

2.8-Inch 240x320 IPS TFT LCD with Resistive Touch & Multiple Interfaces

Our Product Introduction

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Basic Information

- Brand Name: Chenghao Optoelectronic
- Certification: CE、RoHS、FCC
- Model Number: CH280QV22F-T
- Minimum Order Quantity: No Moq
- Packaging Details: All The Products Are Packed In Right Way To Keep It Safe. For Small Sizes Of Products We Use Tray + Carton, For Bigger Sizes We Use Foam Slot + Carton. We Also Design Packages According To Customers' Requirements
- Delivery Time: 3~7 Days
- Payment Terms: TT Or Others
- Supply Ability: 20000000 Pcs/month



Product Specification

- Viewing Area Size: 44.8*63.1 Mm
- Viewing Direction: 80/80/80/80
- Touch Type: Resistive Touch
- FPC Pin Numbers: 50 Pins
- Contrast: 800
- Storage Temperature: -30 ~ +80
- Operating Temperature: -20 ~ +70
- Touch Interface: USB
- Highlight: 2.8-inch IPS TFT LCD display ,
resistive touch TFT LCD screen ,
240x320 resolution TFT LCD module



More Images





Product Description

Product Description:

The CH280QV22F-T is a high-performance 2.8-inch TFT LCD display module engineered by Chenghao Optoelectronic for versatile embedded applications. It features a QVGA resolution of 240x320 pixels, delivering sharp and detailed 65K-color visuals within a compact active area of 43.2 x 57.6 mm. Utilizing IPS (In-Plane Switching) technology, the module provides exceptional wide viewing angles of 80/80/80/80 (Up/Down/Left/Right), ensuring consistent image quality from multiple perspectives.

This module integrates a resistive touch panel with a USB interface, offering reliable and precise input control. For greater design flexibility, the touch solution can be optionally upgraded to capacitive touch or omitted entirely based on project requirements. The display boasts a high brightness of 500 cd/m², with customization available from 300 to 1000 cd/m² to suit various lighting conditions. It is designed to operate reliably across a broad temperature range of -20°C to +70°C, making it suitable for industrial, automotive, and outdoor environments.



To ensure seamless integration, the CH280QV22F-T supports multiple interface protocols, including SPI, MCU (parallel), and RGB, providing developers with versatile connectivity options. Its compact physical dimensions of 50.0 x 69.2 x 3.4 mm and a 50-pin FPC connector facilitate easy installation in space-constrained designs.

Features:

Superior IPS Viewing Experience: With symmetrical 80-degree viewing angles in all directions, the IPS panel guarantees minimal color shift and contrast loss, making it ideal for applications where multiple users view the screen from different angles.

Multi-Interface Compatibility: Engineers can select from SPI, MCU, or RGB interfaces to match their system's architecture. This flexibility simplifies hardware design and reduces the need for external bridge ICs or complex signal conversion.

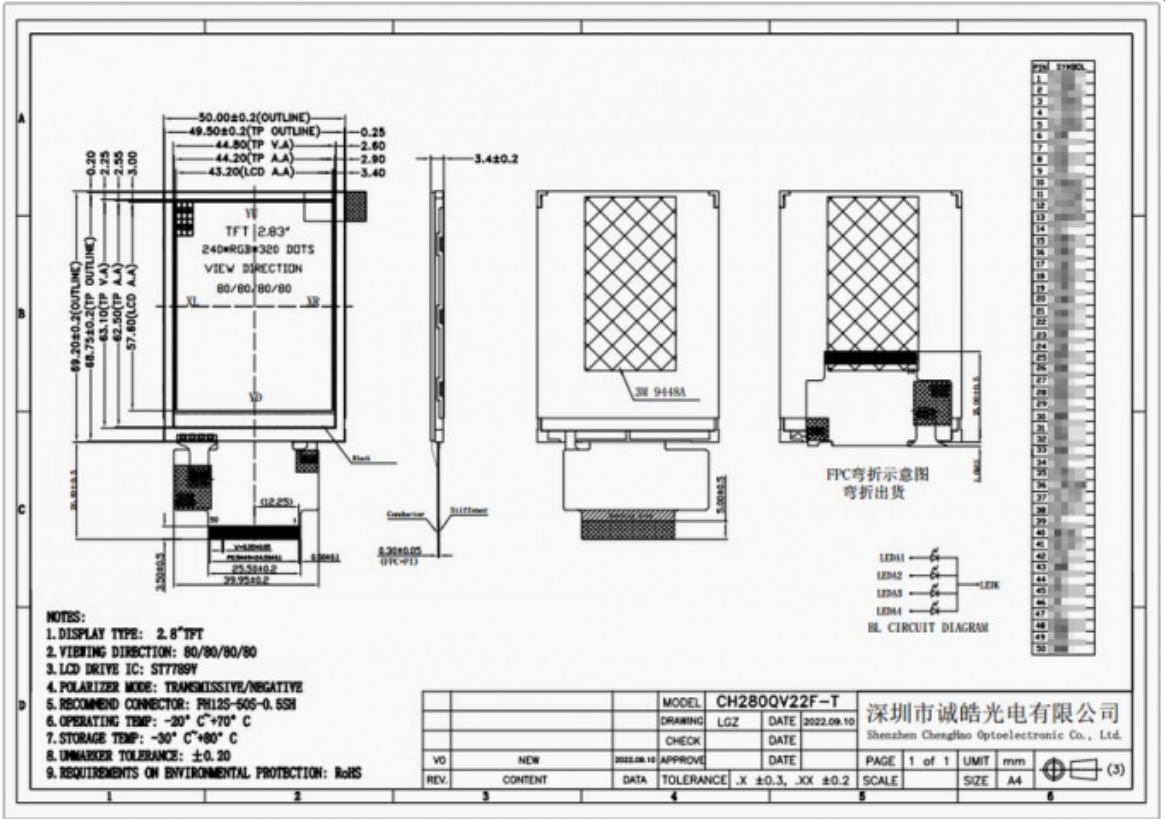
Robust Environmental Tolerance: Designed for challenging conditions, the module operates from -20°C to +70°C and stores from -30°C to +80°C. This ruggedness ensures stable performance in industrial control panels, automotive dashboards, and medical monitoring equipment.

Customizable Brightness & Touch: The standard 500 cd/m² brightness can be tailored from 300 to 1000 cd/m² for sunlight readability or power savings. Furthermore, the standard resistive touch can be swapped for capacitive touch or no touch, allowing precise alignment with user interaction needs and cost targets.

Technical Parameters:

Screen Size	2.8 Inch
Module Size	50*69.2*3.4 Mm
Viewing Direction	80/80/80/80
Touch Type	Resistive Touch
Storage Temperature	-30 ~ +80
Resolution	240*320 Dots
Screen Brightness	500 Cd/m2

Operating Temperature	-20 ~ +70
Contrast	800
LCD Interface	SPI, MCU, RGB



Customization:

Chenghao Optoelectronic offers extensive customization services for the CH280QV22F-T module, allowing it to be perfectly tailored to your specific application needs. Our customization process is collaborative and covers the following key aspects:

- 1) FPC & Connector Customization:** We can modify the Flexible Printed Circuit (FPC) shape, length, structure, and pin count (from the standard 50 pins) to fit your unique PCB layout and enclosure design, simplifying assembly and improving reliability.
- 2) Display Interface Options:** Beyond the standard SPI, MCU, and RGB support, we can integrate other interfaces such as MIPI, LVDS, EDP, or HDMI upon request, ensuring compatibility with your host processor or system-on-chip.
- 3) Backlight Brightness Tuning:** Adjust the LED backlight brightness anywhere from 300 cd/m² to 1000 cd/m² (with options up to 1500 cd/m² for specific needs) to achieve optimal visibility in environments ranging from dim indoor settings to direct sunlight.
- 4) Extended Temperature Range:** The operational temperature can be customized for wider or specialized ranges, such as -45°C to +90°C for extreme environment applications, ensuring performance stability under the harshest conditions.
- 5) Cover Glass & Optical Enhancement:** Customize the cover glass shape, thickness, anti-glare (AG) or anti-reflective (AR) coatings, and add silk-screen printing (e.g., logos, borders) for both functional and aesthetic purposes.
- 6) Touch Panel Selection:** Choose between resistive touch (standard), projective capacitive touch for multi-touch gestures, or opt for no touch panel based on your application's requirements.
- 7) EMI/EMC Shielding:** Integrate electromagnetic interference shielding to meet strict regulatory standards and ensure stable operation in electrically noisy environments.

Our engineering team works closely with you from concept to production, providing prototypes for validation and ensuring the customized module meets all your technical and quality specifications.

Support and Services:

Choosing the CH280QV22F-T grants you access to comprehensive technical support and customer service from Chenghao Optoelectronics, a system designed to ensure the success of your project from development to mass production.

Technical Documentation: Obtain detailed pin definitions and interface timing specifications to simplify your design process.

Design and Integration Support: Our experienced application engineers provide guidance on schematic design, PCB layout, and driver software integration for various MCU platforms.

Sample Provision: We offer standard or customized sample units of the CH280QV22F-T for your use during the prototyping and evaluation phases to verify performance and compatibility before mass ordering.

Reliable Manufacturing and Quality Assurance: All modules undergo rigorous testing, including electrical verification, visual inspection, and aging tests. We adhere to strict quality control procedures to ensure that each unit meets our high standards of reliability and durability.

Flexible Ordering and Logistics: We support varying order volumes, from small batches for R&D to large-scale production. Our efficient supply chain and logistics partners ensure reliable and timely delivery worldwide.

After-Sales Service and Warranty: We provide warranty support for standard products. Our dedicated support team is ready to assist you with any technical issues or questions you may have throughout the product lifecycle.

FAQ:

Q1: What is the model number of the TFT LCD Capacitive Touchscreen?

A1: The model number is CH280QV22F-T.

Q2: Which certifications does this touchscreen have?

A2: It is certified with CE, RoHS, and FCC.

Q3: Is there a minimum order quantity requirement for this product?

A3: No, there is no minimum order quantity (No MOQ) for this product.

Q4: How is the product packaged to ensure safety during shipping?

A4: All products are packed securely. Small sizes are packed using tray plus carton, while bigger sizes use foam slot plus carton.

Packaging can also be customized according to customer requirements.

Q5: What is the typical delivery time for orders?

A5: The delivery time is typically between 3 to 7 days.

Q6: What payment terms are accepted?

A6: Payment can be made via TT (Telegraphic Transfer) or other agreed methods.

Q7: What is the monthly supply capacity for this touchscreen?

A7: Chenghao Optoelectronic can supply up to 20,000,000 pieces per month.



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