17DLR4
CATHODE RAY TUBE

17 INCH, RECTANGULAR, GLASS
FOCUS -- ELECTROSTATIC
DEFLECTION -- MAGNETIC
110 DEGREE DEFLECTION ANGLE
LIGHTWEIGHT BULB

14-3/4 BY 11-11/16 INCH PICTURE SIZE
FACEPLATE -- SPHERICAL, GRAY
NON ION-TRAP GUN
ALUMINIZED SCREEN
EXTERNAL CONDUCTIVE COATING

-----------------------------------------------------------DESCRIPTION AND RATING-----------------------------------------------------------

The 17DLR4 is a 17 inch electrostatic-focus and magnetic-deflection glass, lightweight picture tube. Outstanding features include a short over-all length, a small neck diameter and a non ion-trap gun. The fluorescent screen is aluminized to increase light output and reduce undesirable screen charging. An external conductive coating is provided to serve as a filter capacitor when grounded.

GENERAL

ELECTRICAL

Heater Voltage................................................. 6.3 Volts
Heater Current................................................ 0.6 ± 10% Amperes
Heater Warm-Up Time*........................................ 11 Seconds

Focusing Method - Electrostatic
Deflecting Method - Magnetic
Deflection Angle, Approximate
Diagonal .................................................. 110 Degrees
Horizontal ............................................... 105 Degrees
Vertical .................................................. 87 Degrees

Direct Interelectrode Capacitances, Approximate
Cathode to All Other Electrodes.......................... 5 uuf
Grid No. 1 to All Other Electrodes..................... 6 uuf

External Conductive Coating to Anode
Maximum .................................................. 1500 uuf
Minimum .................................................. 1000 uuf

CATHODE RAY TUBE DEPARTMENT

GENERAL ELECTRIC
Syracuse, N. Y.

from JEDEC release #2378, March 9, 1959
OPTICAL

Phosphor Number - Ph, Sulfide  
  Fluorescent Color - White  
  Phosphorescent Color - White  
  Persistence - Short  
Faceplate - Gray  
Light Transmission at Center, Approximate..................... 76 Percent

MECHANICAL

Over-all Length.................................................. 11-1/16 + 5/16 Inches  
Neck Length.......................................................... 3-15/16 + 3/16 - 1/8 Inches  
Greatest Bulb Dimensions  
  Diagonal......................................................... 16-9/16 + 1/8 Inches  
  Width............................................................... 15-5/8 + 1/8 Inches  
  Height.............................................................. 12-3/4 + 1/8 Inches  
Minimum Useful Screen Dimensions  
  Diagonal......................................................... 15-3/4 Inches  
  Width............................................................... 14-3/4 Inches  
  Height.............................................................. 11-11/16 Inches  
  Area................................................................. 155 Square Inches

Bulb Designation - J132-1/2Al  
Bulb Contact - Recessed small-cavity Cap, JETEC No. J1-21  
Base-Small-button Eightor, 6 pin, JETEC No. B6-212  
Basing Designation - 8JS  
Bulb Contact Alignment  
  Anode Contact Aligns with Pin No. 4 ± 30 Degrees

Mounting Position - Any  
Net Weight, Approximate........................................... 10-1/3 Pounds

MAXIMUM RATINGS

DESIGN - CENTER VALUES

Anode Voltage....................................................... 18000 Max Volts DC  
Focusing-Electrode Voltage....................................... - 500 to + 1000 Max Volts DC  
Grid No. 2 Voltage.................................................. 700 Max Volts DC  
Grid No. 1 Voltage  
  Negative-Bias Value............................................... 1/40 Max Volts DC  
  Positive-Bias Value................................................ 0 Max Volts DC  
  Positive-Peak Value.............................................. 2 Max Volts  
  Negative-Peak Value.............................................. 200 Max Volts

Peak Heater-Cathode Voltage  
  Heater Negative with respect to Cathode  
    During Warm-up Period not to exceed 15 Seconds............... 410 Max Volts  
    After Equipment Warm-up Period................................ 180 Max Volts  
  Heater Positive with respect to Cathode........................ 180 Max Volts
TYPICAL OPERATING CONDITIONS

Anode Voltage $S$ ............................................. 17000 Volts DC
Focusing-Electrode Voltage for Focus ...................... 0 to 500 Volts DC
Focusing-Electrode Current .................................. - 15 to +25 Microamperes DC
Grid No. 2 Voltage ........................................... 450 Volts DC
Grid No. 1 Voltage ........................................... - 28 to - 72 Volts DC

MAXIMUM CIRCUIT VALUES

Grid No. 1 Circuit Resistance .................................. 1.5 Max Megohms
Grid No. 2 Circuit Resistance .................................. 0.1 Min. Megohms
Focusing-Electrode Circuit Resistance ......................... 0.1 Min. Megohms

Protective resistance in Grid No. 2 and focusing-electrode circuits is advisable to prevent damage to tube. If applicable, one resistor, common to both circuits may be used.

* Heater warm-up time is the time required for the voltage across the heater terminals to increase to 5.0 volts in the JETEC test circuit, with $E = 25$ volts and $R = 31.5$ ohms.

+ The maximum ratings provide a ten percent safety factor in accordance with the standard design center system of rating cathode ray tubes. The tube will withstand the combined effects of variations in line voltage and components provided the maximum design center values are not exceeded by more than ten percent.

≠ Anode, Grid No. 3 and Grid No. 5 which are connected together within the tube are referred to herein as anode.

If this tube is operated at voltages in excess of 16,000 volts, X-ray radiation shielding may be necessary to avert possible danger of personal injury from prolonged exposure at close range. The protective face-viewing window of apparatus using tubes of this type may provide such a safeguard. If the radiation measured in contact with this window does not exceed 6.25 milliroentgens per hour, the window will normally provide adequate protection.

$S$ Brightness and focus quality decrease with decreasing anode voltage. In general, the anode voltage should not be less than 15,000 volts.

∀ For visual extinction of focused raster.

Electronics Components Division

GENERAL ELECTRIC COMPANY

Syracuse, New York
SCREEN DIMENSIONS
DIAGONAL 15\frac{3}{4}
WIDTH 14\frac{3}{4}
HEIGHT 11\frac{11}{16}
AREA 155 SQ. IN.

EXTERNAL CONDUCTIVE COATING

BASE 87-183 (NOTES 3 & 4)
1. The reference line is determined by the intersection of the plane C-C' of gage (E.I.A. No. 126) with the glass funnel.

2. Deflection angle on the diagonal is 110°.

3. Anode terminal aligns with pin No. 4 ±30 degrees.

4. Use a non-rigidly mounted socket with flexible leads. Bottom circumference of base wafer will fall within 1-3/4 inch diameter circle concentric with the bulb axis.