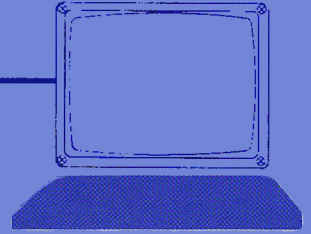


# **DOTRONIX, INC.**

**Leading the industry as CRT manufacturers.**



## **CRT Data Displays**

### **CD-100 Series**

**High reliability raster scan  
5, 9 and 12-inch CRT monitors  
for EIA composite input.**

#### **ADVANCED DESIGN WITH HIGH RELIABILITY.**

The CD-100 Series monochrome data display has been designed for quality display of alpha numeric information. These low cost, high reliability, composite displays feature Dotronix's rugged "wire frame" design for maximum versatility in satisfying various customer packaging requirements. The all solid state circuitry features the latest in display technology that has been field proven in other Dotronix displays. The CD-100 Series is available in 5, 9, and 12-inch sizes with P4 white phosphor as standard equipment. Options include many common EIA phosphors, anti-glare treatment and various frame tilts.

# CD-100 Series

## Technical Description

### Features

- **Composite Input:** EIA RS170 composite video signal. The CD Series has been designed to be fully compatible with the signal that has become the industry standard.
- **High Brightness and Resolution:** Specially selected CRT's and deflection circuitry along with a wide bandwidth video amplifier, provide a clear, crisp display over a wide range of brightness levels.
- **Mechanical Simplicity:** The 5 and 9-inch displays utilize Dotronix's field proven wire frame construction. A combination wire/sheet metal frame in the 12-inch version provides economy with user adjustable screen tilts of 0°, 5°, 7½°, and 10° (factory set at 0°).
- **Low Geometric Distortion:** Pincushion distortion and sweep non-linearities are controlled to exceed requirements of EIA STD RS-375.
- **U.L. Recognized:** These monitors are designed to meet UL-478 Standard for Electronic Data Processing Units and Systems.

### Standard

- P4 white phosphor
- Internal contrast control
- Internal brightness control (customer may parallel with external control if desired, in which case the internal control acts as brightness limit)
- 0° tilt frame
- 10 contact edge connector for signal input

### Options

- Mass termination connector for signal input
- Various EIA registered phosphorus of contrast enhanced versions
- Direct etched faceplate for anti-glare
- Several frame tilts in the CD-90 and CD-120 (0°, 5°, and 10°)

### Models

The basic CD-100 Series models are as follows:

- **CD-50**  
5-inch diagonal screen, wire frame, 12 VDC only
- **CD-90**  
9-inch diagonal screen, wire frame, 12 or 15 VDC, 120 VAC (U.S. domestic) or 220 VAC (European)
- **CD-120**  
12-inch diagonal screen, wire/metal frame, 12 or 15 VDC, 120 VAC (U.S. domestic) or 220 VAC (European)

## Specifications (Standard CRT)

**INPUT SIGNAL:** 0.35 to 2.0 V P-P composite, per EIA RS-170; black negative, sync negative (internal sync only)

**INPUT IMPEDANCE:** 75 ohms, terminated; an internal resistor can be removed for unterminated looping operation, with 5 K ohms min. shunt resistance and 40 pF max. shunt capacitance, operating or non-operating

### VIDEO AMPLIFIER

Bandwidth: 14 MHz (−3 dB) nom.; 12 MHz min.  
 Rise/Fall Times: 30 nsec max. (10%-90%)  
 Gray scale: Linear response to stairstep video signal;  
 8 discernible levels  
 DC Restorer: Keyed to backporch clamp

### SYNCHRONIZATION (Internal composite sync only)

Horizontal: 15.75 ±0.5 kHz  
 Vertical: 49 to 61 Hz  
 Line Rate: 525/60 Hz and 630/50 Hz (interlaced)  
 Horizontal Blanking Required: 10μsec. min.  
 Vertical Blanking Required: 850μsec. min.

### POWER REQUIREMENTS

#### DC Input Power:

Voltage: 12 ±0.2 VDC  
 15 ±0.2 VDC  
 Current: 1.25 ADC nom.  
 1.85 ADC max.  
 Ripple: 100 mV P-P for refresh/power frequency nonsynchronous  
 10 mV P-P for refresh/power frequency synchronous  
 50 mV P-P high frequency power

#### AC Input Power:

Voltage:	120 VAC (U.S. domestic)	220 VAC (European)
	105-130 V RMS	210-230 V RMS
Frequency:	49-61 Hz	49-61 Hz
Power:	40 W nom.	40 W nom.
Fuse:	0.6 A, 120 VAC	0.3 A, 220 VAC

### MATING CONNECTORS REQUIRED

**Signal:** 10-contact board edge connector  
 (Viking 2VK10S/1-2 or Amphenol 225-21031-101)  
**Optional Mass Termination Connector:**  
 Molex 22-01-2107 with type 2759 contacts for discrete wires, or Amp 1-640440-0, preloaded for mass termination  
**Power (AC models):** 4 contact male connector shell  
 (Molex 03-06-1041) with female contacts (Molex 4529T)

### CONTROLS

Brightness	Vertical hold	Width
Contrast	Vertical blanking	Height
Horizontal hold	Vertical linearity	Focus
Horizontal linearity		

## DISPLAY CHARACTERISTICS

	CD-50	CD-90	CD-120
CRT Diagonal Measure	5"	9"	12"
Deflection Angle	70°	90°	90°
Spherical Measure	14"	27"	25"
U.S. Implosion Protection/Mounting Method	None Required	T Band with ears	
High Voltage (Nominal)	9 kV	11 kV	11 kV
Usable Screen Area	2.7"×3.6"	5.0"×6.7"	6.7"×9.0"
Horizontal Resolution*			
Center	650@60 fl	800@40 fl	900@40 fl
Corners	550@60 fl	650@40 fl	750@40 fl

\*Resolution for standard CRT, in TV lines. Measured per EIA RS-375, except depth of modulation is set to 100%. Reference white is set to indicated luminance with contrast control and reference black is set to visual cutoff with brightness control.

## ENVIRONMENTAL

### Temperature Range

Operating: 5°C to 55°C (41°F to 131°F) ambient  
 Non-operating: −40°C to 65°C (−40°F to 150°F)

### Humidity

5% to 90% R.H. (non-condensing)

### Altitude

Operating: Up to 10,000 ft. (3.0 km)  
 Non-operating: Up to 30,000 ft. (9.2 km)

## U.L. RECOGNIZED

Units are listed by U.L. as recognized components that satisfy UL-478 Standard for Electronic Data Processing Units and Systems. Ref. File No. E59318.

## X-RADIATION

AC models comply with DHHS Radiation Performance Standards, 21 CFR, Subchapter J. DC models comply providing customer certifies compliance of power supply to DHHS requirements. Complies with U.L. Standard-478 on X-radiation when operated within specified input voltage limits.

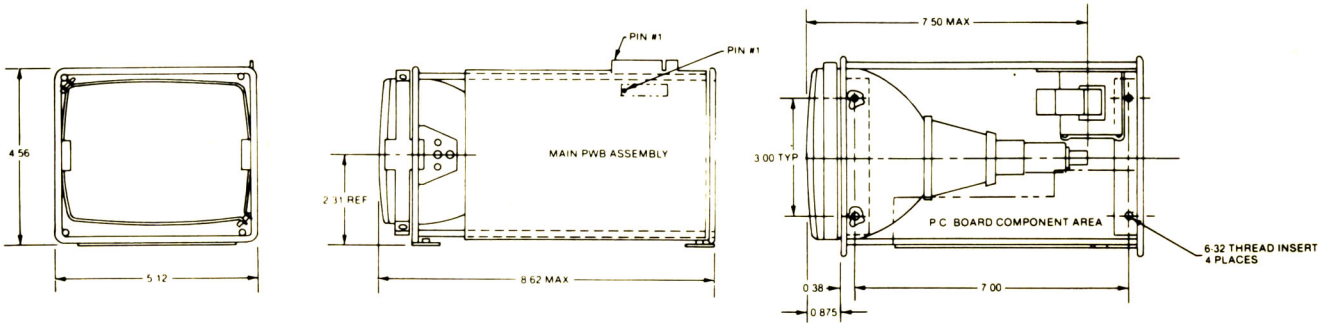
## CSA CERTIFICATION

Units shall be certified by Canadian Standards Association under Standard C22.2 No. 154, Ref. File No. 39422.

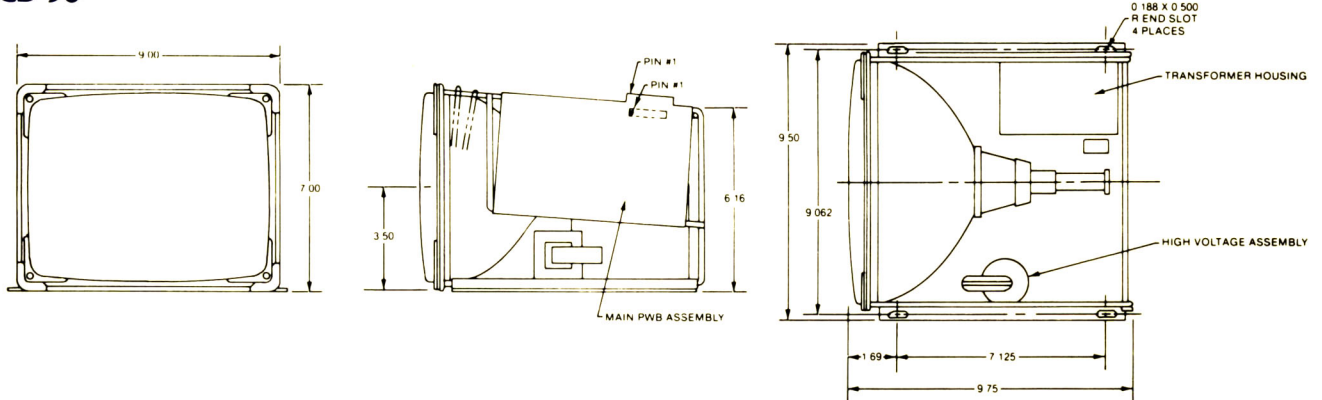
WEIGHTS	lbs.	kg.
CD-50 (DC)	3.5	1.6
CD-90 (DC)	7.1	3.2
CD-90 (AC)	10.4	4.7
CD-120 (DC)	10.8	4.9
CD-120 (AC)	14.1	6.4

# Dimensions

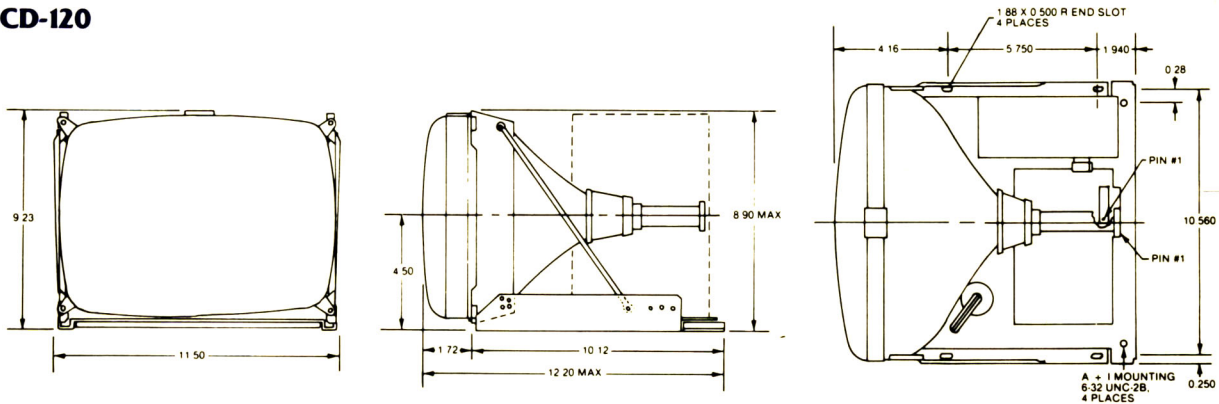
## CD-50



## CD-90



## CD-120



# DOTRONIX, INC.

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