



Optrex 10.4" High Performance VGA TFT Color LCD Module

400 Nits, Wide Viewing Angle, Expanded Features

Optrex America's 10.4-inch VGA TFT (thin film transistor) flat panel display is a rugged, high-performance module designed for the most demanding non-PC applications. It delivers best-in-class, front-of-screen performance with wide viewing angle, powerful backlights and exceptionally high contrast, color saturation and brightness for a range of applications. This compact module is exceptionally rugged – enough to handle 150-G shock and 1-G vibration levels – and can operate reliably over a temperature range of 0° to +50° C. It is backlit by two high-performance CCF lamps with an estimated life of 50,000 hours each.

This 10.4 VGA TFT LCD ((Optrex P/N T51513D104U-FW-A-AB) accepts both 3.3V and 5.0V input voltage. It offers customer-selectable 12 o'clock (normal scan) or 6 o'clock (reverse scan) viewing angles in a single module, and it is a mechanical drop-in replacement for two existing Optrex 10.4-inch VGA TFT LCDs (P/N AA104VB04 and P/N AA104VB02). The new 10.4-inch VGA TFT module is a color display composed of an LCD panel, driver ICs, a control circuit, and two CCFL backlights. (DC-AC inverter for backlight also available.) 262,144 color images are displayed on the 10.4-inch diagonal screen by applying 6-bit digital data.



Applications

Applications for which the new 10.4-inch TFT LCD provides a high-performance, cost-effective display include test & measurement and diagnostic equipment, industrial control equipment, kiosks, POS displays, ATMs, and amusement/entertainment systems. It is ideally suited to the requirements of the industrial, medical, multimedia and instrumentation markets.

Features

- CMOS/TTL digital interface for crisp image quality
- 4.3 micron cell gap between glass substrates for crisper text, faster response
- Viewing angle to 120° (optimum maximum contrast ratio at 12 o'clock)
- 300:1 contrast ratio
- Displays 262,144 colors
- 18-bit color depth
- Highly saturated color
- High resolution
- Normal or Reverse Scan viewing angles

Backlight

- 400 nits brightness typical
- Two cold cathode fluorescent lamps with est. 50,000 hour life
- CCFLs field-replaceable; redundant design eliminates downtime
- 6.0 mA typical lamp current

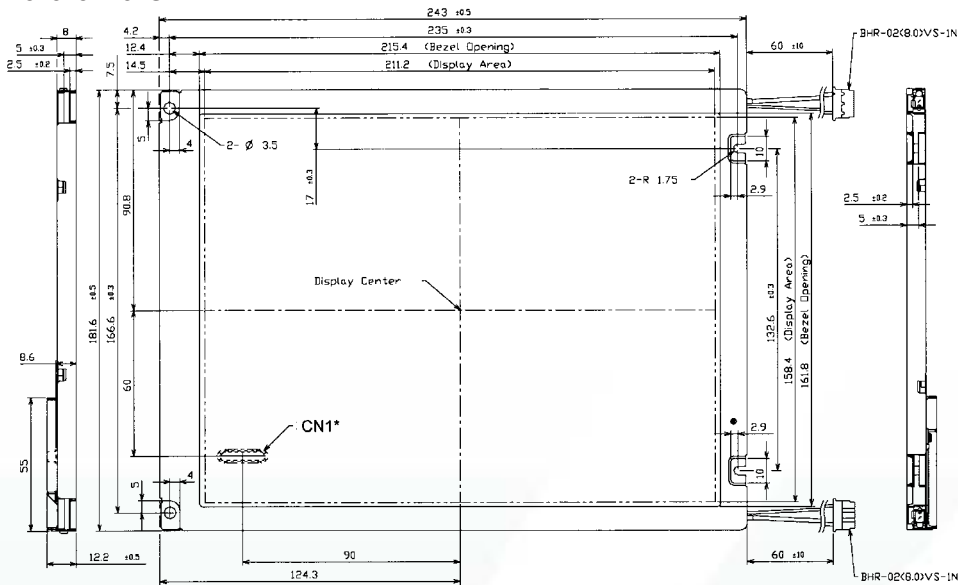
Optrex is a world leader in the design and manufacture of OEM liquid crystal displays (LCDs) for an expanding line of products that includes displays for telecommunications and non-PC Internet devices, test, measurement and diagnostic instruments, handheld data management equipment, and automotive and avionics displays. Optrex now serves customers with an extensive in-field network of applications engineers and more than 100 sales and distribution offices throughout the world. The Optrex technology palette includes Active-MLA (multi-line addressing), TFT (thin film transistor), VHC (very high contrast), TN (twisted nematic), STN (super twisted nematic), MTN (modulated twisted nematic), reflective color and super high performance displays for critical applications.

10.4" SVGA TFT Specifications

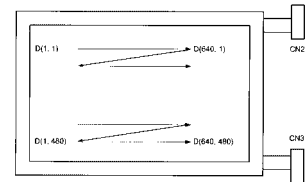
Model Number	T-51513D104U-FW-A-AB
Screen Size	10.4-inch diagonal
Display Format	640 x 480
Active Area (HxV mm)	211.2 x 158.4
Dot Pitch (HxV mm)	0.33 x 0.33
Outline Dimensions (WxHxD mm)	243.0 x 181.6x 12.2
Module Mass (g)	530
Response Time	50 ms.
Interface	CMOS
Supply Voltage	3.3 or 5.0 VDC
Power Consumption (W)	8.5 (w/o loss of inverter)
Backlight	2 Cold Cathode Fluorescent Lamps
Luminance (cd/m ²)	400
Contrast Ratio	300:1
Display Colors	262,144
Viewing Direction	12 o'clock (normal scan) or 6 o'clock (reverse scan)
Viewing Angle	120° (at 12 o'clock)
Operating Temperature Range	0°C to +50°C
Storage Temperature Range	20°C to +60°C

Note: Specifications are subject to change without notice.

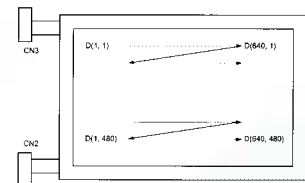
T51513D104U-FW-A-AB



Scanning Direction 12 o'clock



Scanning Direction 6 o'clock



Ask about the Optrex Value-Added Program

Unlimited custom design capabilities for anything from simple connector attachments to sophisticated LCD module integration with plastic housing, buttons, custom circuitry and firmware design.

For complete technical specifications call 734-416-8500 or visit our website at www.optrex.com

Optrex America, Inc.
46723 Five Mile Road • Plymouth, MI 48170
Tel: 734-416-8500 • Fax: 734-416-8520 • E-mail: lcdinfo@optrexusa.com



LCD Total Solution Provider