

# LANSDALE



## TUBE COMPANY

A wholly owned subsidiary of Philco Corporation.

21 CHURCH ROAD, LANSDALE, PA., LANSDALE 4681

4CP7

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Supersedes -

### 4CP7 Cathode Ray Tube

The 4CP7 is a magnetic focus and magnetic deflection cathode ray tube having a long persistence cascade fluorescent screen. A special feature of the 4CP7 is that it produces a small spot of high intensity.

#### GENERAL CHARACTERISTICS

##### Electrical

|  |                 |         |
|--|-----------------|---------|
| Heater Voltage                                   | 6.3             | volts   |
| Heater Current                                   | 0.6 $\pm$ 10%   | amperes |
| Focusing Method                                  | Magnetic        |         |
| Deflecting Method                                | Magnetic        |         |
| Approximate Deflecting Angle                     | 50              | degrees |
| Phosphor   | P7              |         |
| Fluorescence                                     | Blue            |         |
| Phosphorescence                                  | Greenish-yellow |         |
| Persistence                                      | Long            |         |
| Direct Interelectrode Capacitances, Approx.      |                 |         |
| Cathode to all other electrodes                  | 3.5             | uuf     |
| Grid #1 to all other electrodes                  | 4.0             | uuf     |
| External Conductive Coating to Anode Capacitance | 500             | max uuf |
|  | 100             | min uuf |

##### Mechanical

|  |                  |         |
|--|------------------|---------|
| Overall Length                                   | 11 1/4 $\pm$ 1/4 | inches  |
| Greatest diameter of bulb                        | 4 $\pm$ .050     | inches  |
| Minimum Useful Screen Diameter                   | 3 3/8            | inches  |
| Bulb Contact                                     | J1-21            |         |
| Base   | B5-57            |         |
| Basing   | 12G              |         |
| Bulb Contact Alignment                           |                  |         |
| J1-21 contact aligns with vacant pin position #3 | $\pm$ 30         | degrees |

MAXIMUM RATINGS Design Center Values

|  |        |     |          |
|--|--------|-----|----------|
| Anode Voltage <sup>1</sup>                     | 20,000 | max | volts DC |
| Grid #1 Voltage                                |        |     |          |
| Negative-Bias Value                            | 350    | max | volts DC |
| Positive-Bias Value                            | 0      | max | volts DC |
| Positive-Peak Value                            | 2      | max | volts DC |
| Peak Heater-Cathode Voltage <sup>2</sup>       |        |     |          |
| Heater Negative with respect to cathode        |        |     |          |
| During warm-up period not to exceed 15 seconds | 410    | max | volts DC |
| After equipment warm-up period                 | 175    | max | volts DC |
| Heater Positive with respect to cathode        | 175    | max | volts DC |

TYPICAL OPERATING CONDITIONS

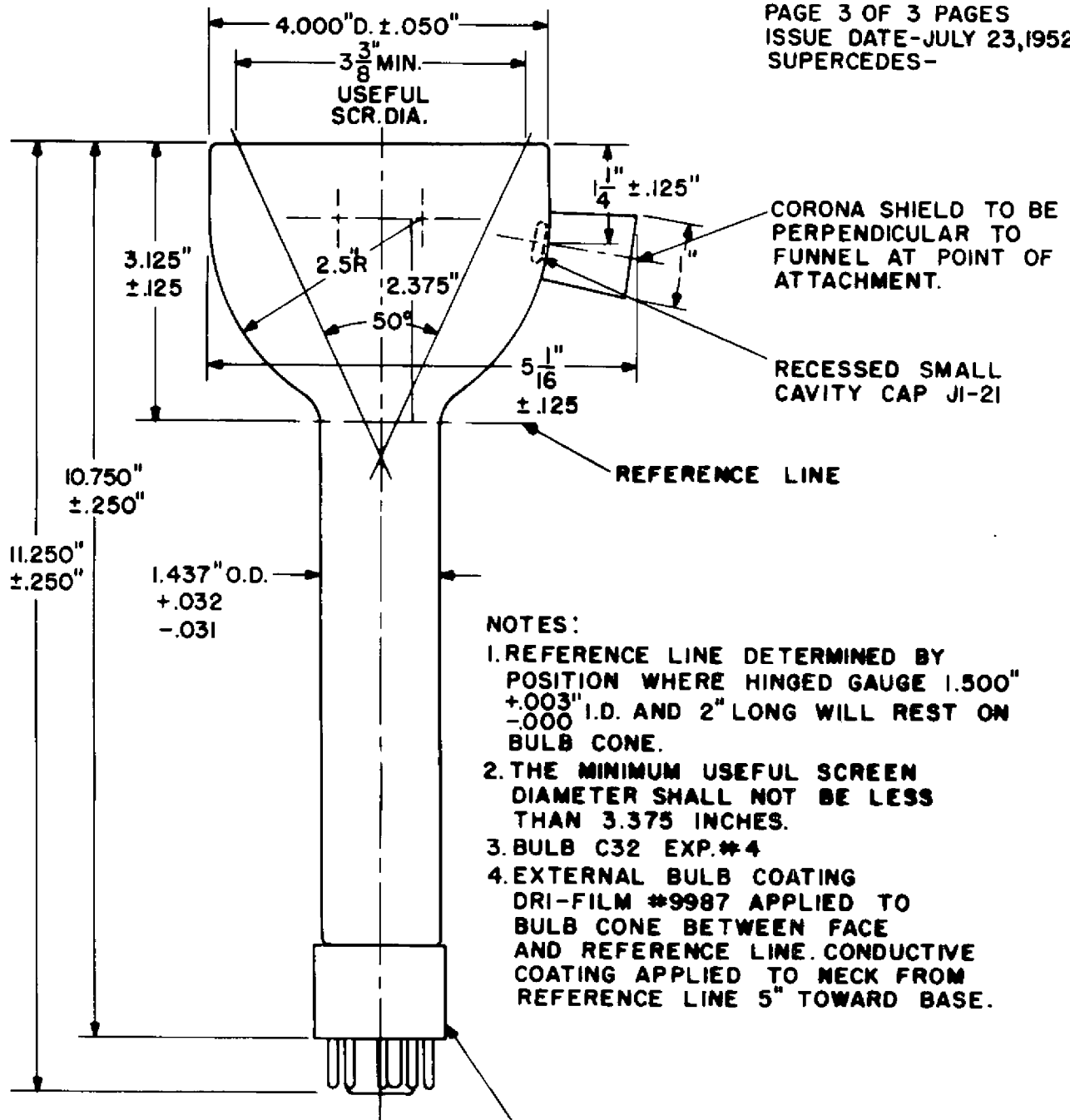
|                                    |             |        |          |
|------------------------------------|-------------|--------|----------|
| Anode Voltage                      | 20,000      |        | volts DC |
| Grid #1 Voltage <sup>3</sup>       | -70 to -140 |        | volts DC |
| Focusing Coil Current <sup>4</sup> | 195         | approx | Ma DC    |
| Spot Position                      | 15          | max    | MM       |

MAXIMUM CIRCUIT VALUES

|                            |     |     |         |
|----------------------------|-----|-----|---------|
| Grid #1 Circuit Resistance | 1.5 | max | Megohms |
|----------------------------|-----|-----|---------|

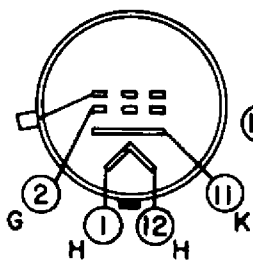
NOTES

1. Anode and Grid #2, which are connected together within the tube, are referred to herein as anode.
2. Cathode should be returned to one side or to the mid-tap of the heater transformer winding.
3. Visual extinction of undeflected focused spot.
4. For standard focus coil JETEC #106 or equivalent, with the combined Grid #1 bias voltage and video signal voltage adjusted for 100 microamperes of anode current. The distance from the air gap in the focus coil to the reference line is 3.25 inches.



NOTES:

1. REFERENCE LINE DETERMINED BY POSITION WHERE HINGED GAUGE 1.500" ± .003" I.D. AND 2" LONG WILL REST ON BULB CONE.
2. THE MINIMUM USEFUL SCREEN DIAMETER SHALL NOT BE LESS THAN 3.375 INCHES.
3. BULB C32 EXP. #4
4. EXTERNAL BULB COATING DRI-FILM #9987 APPLIED TO BULB CONE BETWEEN FACE AND REFERENCE LINE. CONDUCTIVE COATING APPLIED TO NECK FROM REFERENCE LINE 5" TOWARD BASE.



4CP7

SMALL-SHELL DUODECAL 5-PIN BASE B5-57