

Military, Aerospace and Government Business Unit

10.4" XGA Rugged Military Spec Display System



TVD104XHAL

- **TVD104XHAL** is 10.4" XGA(1204x768pixels) Flat Panel Display, specifically designed for observation and driver enhancement on rugged vehicles, aircraft and ships.
- **Solid State Backlighting** with Low Power Consumption
- **Wide Range** of Extended Operating Temperature with Heater Glass.
- **Digital Programmable Dimming Control** for Backlight and Bezel switch

FEATURES

- Rugged Mil Spec Display
- 3mm Front Glass Bonding
- High Quality Wide View (89°/89°/89°/89°)
- Black Hard Anodized Exterior Surface
- Digital Programmable Dimming Control (0% ~100%)
- Digital Dimming Control for Bezel
- High Rel Extended Life LED Backlight
- High Luminance (250fL) Low Power Consumption
- Definable Interface and Function Control Available

(Option)

- NVIS Backlight for Display
- NVIS Backlight for Bezel Switch
- Built-in Heater Glass with Temperature Sensor
- Touch Screen



TRUE VISION DISPLAYS, INC.

Technical Specifications

TVD104XHAL

Electro Optical

Display Size	210.432mm x 157.824mm (active area)
Display Mode	Normally Black
Resolution & Color	XGA (1024 x 768 pixels) 262,144 colors
Display Backlight	High Brightness White LED (LED controller included)
Luminance (Day Max)	250 fL (855 cd/m2)
Luminance (Night Min)	0.035 cd/m2 (0.01 fL) - Programmable
Contrast Ratio (CR)	600 : 1 (typ.)
Horizontal Viewing Angle	Right Side : 89° (typ.), Left Side : 89° (typ.)
Vertical Viewing Angle	Up Side : 89° (typ.), Down Side : 89° (typ.)
Bezel Backlight	LED with Digital Dimming Control (NVIS Filter available)
White Uniformity	80% (min.)
Color Chromaticity	TBD

Interface

Video Input	15pin D-SUB (VGA) / Other options available
Data Interface	Customization available
Communication	Optional 2 serial channels, switchable between RS-232 and RS-422 Dual MIL CAN
Data Input Connections	Optional MIL-C-38999 Rear

Control

Display Luminance	Programmable Digital Dimming Control (0 ~ 100%)
Bezel Switch Luminance	Programmable Digital Dimming Control (0 ~ 100%)
Switch Button	32 customer-definable function switch buttons

Power

Power Supply	AC 110 ~ 240V (Optional 12VDC MIL-704E)
Power Consumption	DC 11.7V, 0.63 A, 7.4 W @ Max Brightness
Power Input Connection	AC Power Connector in rear (Optional MIL-C-38999 Rear)

Environmental

Operational Temperature	-20°C ~ +70°C Std. (-30°C ~ +70°C with Heater Glass)
Storage Temperature	-40°C ~ +80°C
Humidity	95% non-condensing
Vibration	MIL-STD-461D/462D
Shock	50g – 11ms half sine (MIL-STD-810D)
Altitude	20,000 Ft (Optional 40,000Ft)
MTBF	30,000 hrs (MIL-HDBK-217F)

Mechanical

Outline Dimension	201.5mm (H) x 258mm (V) x 132mm (D) [7.933" x 10.157" x 5.197"]
Weight	3.7kg (8.2 lb)
Bezel Switch Force	800g