ELECTRONIC TUBE REFERENCE

# 21YP4

Specialized - Cathode Ray electronic tube

CONSOLIDATED TECHNICAL DATA
**1 SECTION**
CONSTRUCTION
**CATHODERAY**

Large P4 monochrome television picture tube for high-voltage direct-view service, using magnetic deflection and manufacturer-specified focusing and beam-control arrangements for type 21YP4.

## General characteristics

| | | | |
|---|---|---|---|
| **BASE DESIGNATION** | — | **BASE PINS** | 12 |
| **NOMINAL HEATER** | 6.3 V / 600 mA | **PARALLEL HEATER** | — / — |
| **HEATING** | Indirect | **SERIES OPERATION** | Not specified |
| **CATHODE ARRANGEMENT** | Separate cathodes | **SECTION CONSTRUCTION** | Similar |

## Section ratings

| SECTION1 Cathode Ray | |
|---|---|
| **MAXIMUM PLATE VOLTAGE** | 18000 V |
| **MAXIMUM SCREEN VOLTAGE** | 500 V |
| *Maximum anode voltage mapped to MaxPlateVoltage; CRT grid/focusing limits retained as parameters rather than mis-promoted as ordinary screen-grid data.* | |

Direct-view picture tube with electrostatic focus, magnetic deflection, external conductive coating and ion trap, and grey-filter faceplate.

SOURCE OPERATING CONDITIONS

# 1961 Tung Sol

SOURCE PDF

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1961 TUNG SOL

## Section 1 · Cathode Ray

### OTHER

| PARAMETER | PUBLISHED VALUE | CONDITION / NOTE |
|---|---|---|
| HighVoltageAnodeMaximum | **20000 V** | CRT |

### CAPACITANCE

| PARAMETER | PUBLISHED VALUE | CONDITION / NOTE |
|---|---|---|
| CathodeToOtherElectrodesCapacitance | **5 pF** | Approximate |

SOURCE DATA APPENDIX

SOURCE OPERATING CONDITIONS

# 1966 Tung Sol Electronic Tubes 4 of 4

SOURCE PDF

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1966 TUNG SOL ELECTRONIC TUBES 4 OF 4

## Section 1 · Cathode Ray

### CONSTRUCTION

| PARAMETER | PUBLISHED VALUE | CONDITION / NOTE |
|---|---|---|
| Focusing method | **Electrostatic** | — |
| Deflecting method | **Magnetic** | — |
| Phosphor | **P4** | White;MediumPersistence |
| External conductive coating | **Present** | — |

### CHARACTERISTIC

| PARAMETER | PUBLISHED VALUE | CONDITION / NOTE |
|---|---|---|
| Deflection angle | **70 deg** | Approximate |

| PARAMETER | PUBLISHED VALUE | CONDITION / NOTE |
|---|---|---|
| Faceplate light transmission at center | **75 %** | Approximate |

## OTHER

| PARAMETER | PUBLISHED VALUE | CONDITION / NOTE |
|---|---|---|
| Heater voltage | **6.3 V** | — |
| Heater current | **600 mA** | — |
| Maximum DC anode voltage | **19800 V** | — |
| Maximum DC grid #2 voltage | **500 V** | — |
| Maximum grid #1 negative-bias magnitude | **125 V** | — |
| Maximum grid #1 positive DC voltage | **0 V** | — |
| Maximum grid #1 positive peak voltage | **2 V** | — |
| Typical DC anode voltage | **16000 V** | TelevisionPictureTube |
| Typical DC grid #2 voltage | **300 V** | TelevisionPictureTube |
| Typical grid #1 voltage minimum | **-72 V** | VisualExtinctionRange |
| Typical grid #1 voltage maximum | **-33 V** | VisualExtinctionRange |
| Maximum grid #1 circuit resistance | **1.5 megohm** | — |
| Ion trap magnet rated strength | **45 gauss** | Approximate |
| Focusing electrode voltage minimum | **-60 V** | ElectrostaticFocus |
| Focusing electrode voltage maximum | **350 V** | ElectrostaticFocus |
| Maximum focusing electrode voltage minimum | **-500 V** | ElectrostaticFocus |
| Maximum focusing electrode voltage maximum | **1000 V** | ElectrostaticFocus |

## CAPACITANCE

| PARAMETER | PUBLISHED VALUE | CONDITION / NOTE |
|---|---|---|
| Cathode-to-all-other-electrodes capacitance | **5 pF** | Approximate |

| PARAMETER | PUBLISHED VALUE | CONDITION / NOTE |
|---|---|---|
| Grid #1-to-all-other-electrodes capacitance | **6 pF** | Approximate |

| APPLICATION | | |
|---|---|---|
| **PARAMETER** | **PUBLISHED VALUE** | **CONDITION / NOTE** |
| Application | **Direct-view television picture tube** | — |



SOURCE OPERATING CONDITIONS

SOURCE PDF

# 1968 General Electric Co

Published test conditions and operating points. Values on this page are preserved as reported by this source.

1968 GENERAL ELECTRIC CO

## Section 1 · Cathode Ray

| OTHER | | |
|---|---|---|
| **PARAMETER** | **PUBLISHED VALUE** | **CONDITION / NOTE** |
| Maximum Anode Voltage | **18000 V** | — |
| Maximum Grid No. 2 Voltage | **500 V** | — |
| Anode Voltage | **16000 V** | Typical |
| Heater Voltage | **6.3 V** | — |
| Heater Current | **600 mA** | — |

Tube Tinker

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