

3.96-Inch Rugged Capacitive Touch Display module with Enclosure

The KIPL 25-6398NR is a rugged 3.96-inch display module designed for applications requiring a compact, high-contrast display with capacitive touch functionality. It features an IPS display panel with 480 × 800 pixel resolution, 16.7M colours, a 6:10 aspect ratio and a 170°/170° viewing angle.

The display provides 400 cd/m² luminance after bonding and an 800:1 contrast ratio. Its 260 Hz refresh rate supports responsive display performance, while the LED backlight provides a compact display solution with a typical LED life of 30,000 hours.

The module incorporates a capacitive touch screen, ILI2511 touch driver IC and I2C touch interface. It supports operation with a stylus and gloved finger, with tempered glass and AG/AR strengthened glass providing a durable touch surface.

Optical bonding integrates the LCD and touch screen, while the EMI protective mesh provides provision for 360-degree electrical grounding. The rugged display is designed for a wide operating temperature range of -30°C to +70°C, with storage from -40°C to +80°C, and is designed to meet MIL-STD-461E/F.

Key Features :

- 3.96-inch IPS display with 480 × 800 resolution, 16.7M colours, 800:1 contrast ratio and 170°/170° viewing angle.
- Capacitive touch interface with ILI2511 touch driver IC, I2C interface and support for stylus and gloved-finger operation.
- Optical bonding and EMI shielding with AG/AR strengthened glass and provision for 360-degree electrical grounding.
- Rugged compact design with -30°C to +70°C operating temperature, fanless construction, IP23-rated front panel and MIL-STD-461E/F design.

Technical Specifications :

Display Size	3.96 Inch
Display Panel Type	IPS
Resolution	480(H) × 800(V) Pixels
Display Interface	MIPI
Backlight	LED
Luminance	400 cd/m² after bonding
Contrast Ratio	800:1
Aspect Ratio	6:10
Refresh Rate	260 Hz
Viewing Angle	170° / 170°
Colour Depth	16.7M
Active Area	51.84(W) × 86.40(L) mm
LED Life	30,000 Hours (Typical)
Input Voltage	VDD = 2.8V; LED forward voltage = 24V @ typical 20mA
Overall Dimensions	58.50(W) × 98.00(L) × 5.5(D) ±0.5 mm, approximately after bonding
Touch Type	Capacitive Touch
Touch Interface	I2C
Touch Driver IC	ILI2511
Touch Input Support	Stylus and gloved finger operation
Touch Glass	25H tempered glass, AG/AR strengthened glass
Optical Bonding	LCD + Touch Screen
EMI Mesh	EMI protective mesh with provision for 360-degree electrical grounding
Operating Temperature	-30°C to +70°C
Storage Temperature	-40°C to +80°C
Humidity	>95% RH at +40°C
EMI/EMC	Designed to meet MIL-STD-461E/F
Front Panel Rating	Ip23