SLOW SCAN VIDICON TYPE WL-7290

The WL-7290 is a small size vidicon type camera tube designed for slow speed scanning applications. The extremely low dark current of the WL-7290 permits high-resolution, long-storage-time with higher sensitivity, higher output signal and better signal-to-noise ratio.

The WL-7290 with slow scan is also useful for transmitting high resolution information over conventional audio circuits as the system bandwidth requirements are sharply reduced with slow scan.

**ELECTRICAL:**
- **Cathode:** Coated Unipotential
- **Heater:**
  - Voltage (ac or dc) ....... 6.3 + 10% Volts
  - Current ............... 0.6 Amperes
- **Direct Inter-electrode Capacitance:**
  - Signal Electrode to all other Electrodes ............... 4.5 uuf
  - Spectral Response ...... from 3000 to 6000 Angstroms
  - Photoconductive Layer:
    - Orientation of Tube to Scan .... Proper orientation is obtained when the horizontal scan is essentially parallel to the plane passing through the tube axis and short index pin.
- **Focusing Method:** Magnetic
- **Deflection Method:** Magnetic

**MECHANICAL:**
- **Overall Length** ............... 6-1/4" ± 1/4"
- **Greatest Diameter** ............... 1.125" ± 0.010"
- **Bulb** ............... T-8
- **Base** ............... Small-Button, 8-Pin (JETEC EB-11)
- **Operating Position** ............... Any
- **Basing** ............... 8HM

**MAXIMUM RATINGS:**
- **Absolute Maximum System**
  - Signal-Electrode Voltage ............... 25 max. Volts
  - Grid 4 & Grid 3 Voltage ............... 350 max. Volts
  - Grid 2 Voltage ............... 350 max. Volts
  - Grid 1 Voltage:
    - Negative Bias Value ............... 125 max. Volts
    - Positive Bias Value ............... 0 max. Volts
  - Heater-Cathode Voltage:
    - Heater Negative with Respect to Cathode ............... 125 max. Volts
    - Heater Positive with Respect to Cathode ............... 10 max. Volts
  - Faceplate Temperature ............... 45 max. °C

**TYPICAL OPERATION AND CHARACTERISTICS:**
- For Scanned Area of 1/2" x 3/8"
  - Signal-Electrode Voltage ............... 10 to 25 Volts
  - Grid 4 (Decelerator) & Grid 3 (Beam Focus) Voltage ............... 250 Volts
  - Grid 2 (Accelerator) Voltage ............... 300 Volts
  - Grid 1 Voltage:
    - (For Picture Cutoff) ............... 45 to -100 Volts
  - Dark Current ............... 0.0002 uamp
- Average "Gamma" of Transfer Characteristic for Signal Output Current
  - Between 0.0002 and 0.2 uamp ............... 0.95
- Min. Peak-to-Peak Blanking Voltage:
  - When Applied to Grid 1 ............... 40 Volts
  - When Applied to Cathode ............... 10 Volts
  - Field Strength at Center of Focusing Device ............... 40 Gausses
  - Field Strength of Adjustable Alignment Coil ............... 0 to 4 Gausses
  - Approx. Storage Time:
    - 450 Line Resolution ............... 40 Seconds
    - 350 Line Resolution ............... 120 Seconds

*The quality area of the target extends to the edges of the target.
The entire target may therefore be scanned with no degradation of picture quality.

*With no blanking voltage on Grid 1.

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from JETEC release #2273, Sept. 8, 1958

WESTINGHOUSE ELECTRIC CORPORATION, ELECTRONIC TUBE DIVISION, ELMIRA, NEW YORK
BASE-PIN positions are held to tolerances such that pins will fit a flat plate gauge having thickness of 1/4" and 9 holes 0.0700" ± 0.0005" so located on a 0.6000"±0.0005" dia. circle that the distance along the chord between any two adjacent hole centers is 0.2052"±0.0005". Gauge is provided with center hole having diameter of 0.300" ±0.001" and same center as the pin circle.

Straight sides of masked portions are parallel to plane passing through tube axis and short index pin.

CE-A1350