

RCA

2P22

IMAGE ORTHICON

Obsolete type--data are presented for JETEC Registration Records only

DATA

General:

Heater, for Unipotential Cathode:

Voltage (AC or DC)	6.3 ± 10%	volts
Current	0.6	Ampere

Direct Interelectrode Capacitance:

Anode to All Other Electrodes	9.5	μuf
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Photocathode, Semitransparent:

Response	See Accompanying Curve	
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Useful Image Size (1 x 1 aspect ratio)	1-1/32" Max.	Diagonal
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Focusing Method	Magnetic	
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Deflection Method	Magnetic	
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Overall Length	8-13/16" ± 1/4"	
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Maximum Bulb Radius	1-3/32"	
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Base	Small-Button Trihexal 18-Pin	
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Mounting Position	Any	
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Focusing Coil Length	6"	
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Deflecting-Coil Length	3-3/16"	
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Alignment-Coil Length†	29/32"	
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Photocathode Distance Inside End of Focus Coil	0.6"	
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Deflection Coil Distance Inside End of Focus Coil	3"	
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Maximum Ratings, Absolute Values:

PHOTOCATHODE:

Voltage	-400 max.	volts
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Illumination	10 max.	ft-c
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AMBIENT TEMPERATURE	60 max.	°C
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TARGET & GRID-NO.6 VOLTAGE:

Positive Value	50 max.	volts
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Negative Value	50 max.	volts
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GRIDS No.4 & No.5 VOLTAGE	200 max.	volts
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GRIDS No.2 & No.3 & DYNODE-No.1 VOLTAGE	300 max.	volts
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GRID-No.1 VOLTAGE:

Negative bias value	50 max.	volts
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Positive bias value	0 max.	volts
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PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode	125 max.	volts
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Heater positive with respect to cathode	10 max.	volts
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ANODE-SUPPLY VOLTAGE*	1650 max.	volts
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VOLTAGE PER MULTIPLIER STAGE	350 max.	volts
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Typical Operation:

Photocathode Voltage (Image Focus)*	-250	volts
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Target & Grid No.6 Voltage ^o	0	volts
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Grids-No.5 (Decelerator) & No.4 (Beam Focus) Voltage [#]	90	volts
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Grids-No.3 & No.2 & Dynode-No.1 Voltage	210	volts
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Grid-No.1 Voltage for Picture Cutoff [®]	-15	volts
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Dynode-No.2 Voltage	520	volts
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Dynode-No.3 Voltage	830	volts
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Dynode-No.4 Voltage	1140	volts
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Dynode-No.5 Voltage	1450	volts
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Anode Voltage	1500	volts
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Anode Current (DC)	15	μamp
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Target Temperature Range	35 to 45	°C
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Ratio of Peak-to-Peak Highlight Video Signal

to RMS Noise Current (Approx.)	15	
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Minimum Peak-to-Peak Blanking Voltage	10	volts
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Field Strength at Center of Focusing Coil	75	gausses
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† Coil is provided with two opposite sets of windings, and should permit adjustment from 0 to 45 ampere turns. Adjust current and rotation for brightest picture.

• Ratio of dynode voltages is shown under Typical Operation.

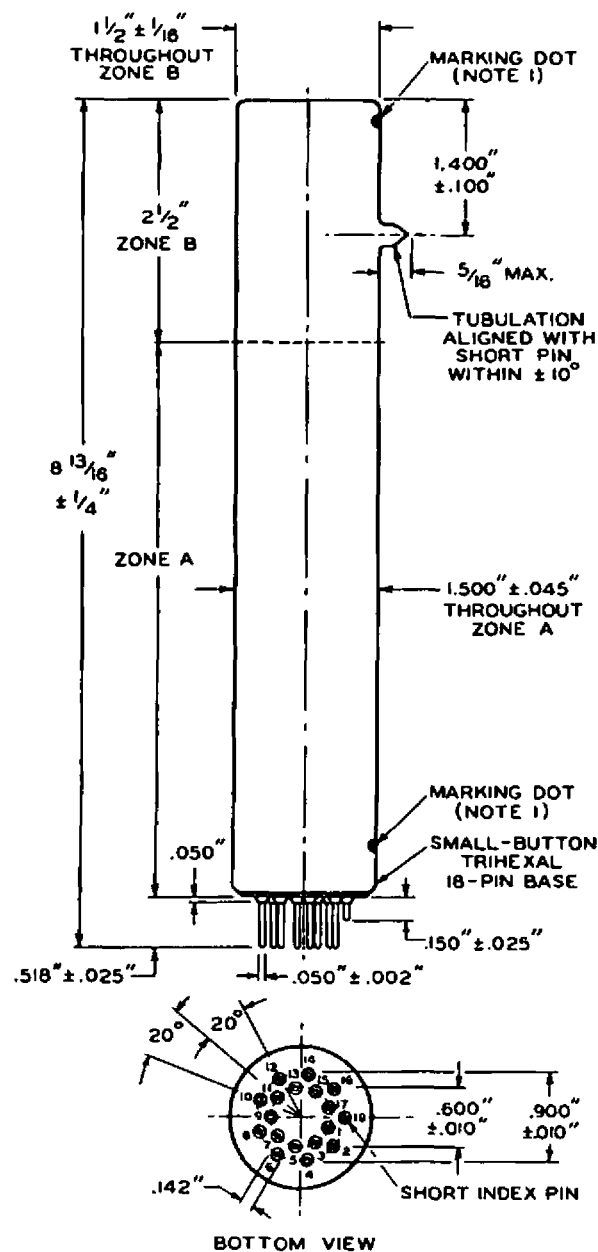
* Adjustable within +40% and -30% of this value.

◦ Adjustable within ± 3 volts of indicated value, with blanking voltage off.

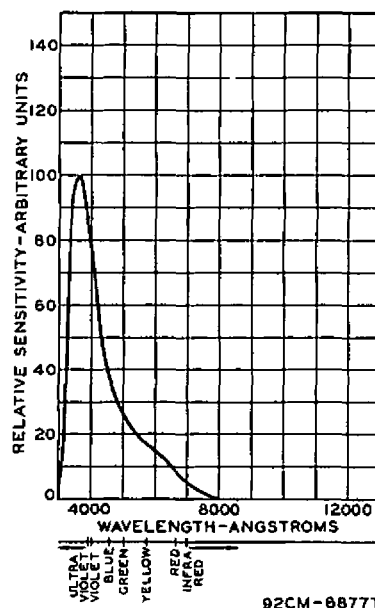
Adjustable within $\pm 22.5\%$ of indicated value.

⊕ Adjustable within $\pm 67\%$ of indicated value.

DIMENSIONAL OUTLINE



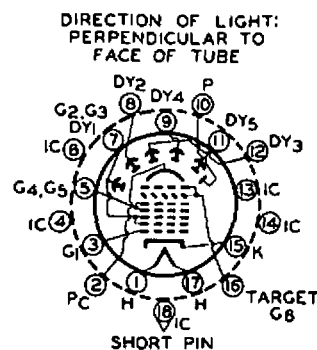
NOTE 1: MARKING DOTS ARE ALIGNED WITH SHORT PIN (N^o 18) AND INDICATE PROPER DIRECTION OF INSERTION IN FOCUS COIL.



Spectral Sensitivity Characteristic of Type 2P22 for Equal Values of Radiant Flux at all Wavelengths

SOCKET CONNECTIONS

Bottom View



- PIN 1: HEATER
- PIN 2: PHOTOCATHODE
- PIN 3: GRID NO.1
- PIN 4: INTERNAL CONNECTION—DO NOT USE
- PIN 5: GRID NO.4, GRID NO.5
- PIN 6: INTERNAL CONNECTION—DO NOT USE
- PIN 7: GRID NO.2, GRID NO.3, DYNODE NO.1
- PIN 8: DYNODE NO.2
- PIN 9: DYNODE NO.4
- PIN 10: ANODE
- PIN 11: DYNODE NO.5
- PIN 12: DYNODE NO.3
- PIN 13: INTERNAL CONNECTION—DO NOT USE
- PIN 14: INTERNAL CONNECTION—DO NOT USE
- PIN 15: CATHODE
- PIN 16: TARGET, GRID NO.6
- PIN 17: HEATER
- PIN 18: INTERNAL CONNECTION—DO NOT USE