

## Picture Tube

**RECTANGULAR GLASS TYPE**  
**LOW-VOLTAGE ELECTROSTATIC FOCUS**

**ALUMINIZED SCREEN**  
**90° MAGNETIC DEFLECTION**

### GENERAL DATA

#### Electrical:

|                                               |                                   |            |
|-----------------------------------------------|-----------------------------------|------------|
| Heater Current at 6.3 volts . . . . .         | 600 ± 10%                         | ma         |
| Direct Interelectrode Capacitances:           |                                   |            |
| Grid No.1 to all other electrodes . . . . .   | 6                                 | μf         |
| Cathode to all other electrodes . . . . .     | 5                                 | μf         |
| External conductive coating to ultor. . . . . | { 2500 max.<br>2000 min.          | { μf<br>μf |
| Electron Gun. . . . .                         | Type Requiring No Ion-Trap Magnet |            |

#### Optical:

|                                                           |                                |
|-----------------------------------------------------------|--------------------------------|
| Faceplate, Spherical. . . . .                             | Filterglass                    |
| Light transmission (Approx.) . . . . .                    | 74%                            |
| Phosphor (For Curves, see front of this Section). . . . . | P4—Sulfide Type,<br>Aluminized |

#### Mechanical:

|                                   |                |
|-----------------------------------|----------------|
| Operating Position. . . . .       | Any            |
| Weight (Approx.) . . . . .        | 24 lbs         |
| Overall Length. . . . .           | 18" ± 3/8"     |
| Neck Length . . . . .             | 5-1/2" ± 3/16" |
| Projected Area of Screen. . . . . | 262 sq. in.    |
| External Conductive Coating:      |                |

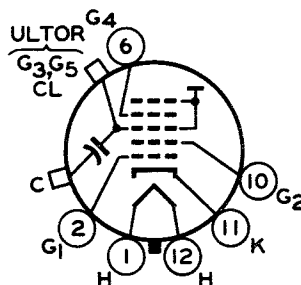
|                                                        |                     |
|--------------------------------------------------------|---------------------|
| Type. . . . .                                          | Special             |
| Contact area for grounding. . . . .                    | Near Reference Line |
| For Additional Information on Coatings and Dimensions: |                     |

See *Picture-Tube Dimensional-Outlines* and *Bulb J171 D/E* sheets at the front of this section

|                     |                                        |
|---------------------|----------------------------------------|
| Cap . . . . .       | Recessed Small Cavity (JEDEC No.J1-21) |
| Bases (Alternates): |                                        |

|                                                                        |     |
|------------------------------------------------------------------------|-----|
| Short Small-Shell Duodecal 6-Pin<br>(JEDEC Group 4, No.B6-203)         |     |
| Small-Shell Duodecal 6-Pin, Arrangement 1<br>(JEDEC Group 4, No.B6-63) |     |
| Basing Designation for BOTTOM VIEW. . . . .                            | 12L |

- Pin 1—Heater
- Pin 2—Grid No.1
- Pin 6—Grid No.4
- Pin 10—Grid No.2
- Pin 11—Cathode
- Pin 12—Heater



- Cap—Ultor  
(Grid No.3,  
Grid No.5,  
Collector)
- C—External  
Conductive  
Coating



# 21CBP4A

**Maximum and Minimum Ratings, Design-Maximum Values:**

|                                                  |            |       |
|--------------------------------------------------|------------|-------|
| ULTOR VOLTAGE . . . . .                          | 22000 max. | volts |
| GRID-No.4 (FOCUSING) VOLTAGE:                    |            |       |
| Positive value. . . . .                          | 1000 max.  | volts |
| Negative value. . . . .                          | 500 max.   | volts |
| GRID-No.2 VOLTAGE . . . . .                      | 550 max.   | volts |
| GRID-No.1 VOLTAGE:                               |            |       |
| Negative peak value . . . . .                    | 220 max.   | volts |
| Negative bias value . . . . .                    | 155 max.   | volts |
| Positive bias value . . . . .                    | 0 max.     | volts |
| Positive peak value . . . . .                    | 2 max.     | volts |
| HEATER VOLTAGE. . . . .                          | { 6.9 max. | volts |
|                                                  | { 5.7 min. | volts |
| PEAK HEATER-CATHODE VOLTAGE:                     |            |       |
| Heater negative with respect to cathode:         |            |       |
| During equipment warm-up period                  |            |       |
| not exceeding 15 seconds. . . . .                | 450 max.   | volts |
| After equipment warm-up period. . . . .          | 200 max.   | volts |
| Heater positive with respect to cathode. . . . . |            |       |
| . . . . .                                        | 200 max.   | volts |

**Typical Operating Conditions:**

|                                                                    |            |       |
|--------------------------------------------------------------------|------------|-------|
| With ultor voltage of . . . . .                                    | 16000      | volts |
| and grid-No.2 voltage of . . . . .                                 | 300        | volts |
| Grid-No.4 Voltage for focus . . . . .                              | 0 to 450   | volts |
| Grid-No.1 Voltage for visual extinction of focused raster. . . . . | -28 to -72 | volts |

**Maximum Circuit Values:**

|                                       |          |         |
|---------------------------------------|----------|---------|
| Grid-No.1-Circuit Resistance. . . . . | 1.5 max. | megohms |
|---------------------------------------|----------|---------|

For X-radiation shielding considerations, see sheet  
*X-RADIATION PRECAUTIONS FOR CATHODE-RAY TUBES*  
at front of this section

