

TUNG-SOL

CATHODE RAY

THE 21CWP4 IS A DIRECT VIEW PICTURE TUBE DESIGNED FOR TELEVISION APPLI-
CATIONS. ITS FEATURES INCLUDE:

| | |
|---------------------------------------|--|
| ELECTROSTATIC FOCUS | ALUMINIZED SCREEN |
| MAGNETIC DEFLECTION | GRAY FILTER FACEPLATE |
| UNIPOTENTIAL CATHODE | RECTANGULAR GLASS CONSTRUCTION |
| EXTERNAL CONDUCTIVE COATING | 19 1/16" X 15 1/16" RASTER SIZE |
| EXTERNAL SINGLE FIELD ION TRAP | |

ELECTRICAL DATA

| | | |
|---|------|------------------|
| FOCUSING METHOD | | ELECTROSTATIC |
| DEFLECTING METHOD | | MAGNETIC |
| DEFLECTION ANGLE (APPROX.): | | |
| HORIZONTAL | 85 | DEGREES |
| DIAGONAL | 90 | DEGREES |
| DIRECT INTERELECTRODE CAPACITANCES (APPROX.): | | |
| CATHODE TO ALL OTHER ELECTRODES | 5 | $\mu\mu\text{f}$ |
| GRID #1 TO ALL OTHER ELECTRODES | 6 | $\mu\mu\text{f}$ |
| MAXIMUM EXTERNAL CONDUCTIVE COATING TO ANODE | 2500 | $\mu\mu\text{f}$ |
| MINIMUM EXTERNAL CONDUCTIVE COATING TO ANODE | 2000 | $\mu\mu\text{f}$ |

OPTICAL DATA

| | | |
|---|--------------|---------|
| PHOSPHOR NUMBER | SULFIDE TYPE | P-4 |
| FLUORESCENT COLOR | | WHITE |
| PHOSPHORESCENT COLOR | | WHITE |
| PERSISTENCE | | MEDIUM |
| FACEPLATE TRANSMISSION AT CENTER (APPROX.): | 74 | PERCENT |

RATINGS

INTERPRETED ACCORDING TO DESIGN CENTER SYSTEM

| | | |
|--|---------------|----------|
| HEATER VOLTAGE | 6.3 | VOLTS |
| HEATER CURRENT | 0.6 \pm 5% | AMP. |
| MAXIMUM DC ANODE VOLTAGE | 22 000 | VOLTS |
| MAXIMUM DC GRID #4 VOLTAGE ^A | -550 TO +1100 | VOLTS |
| MAXIMUM DC GRID #2 VOLTAGE | 550 | VOLTS |
| MAXIMUM GRID #1 VOLTAGE: | | |
| DC NEGATIVE-BIAS VALUE | 155 | VOLTS |
| DC POSITIVE-BIAS VALUE | 0 | VOLTS |
| POSITIVE-PEAK VALUE | 2 | VOLTS |
| MAXIMUM DC PEAK HEATER-CATHODE VOLTAGE: | | |
| HEATER NEGATIVE WITH RESPECT TO CATHODE | | |
| DURING WARM-UP PERIOD NOT TO EXCEED 15 SECONDS | 450 | VOLTS |
| AFTER EQUIPMENT WARM-UP PERIOD | 200 | VOLTS |
| HEATER POSITIVE WITH RESPECT TO CATHODE | 200 | VOLTS |
| MAXIMUM GRID #1 CIRCUIT RESISTANCE | 1.5 | MEG OHMS |

TYPICAL OPERATING CONDITIONS AND CHARACTERISTICS

| | | |
|-----------------------------------|-------------|----------|
| DC ANODE VOLTAGE | 16 000 | VOLTS |
| DC GRID #4 VOLTAGE | -64 TO +352 | VOLTS |
| DC GRID #2 VOLTAGE | 300 | VOLTS |
| DC GRID #1 VOLTAGE ^B | -28 TO -72 | VOLTS |
| DC ION TRAP MAGNET RATED STRENGTH | 40 | GAUSSSES |

^A THE FOCUS ELECTRODE MAY BE MODULATED TO IMPROVE OVERALL FOCUS.

^B VISUAL EXTINCTION OF FOCUSED RASTER.

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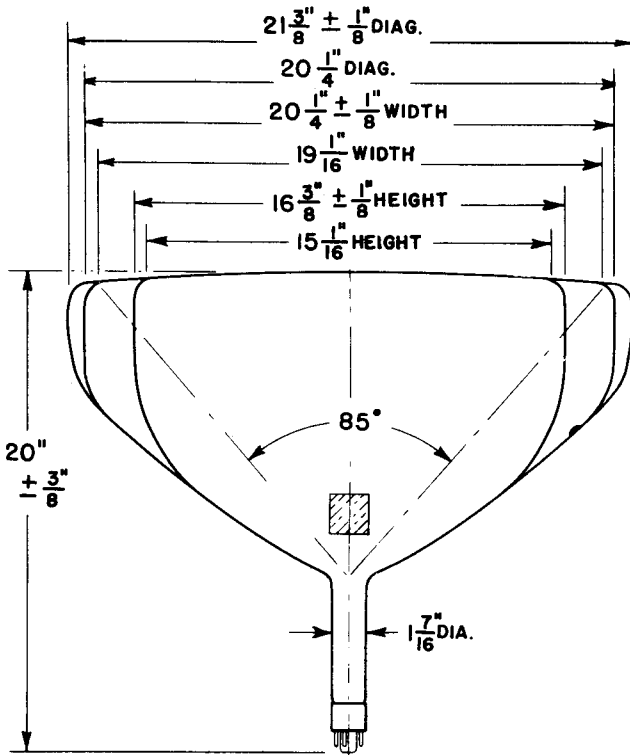
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MECHANICAL DATA

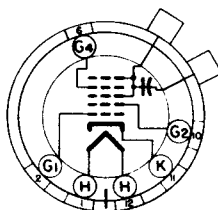
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|--|----------------------------|--------|
| OVERALL LENGTH | 20 ± 3/8 | INCHES |
| GREATEST DIMENSIONS OF BULB: | | |
| DIAGONAL | 21 3/8 ± 1/8 | INCHES |
| WIDTH | 20 1/4 ± 1/8 | INCHES |
| HEIGHT | 16 3/8 ± 1/8 | INCHES |
| MIN. USEFUL SCREEN DIMENSIONS: | | |
| DIAGONAL | 20 1/4 | INCHES |
| WIDTH | 19 1/16 | INCHES |
| HEIGHT | 15 1/16 | INCHES |
| BULB CONTACT | RECESSED SMALL CAVITY CAP | J4-21 |
| BASE | SMALL SHELL DUODECAL 6 PIN | B6-63 |
| BASING | | 12L |
| BULB CONTACT ALIGNMENT | | |
| J4-21 CONTACT ALIGNS WITH PIN POSITION #6 ± 30 DEGREES | | |



PIN CONNECTIONS

- PIN 1 - HEATER
- PIN 2 - GRID #1
- PIN 6 - GRID #4
- PIN 10 - GRID #2
- PIN 11 - GATHODE

- PIN 12 - HEATER
- ANODE CAP:
- GRID NO. 3
- GRID NO. 5



BOTTOM VIEW