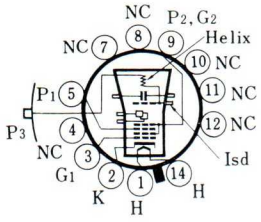

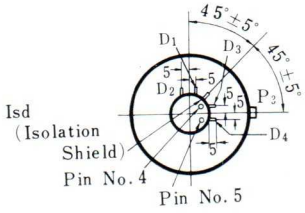

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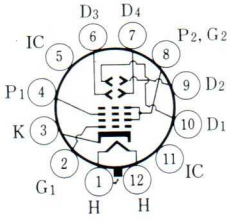

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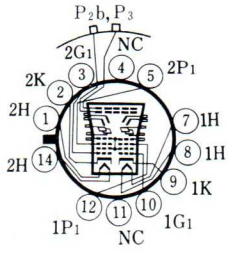
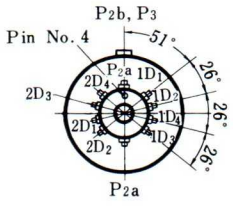
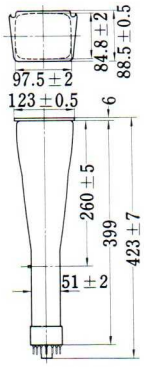


5SP-A

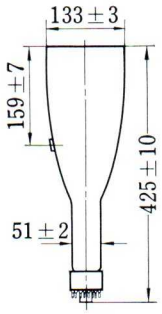


Type	Heater		Dimensional Outline		Base & Cap	Direct Interelectrode Capacitances			Screen		Maximum Ratings				
	Voltage (V)	Current (A)	Overall Length (mm)	Greatest Diameter of Bulb (mm)		D_1 to D_2 (pF)	D_3 to D_4 (pF)	G_1 to All other Electrode (pF)	Minimum Useful Screen (mm)	Phosphor Numbers	Anode No. 3 (Post Ultor) Voltage (V)	Anode No. 2 (Ultor) Voltage (V)	Anode No. 1 Voltage for Focus (V)	Grid No. 1 Voltage (V)	Ratio of Post Ultor Voltage to Ultor Voltage
120LB-*	6.3	0.3	424±7	117.5 ±2	B14-38 J1-21	2.0	2.0	7.4	80×48	P1 P2 P7 P11 P31	11,000	2,200	770	−200	5.0
5ABP-	6.3	0.6	425±10	133±3	B12-37 J1-22	2.5	1.3	8	116×100	P1 P2 P7 P11 P15	6,000	2,600	1,000	−200	2.3
5BHP-	6.3	0.6	464±10	133±3	B12-37 J1-21 Pins	1.9	1.5	6.4	100×40	P1 P2 P7 P11	12,000	2,000	800	−200	6
5CAP- 5CAP-(M)	6.3	0.6	445±10	133±3	B12-37 J1-21 Pins	1.9	1.4	7.0	100×80	P1 P2 P7 P11 P31	6,000	2,000	800	−200	3.3
5CBP- 5CBP-(M)	6.3	0.6	464±10	133±3	B12-37 J1-21 Pins	1.9	1.4	7	100×60	P1 P2 P7 P11 P31	6,000	2.000	800	−200	3
5DEP-(F)	6.3	0.6	375±10	133.3 ±2.4	B12-43	5.2	7.0	7.5	114φ	P1	—	2,750	1,100	−220	—
5SP-A	6.3	0.6	464±10	133±3	B12-37 J1-22 C1-2	2 max	2.3 max	6.6 max	116φ	P1 P2 P7 P11	7,500	2,500	1,000	−200	3
5UP-(F)	6.3	0.6	375±10	133±3	B12-43	2.5	2.5	8	114φ	P1 P2 P7 P11 P15	—	2,500	1,000	−200	—

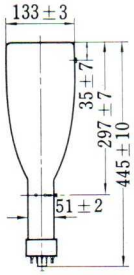
* This type is with the scales inside.



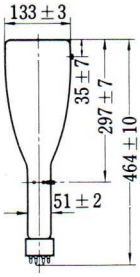
120LB-



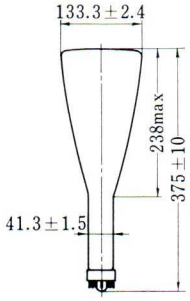
5ABP-



5BHP-・5CBP-・5CBP-(M)・130CB-(M)



5CAP-・5CAP-(M)・130VB-



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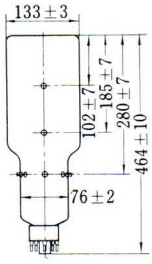
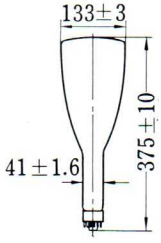


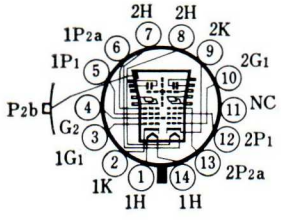
5SP-A

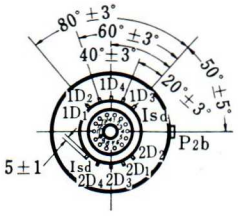


5UP-(F)

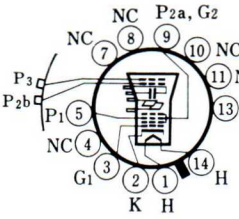
Equipment Design Ranges			Typical Operating Conditions						
Anode No. 1 Voltage (V)	Deflection Factors		Anode No. 3 (Post Ultor) Voltage (V)	Anode No. 2 (Ultor) Voltage (V)	Anode No. 1 Voltage for Focus (V)	Pattern Adjustment Electrode Voltage Deflection Plate Shield Voltage (V)	Grid No. 1 Voltage for Visual Cut Off (V)	Deflection Factors	
	D_1 to D_2 (Vdc/cm/kV of Eb_2)	D_3 to D_4 (Vdc/cm/kV of Eb_2)						D_1 to D_2 (Vdc/cm)	D_3 to D_4 (Vdc/cm)
Eb_2× 15.0～35.0%	$Eb_3=5Eb_2$ 6.0～8.0	2.0～3.75	10,000	2,000	300～700	1,900～2,100	−40～−100	12.0～16.0	4.0～7.5
Eb_2× 20～34.5%	$Eb_3=2Eb_2$ 10.5～14.2	6.9～9.5	2,000	2,000	400～685	—	−52～−87	16.9～22.8	11.4～15.4
			3,000	1,500	300～515	—	−39～−65	15.8～21.2	10.6～14.2
			4,000	2,000	400～685	—	−52～−87	21.2～28.3	13.7～18.9
Eb_2× 10.8～35.3%	$Eb_3=6Eb_2$ 15.5～20.1	3.5～4.3	10,000	1,670	180～590	1,580～1,760	−50～−80	27.6～33.5	5.9～7.2
Eb_2× 12.2～36.2%	$Eb_3=3.24Eb_2$ 10.3～13.0	4.8～6.0	6,000	1,850	225～670	1,720～1,980	−60～−85	19～24	8.9～11.0
Eb_2× 10.0×29.8%	$Eb_3=2.1Eb_2$ 10～12.1	3.15～3.95	4,000	1,330	130～395	1,260～1,400	−43～−60	15.1～18.4	4.7～6.0
			4,000	1,600	160～475	1,520～1,680	−52～−72	17.0～20.6	5.3～6.7
			4,000	1,900	190～565	1,800～2,000	−62～−85	19～23	6.0～7.5
Eb_2× 17.4×32.0%	9.5～12.6	5.5～7.3	—	1,500	260～480	—	−67.5	14.2～18.9	8.3～11.0
Eb_2× 18.1～34.8%	$Eb_3=2Eb_2$ 16.3～19.9	13.8～16.9	3,000	1,500	272～521	—	−34～−56	24.4～29.9	20.9～25.6
			4,000	2,000	363～695	—	−45～−75	32.7～39.8	27.6～33.8
Eb_2× 17～32%	11.1～15.2	9.2～12.6	—	1,500	260～480	—	−67.5 max	16.6～22.8	13.8～18.8
			—	2,000	340～640	—	−90 max	22.1～30.3	18.4～24.6

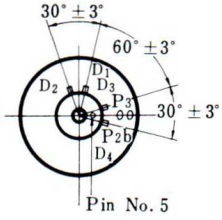
OSCILLOGRAPH TUBES



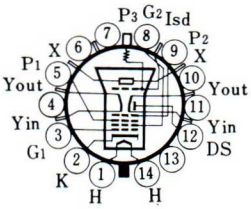


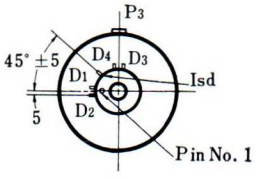
130DB-



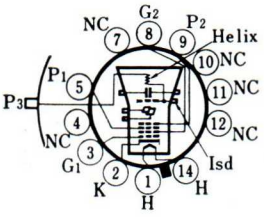


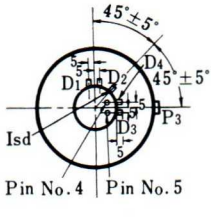
130HB-



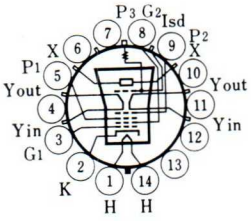


130JB- · H8167





130VB- · H8136



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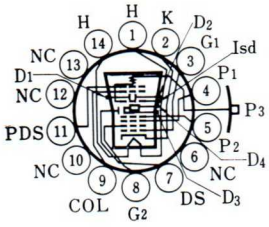
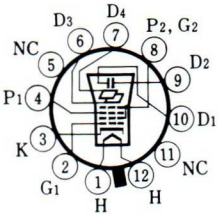
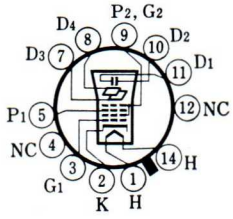


140LB-



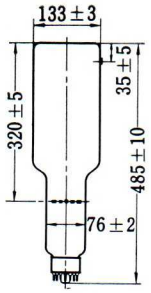
150RB-



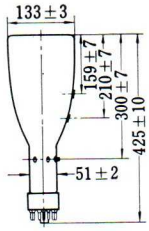
7VP-(F)

Type	Heater		Dimensional Outline		Base & Cap	Direct Interelectrode Capacitances			Screen		Maximum Ratings				
	Voltage (V)	Current (V)	Overall Length (mm)	Greatest Diameter of Bulb (mm)		D_1 to D_2 (pF)	D_3 to D_4 (pF)	G_1 to All other Electrode (pF)	Minimum Useful Screen (mm)	Phosphor Numbers	Anode No. 3 (Post Ultor) Voltage (V)	Anode No. 2 (Ultor) Voltage (V)	Anode No. 1 Voltage for Focus (V)	Grid No. 1 Voltage (V)	Ratio of Post Ultor Voltage to Ultor Voltage
130CB-	6.3	0.3	464±10	133±3	B12-37 J1-21 Pins	2.5	1.5	6.4	100×60	B 1 B 2 B 7 B 31	6,000	2,000	800	−200	3
130DB-	6.3	0.6	485±10	133±3	B14-38 J1-21 Pins	3.3	1.6	7.4	116×100	B 1 B 2 B 7 B 11	—	3,000	1,000	−200	—
130HB-	6.3	0.6	425±10	133±3	B12-37 J1-22 Pins	2.3	1.1	8	116×100	B 1 B 2 B 7 B 11 B 15	6,000	2,600	1,000	−200	2.3
130JB- H8167*	6.3	0.6	532±7	133±3	B14-38 J1-21	2	1.5	8	100×40	B 1 B 31	12,000	2,000	1,200	−200	6
130VB- H8136*	6.3	0.6	445±10	133±3	B12-37 J1-21	1.9	1.4	7	100×80	B 1 B 7 B 11 B 31	6,600	2,200	800	−200	3.3
H8129	6.3	0.6	532±10	133±3	B14-38 J1-21	4.8		8.3	80	P 1 P 2 P 7 P 11 P 31	12,000	2,000	1,000	−200	6
140LB-*	6.3	0.3	466±7	136±2	B14-38 J1-21	3.0	4.5	6.4	100×60	P 1 P 2 P 7 P 11 P 31	16,500	2,640	2,640	−200	6.25
150RB-	6.3	0.6	285±10	154±3	B12-43	2.5	2.5	8	125×90	P 1	—	2,500	1,000	−200	—
7VP-(F)	6.3	0.6	368±10	178±3	B12-37	3	2	6	150	P 1 P 2 P 7 P 11	—	4,000	2,000	−200	—

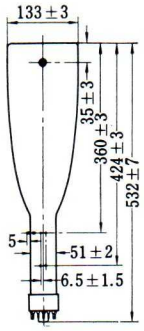
* These types are with the scales inside.



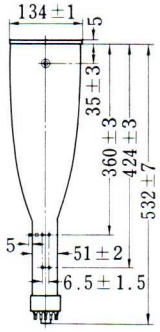
130DB-



130HB-



130JB-



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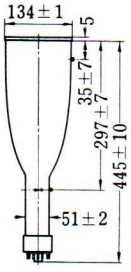

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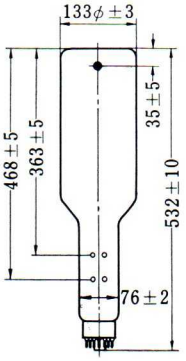

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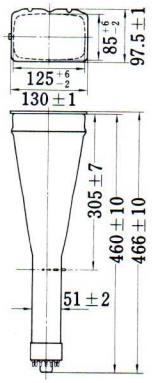
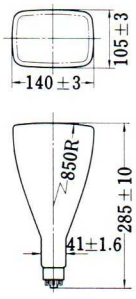
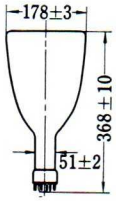


140LB-



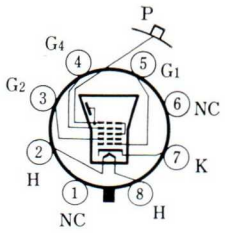
150RB-



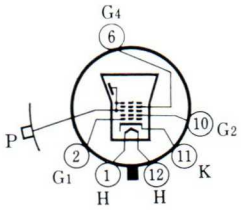
7VP-(F)

Equipment Design Ranges			Typical Operating Conditions						
Anode No. 1 Voltage (V)	Deflection Factors		Anode No. 3 (Post Ultor) Voltage (V)	Anode No. 2 (Ultor) Voltage (V)	Anode No. 1 Voltage for Focus (V)	Pattern Adjustment Electrode Voltage Deflection Plate Shield Voltage (V)	Grid No. 1 Voltage for Visual Cut Off (V)	Deflection Factors	
	D_1 to D_2 (Vdc/cm/kV of Eb_2)	D_3 to D_4 (Vdc/cm/kV of Eb_2)						D_1 to D_2 (Vdc/cm)	D_3 to D_4 (Vdc/cm)
$Eb_2\times$ 9.8～30%	$Eb_3=3Eb_2$ 8.3～11.3	3.0～4.13	4,000	1,330	130～400	1,240～1,420	−35～−56	11～15	4.0～5.5
$Eb_2\times$ 13.3～26.7%	5.3～7.3	3.7～5.0	—	3,000	400～800	—	−50～−80	16～22	11～15
$Eb_2\times$ 20～34.5%	$Eb_3=2Eb_2$ 10.5～14.2	6.9～9.5	2,000	2,000	400～690	—	−52～−87	16.9～22.8	11.4～15.4
			3,000	1,500	300～515	—	−39～−65	15.8～21.2	10.6～14.2
			4,000	2,000	400～690	—	−52～−87	21.1～28.3	13.7～18.9
$Eb_2\times$ 10～50%	$Eb_3=6Eb_2$ 18～22	5～6	10,000	1,670	100～1,000	—	−40～−70	18.0～22.0	5～6
$Eb_2\times$ 12.2～36.2%	10.3～13	4.8～6.0	6,000	1,850	225～670	—	−60～−85	19.0～24.0	8.9～11.0
$Eb_2\times$ 10.8×35.3%	$Eb_3=6Eb_2$ 10.8～13.2	2.7～3.3	10,000	1,670	180～590	1,580～1,760	−40～−70	18.0～22.0	4.5～5.5
$Eb_2\times$ 16.7～41.7%	$Eb_3=6.25Eb_2$ 5.0～7.5	1.25～2.3	15,000	2,400	400～1,000	2,200～2,600	−60～−100	12.0～18.0	3.0～5.5
$Eb_2\times$ 18～32%	19.0～26.0	16.0～22.0	—	2,000	360～640	—	−50～−90	38.0～52.0	32.0～44.0
$Eb_2\times$ 27×40%	12.2～16.1	9.8～13.4	—	1,500	400～600	—	−42 max	18.5～24.4	15.0～20.1
			—	3,000	800～1,200	—	−84 max	36.6～48.4	29.5～40.2

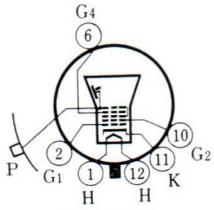
RADAR DISPLAY TUBES



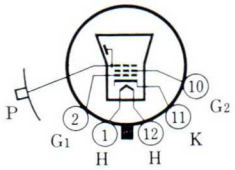
5AHP7A



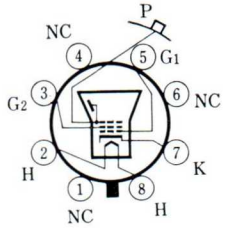
7ABP7A
10WP7A
16AKP7



12ABP7A

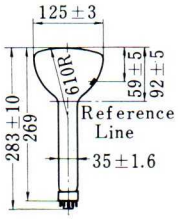


7MP7(M)
10KP7(M)
12SP7B



12DP7A(M)

Type	Heater		Focusing Method	Deflection Method	Dimensional Outline		Base	Cap	Deflection Angle
	Voltage (V)	Current (A)			Overall Length (mm)	Greatest Diameter of Bulb (mm)			(°)
5AHP7A	6.3	0.6	Electrostatic	Magnetic	283±10	125±3	B8-11	J1-22	53
7ABP7A	6.3	0.6	Electrostatic	Magnetic	337±10	183±3	B6-63	J1-21	50
7MP7(M)	6.3	0.6	Magnetic	Magnetic	324±10	183±3	B5-57	J1-21	50
10KP7(M)	6.3	0.6	Magnetic	Magnetic	448±10	267±3	B5-57	J1-21	50
10WP7A	6.3	0.6	Electrostatic	Magnetic	430±10	267±3	B6-63	J1-21	50
12ABP7A	6.3	0.6	Electrostatic	Magnetic	457±10	316±3	B6-63	J1-21	55
12DP7A(M)	6.3	0.6	Magnetic	Magnetic	498±13	305±5	B8-11	C1-5	50
12SP7B	6.3	0.6	Magnetic	Magnetic	476±10	316±3	B5-57	J1-21	50
16AKP7	6.3	0.6	Electrostatic	Magnetic	560±10	403±3	B7-51	J1-21	53



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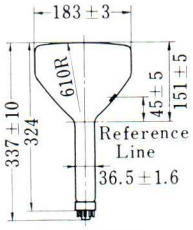
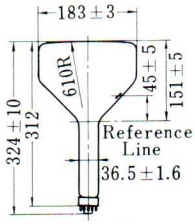
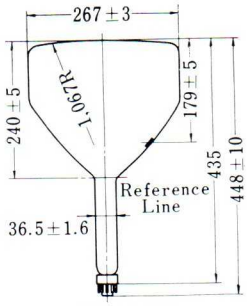


7ABP7A



7MP7(M)



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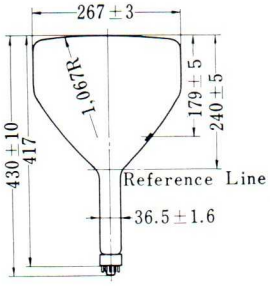
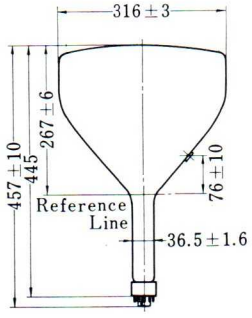
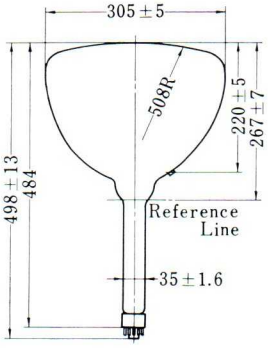


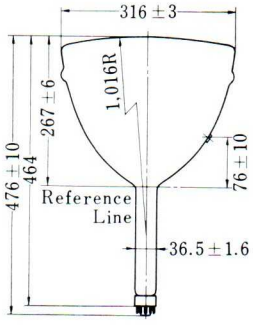
10WP7A



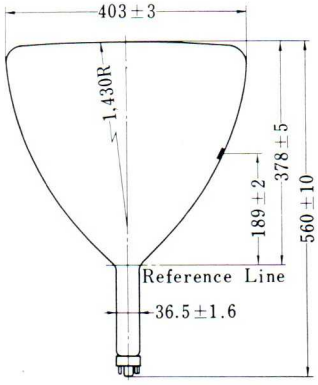
12ABP7A



12DP7A(M)



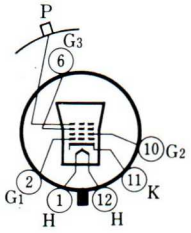
12SP7B



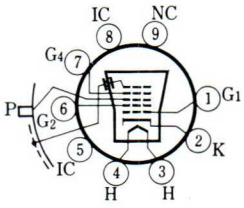
16AKP7

Direct Interelectrode Capacitance		Minimum Useful Screen Diameter	Grid No. 1 Circuit Resistance	Maximum Ratings				Typical Operating Conditions				
Grid No. 1 to All Other Electrodes (pF)	Cathode to All Other Electrodes (pF)	(mm)	(mΩ)	Anode Voltage (V)	Focusing Electrode Voltage (V)	Grid No. 2 Voltage (V)	Grid No. 1 Voltage (V)	Anode Voltage (V)	Focusing Voltage (V)	Grid No. 2 Voltage (V)	Grid No. 1 Voltage (V)	Focusing Field (AT)
10	8	108	1.5	11,000～5,000	−550～+1,100	770	+0～−200	5,000	0～300	300	−33～−77	—
10	8	152	1.5	11,000～6,000	−550～+1,100	770	+0～−200	7,000	0～300	300	−33～−77	—
10	8	152	1.5	8,800～6,000	—	770	+0～−180	7,000	—	250	−27～−63	500
10	8	228	1.5	11,000～7,000	—	770	+0～−180	9,000	—	250	−27～−63	620
10	8	228	1.5	13,200～7,000	−450～+900	600	+0～−200	10,000	0～400	300	−33～−77	—
6	5	279	1.5	13,200～7,000	−500～+1,000	770	+0～−180	10,000	0～300	300	−33～−77	—
11	10	254	1.5	11,000～6,000	—	770	+0～−180	6,000	—	250	−25～−70	500
10	8	279	1.5	11,000～8,000	—	450	+0～−180	9,000	—	250	−27～−63	500
9	7	372	1.5	14,000	−500～+1,000	450	+0～−180	12,000	−300～+250	300	−35～−75	—

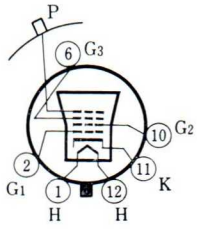
MONITOR TUBES



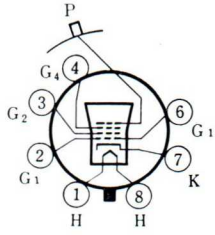
7TP4
10SP4



170AB4

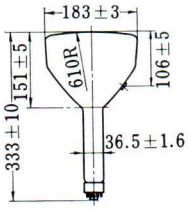


270AB4

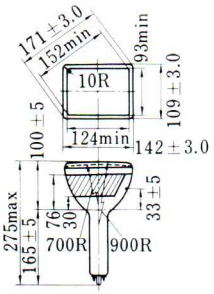


13QAMB4

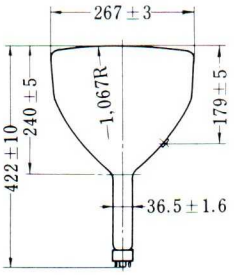
Type	Heater		Focusing Method	Deflection Method	Dimensional Outline		Base	Cap	Deflection Angle
	Voltage (V)	Current (A)			Overall Length (mm)	Greatest Diameter of Bulb (mm)			(°)
7TP4	6.3	0.6	Electrostatic	Magnetic	333±10	183±3	B6-63	J1-21	50
170AB4	6.3	0.15	Electrostatic	Magnetic	275max	171±3	Special	J1-21	70
10SP4	6.3	0.6	Electrostatic	Magnetic	422±10	267±3	B6-63	J1-21	50
270AB4	6.3	0.15	Electrostatic	Magnetic	355±10	267±3	B6-63	J1-21	70
13QAMB4	6.3	0.3	Electrostatic	Magnetic	199±7	126±3	B7-208	J1-21	70



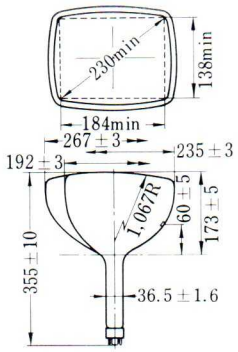
7TP4



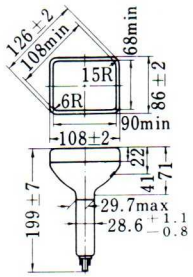
170AB4



10SP4



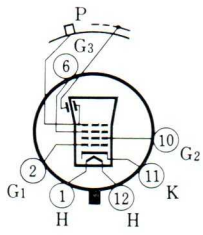
270AB4

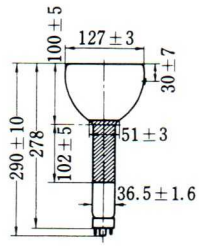


130AMB4

Direct Interelectrode Capacitance		Minimum Useful Screen Diameter	Grid No. 1 Circuit Resistance	Maximum Ratings				Typical Operating Conditions			
Grid No. 1 to All Other Electrodes (pF)	Cathode to All Other Electrodes (pF)	(mm)	(MΩ)	Anode Voltage (V)	Focusing Electrode Voltage (V)	Grid No. 2 Voltage (V)	Grid No. 1 Voltage (V)	Anode Voltage (V)	Focusing Voltage (V)	Grid No. 2 Voltage (V)	Grid No. 1 Voltage (V)
6	5	152	1.5	13,200～9,000	2,200	450	+0～−125	10,000	1,160～1,560	200	−22～−52
6	5	See drawing	1.5	14,000～8,000	−500～+500	550～200	+0～−154	10,000	0～300	300	−40～−70
6	5	232	1.5	15,400～9,000	3,300	450	+0～−125	12,000	1,400～1,900	200	−22～−52
6	5	See drawing	1.5	15,400～9,000	3,300	450	+0～−154	10,000	1,150～1,570	200	−22～−52
6	5	108	1.5	11,000～8,000	−550～1,100	450	+0～−154	10,000	0～300	300	−32～−62

FLYING SPOT TUBES





5CNP16

Type	Heater		Focusing Method	Deflection Method	Dimensional Output		Bass	Cap	Deflection Angle
	Voltage (V)	Current (A)			Overall Length (mm)	Greatest Diameter of Bulb (mm)			(°)
5CNP16	6.3	0.6	Electrostatic	Magnetic	290±10	127±3	B6-63	J1-21	50

STANDARD PHOSPHORS

Designation EIA (CES)	Color		Persistence	Application
	Fluorescent	Phosphorescent		
P 1 (B 1)	Green	Green	Medium	Oscilloscopes
P 2 (B 2)	Blue-Green	Blue-Green	Long	Oscilloscopes and Radar
P 4 (B 4)	White	White	Medium Short	Television Receivers
P 5 (B 5)	Blue	Blue	Medium Short	Photographic Application
P 7 (B 7)	Blue-White	Yellow	Long	Radar
P11 (B11)	Blue	Blue	Short	Oscilloscopes for visual or photographic observation
P12 (B12)	Orange	Orange	Medium Long	Radar
P15 (B15)	Green	Green	Very Short	Flying spot scanner
P16 (B16)	Bluish Purple	Bluish Purple	Very Short	Flying spot scanner
P19 (B19)	Orange	Orange	Long	Radar
P26 (B26)	Orange	Orange	Very Long	Radar Display
P31 (B31)	Yellowish-Green	Yellowish-Green	Medium Short	Oscilloscopes

Direct Interelectrode Capacitance		Minimum Useful Screen Diameter	Grid No. 1 Circuit Resistance	Maximum Ratings				Typical Operating Conditions			
Grid No. 1 to All Other Electrodes (pF)	Cathode to All Other Electrodes (pF)	(mm)	(MΩ)	Anode (Ultor) Voltage (V)	Focusing Electrode Voltage (V)	Grid No. 2 Voltage (V)	Grid No. 1 Voltage (V)	Anode (Ultor) Voltage (V)	Focusing Voltage (V)	Grid No. 2 Voltage (V)	Grid No. 1 Voltage (V)
6	5	108	1.5	22,000～18,000	3,850	450	+0 −125	20,000	2,220～3,160	200	−22～−52

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