The LCP7 is a magnetic focus and magnetic deflection cathode ray tube having a long persistence cascade fluorescent screen. A special feature of the LCP7 is that it produces a small spot of high intensity.

**GENERAL CHARACTERISTICS**

**Electrical**

- Heater Voltage: 6.3 volts
- Heater Current: 0.6 ± 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 ± 1/4 inches
- Greatest diameter of bulb: 4 ± 0.050 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 ± 30 degrees

from RTMA release #1119, Sept. 12, 1952
MAXIMUM RATINGS Design Center Values

Anode Voltage \(^1\) 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 \(^2\)
Heater Negative with respect to cathode
During warm-up period not to exceed 15 seconds 140 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 \(^3\) 20,000 volts DC
Grid #1 Voltage \(^4\) 70 to 140 volts DC
Focusing Coil Current \(^4\) 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.

DATE: 7-24-52