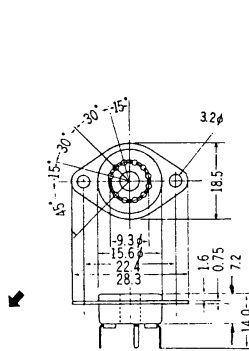
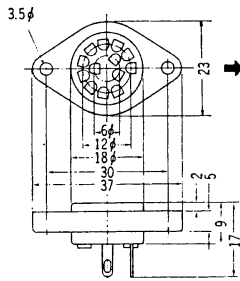


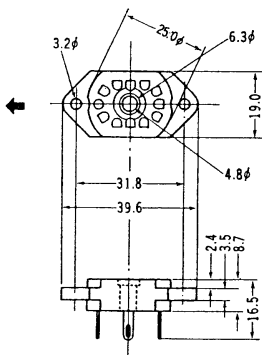
		TOP VIEW TYPE (DC OPERATION)								SIDE VIEW TYPE				
REFERENCE NUMBER		CD11	CD12	CD13	CD24	CD25	CD27	CD28	CD43	GR-110	GR-116D	GR-111	CD66	
Outline Drawing														
Pin Connections														
Socket		TSB-14P	TSB-12P	TSM-11P	TSB-13P	TSR-11P	TSB-12P	TSM-13P	TSR-11P					
Construction		0~9	0~9	0~9	0~9	0~9	0~9	0~9	0~9	0~9 Decimal Point	0~9 Decimal Point Left-Right	0~9 Decimal Point	0~9 Decimal Point	
ELECTRICAL SPECIFICATIONS	Supply Voltage (Vdc) Ebb	MIN. 170 ST. — MAX. —	MIN. 200 ST. — MAX. —	MIN. 170 ST. — MAX. —	MIN. 170 ST. — MAX. —	MIN. 170 ST. — MAX. —	MIN. 200 ST. — MAX. —	MIN. 170 ST. — MAX. —	MIN. 170 ST. — MAX. —	MIN. 170 ST. — MAX. —	MIN. 175 ST. — MAX. —	MIN. 170 ST. — MAX. —	MIN. 170 ST. — MAX. —	
	Ionization Voltage (Vdc) Ez	— — 170	— — 170	— — 170	— — 170	— — 170	— — 170	— — 170	— — 170	— — 170	— — 170	— — 170	— — 170	
ABSOLUTE RATINGS	Cathode Current (mA)dc Numerical Cathode ik Decimal Point ik(·)	1.5 2.5 3.5 (Ebb=170Vdc, Rp=10kΩ)	3.5 5.0 6.5 (Ebb=200Vdc, Rp=12kΩ)	0.6 0.9 1.2 (Ebb=170Vdc, Rp=33kΩ)	1.5 2.25 3.0 (Ebb=170Vdc, Rp=10kΩ)	1.5 2.5 3.5 (Ebb=170Vdc, Rp=10kΩ)	7.5 10 12.5 (Ebb=200Vdc, Rp=5kΩ)	1.0 1.8 2.5 (Ebb=170Vdc, Rp=15kΩ)	1.5 2.25 3.0 (Ebb=170Vdc, Rp=10kΩ)	1.2 1.9 2.6 (Ebb=190Vdc, Rk=27kΩ)	2.2 3 3.8 (Ebb=180Vdc, Rk=15kΩ)	1.5 2.25 3.0 (Ebb=190Vdc, Rp=20kΩ)	1.5 2.25 3.0 (Ebb=170Vdc, Rp=12kΩ)	
	Average Each Cathode Power Dissipation (w) Numerical Cathode Pk Decimal Point Pk(·)	— — 0.5	— — 1	— — 0.2	— — 0.5	— — 0.5	— — 2	— — 0.4	— — 0.5	— — 0.5	— — 0.5	— — 0.5	— — 0.5	— — 0.5
MECHANICAL DATA	Peak Cathode Current (mA)dc Numerical Cathode ik Decimal Point ik(·)	— — 4.0	— — 10	— — 1.5	— — 3.5	— — 4.0	— — 12.5	— — 3	— — 3.5	— — 3.0	— — 4	— — 3.5	— — 3.5	
	Range of Average Cathode Current (mA)dc Numerical Cathode Decimal Point	1.5 ~ 3.5	3.5 ~ 6.5	0.6 ~ 1.2	1.5 ~ 3.0	1.5 ~ 3.5	7.5 ~ 12.5	1.0 ~ 2.5	1.5 ~ 3.0	1.2 ~ 2.6	2.2 ~ 3.8	1.5 ~ 3.0	1.5 ~ 3.0	
	Ambient Temperature (for storage) Ts (deg C)	-65 ~ +70	-65 ~ +70	-65 ~ +70	-65 ~ +70	-65 ~ +70	-65 ~ +70	-65 ~ +70	-65 ~ +70	-65 ~ +70	-65 ~ +70	-65 ~ +70	-65 ~ +70	-65 ~ +70
	Operating Ambient Temperature Tc (deg C)	-10 ~ +55	-10 ~ +55	-10 ~ +55	-10 ~ +55	-10 ~ +55	-10 ~ +55	-10 ~ +55	-10 ~ +55	-10 ~ +55	-10 ~ +55	-10 ~ +55	-10 ~ +55	-10 ~ +55
TYPICAL OPERATING CONDITIONS	Maximum Viewing Angle (deg) (approx)	160	160	160	160	160	160	160	160	90	100	100	100	
	Weight (g) (approx)	25	75	4	12	13	130	9	10	2.3	4 (INCL. STAND-OFF)	7	10	
TYPICAL OPERATING CONDITIONS	Supply Voltage (Vdc)	170 200 250 300	200 250 300	170 200 250 300	170 200 250 300	170 200 250 300	200 250 300	170 200 250 300	170 200 250 300	190 200 230	Rk 180 200	190 200 250 300	190 200 250 300	
	Anode Series Resistor (KΩ) Decimal Point Series Resistor (KΩ) Pulse Duration (mS)	10 22 42 62	12 22 32	33 65 120 180	10 24 47 68	10 22 43 62	5 10 15	15 35 65 100	10 24 47 68	Rk 27 33 47 180 200 300	Rk 15 20 100 150	Rp 20 24 47 68	Rk 20 24 47 68 91 110 200 300	



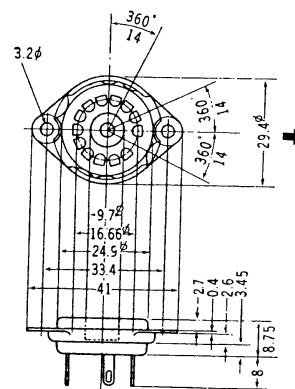
TSM-11P
CD 13



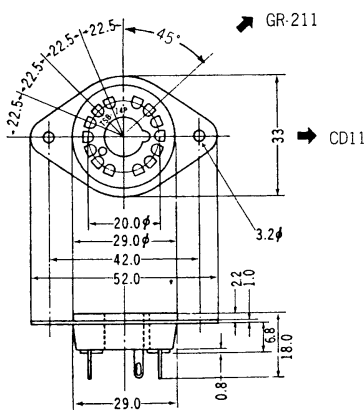
TSM-13P
CD 28



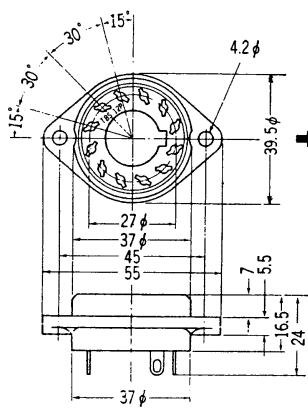
TSR-11P
CD 25, CD 43



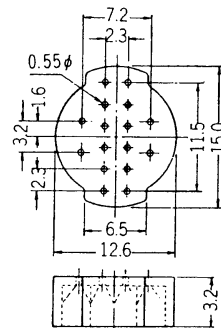
TSB-13P
CD 24



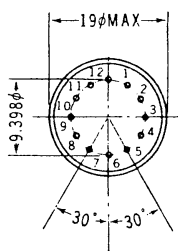
TSB-14P
CD11, GR-211



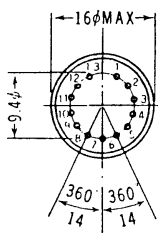
TSB-12P
CD12, CD27, GR-414, GR-311



GR-116D
GR-116P



CD 66
CD 66p



GR-111
GR-111p



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