

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 μ f

Photocathode, Semitransparent:

Response See Accompanying Curve

Useful Image Size (1 x 1 aspect ratio) 1-1/32" Max. Diagonal

Focusing Method Magnetic

Deflection Method Magnetic

Overall Length 8-13/16" ± 1/4"

Maximum Bulb Radius 1-3/32"

Base Small-Button Trihexal 18-Pin

Mounting Position Any

Focusing Coil Length 6"

Deflecting-Coil Length 3-3/16"

Alignment-Coil Length† 29/32"

Photocathode Distance Inside End of Focus Coil 0.6"

Deflection Coil Distance Inside End of Focus Coil 3"

Maximum Ratings, Absolute Values:

PHOTOCATHODE:

Voltage -400 max. volts

Illumination 10 max. ft-c

AMBIENT TEMPERATURE 60 max. °C

TARGET & GRID-NO.6 VOLTAGE:

Positive Value 50 max. volts

Negative Value 50 max. volts

GRIDS No.4 & No.5 VOLTAGE 200 max. volts

GRIDS No.2 & No.3 & DYNODE-No.1 VOLTAGE 300 max. volts

GRID-No.1 VOLTAGE:

Negative bias value 50 max. volts

Positive bias value 0 max. volts

PEAK HEATER-CATHODE VOLTAGE:

Heater negative with respect to cathode 125 max. volts

Heater positive with respect to cathode 10 max. volts

ANODE-SUPPLY VOLTAGE● 1650 max. volts

VOLTAGE PER MULTIPLIER STAGE 350 max. volts

Typical Operation:

Photocathode Voltage (Image Focus)* -250 volts

Target & Grid No.6 Voltage^o 0 volts

Grids-No.5 (Decelerator) & No.4 (Beam Focus) Voltage[#] 90 volts

Grids-No.3 & No.2 & Dynode-No.1 Voltage 210 volts

Grid-No.1 Voltage for Picture Cutoff[@] -15 volts

Dynode-No.2 Voltage 520 volts

Dynode-No.3 Voltage 830 volts

Dynode-No.4 Voltage 1140 volts

Dynode-No.5 Voltage 1450 volts

Anode Voltage 1500 volts

Anode Current (DC) 15 μ amp

Target Temperature Range 35 to 45 °C

Ratio of Peak-to-Peak Highlight Video Signal

to RMS Noise Current (Approx.) 15

Minimum Peak-to-Peak Blanking Voltage 10 volts

Field Strength at Center of Focusing Coil 75 gauss

† 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.

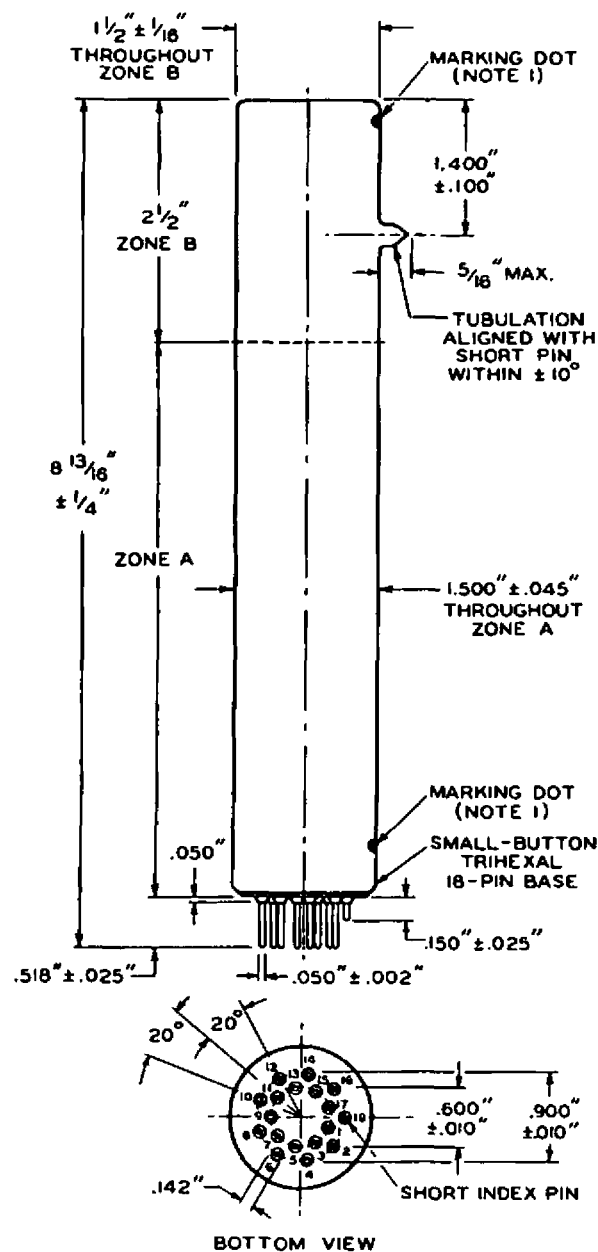
* Adjustable within +40% and -30% of this value.

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

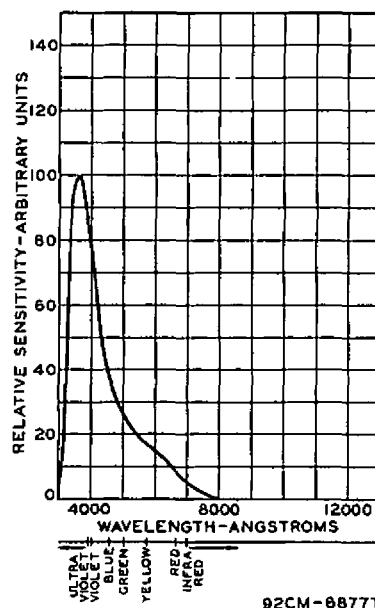
Adjustable within $\pm 22.5\%$ of indicated value.

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

DIMENSIONAL OUTLINE



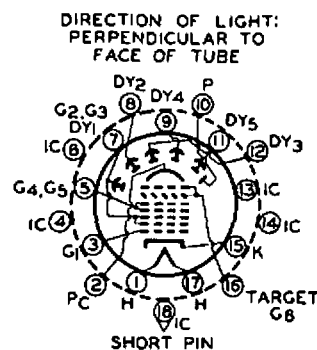
NOTE 1: MARKING DOTS ARE ALIGNED WITH SHORT PIN (N^o 18) AND INDICATE PROPER DIRECTION OF INSERTION IN FOCUS COIL.



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