

1.9-Inch High Brightness 800 cd/m² IPS LCD Display with SPI & MCU Interface for Industrial Applications

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: BBI
- Certification: ISO9001 RoHS
- Minimum Order Quantity: 1000
- Price: 0.7-7USD
- Packaging Details: CARTON
- Delivery Time: 3-4WEEKS
- Payment Terms: T/T
- Supply Ability: 100000/MONTH



Product Specification

- Storage temperature: -30°C To 80°C
- Luminance: 800 Cd/m²
- Aa Size: 22.7(W) X 42.72(H)
- Screen type: TFT LCD
- Overall Dimensions: 25(W) X 49.33(H) X 2.11(T)
- Size: 1.9 Inches
- Backlight Type: LED
- Operating temperature: -20°C To 70°C
- Highlight: **1.9-Inch IPS LCD Display ,
High Brightness 800 cd/m² TFT LCD Screen ,
SPI & MCU Interface LCD Display Module**



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Product Description

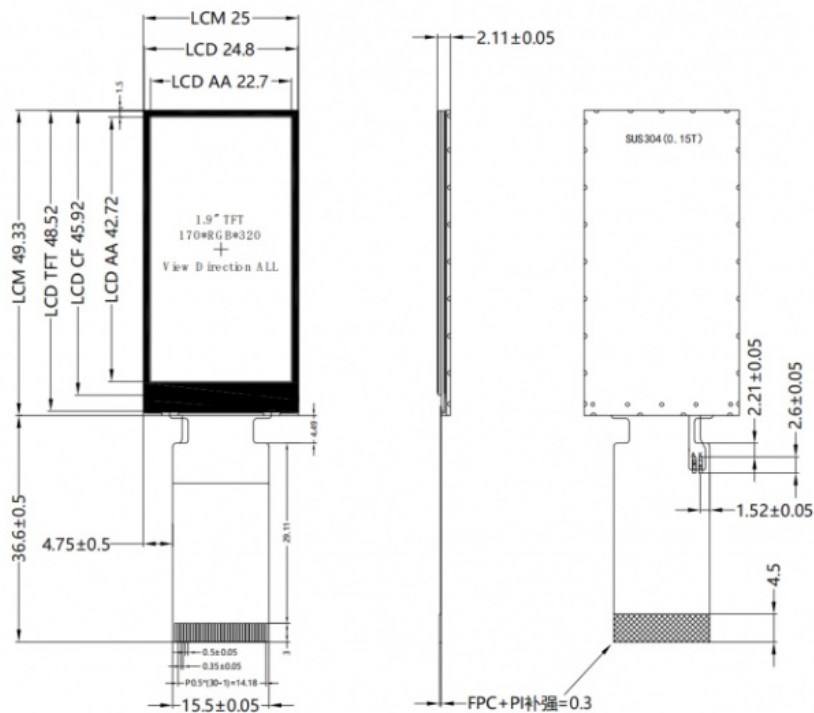
1.9-Inch High Brightness 170x320 Resolution IPS LCD Display

This compact color TFT IPS display module features a 1.9-inch diagonal size with 170x320 resolution and supports both SPI and MCU interfaces for flexible integration.

Product Specification

Features	Details	Unit
Display Size (Diagonal)	1.9"	Inch
LCD Type	IPS TFT	-
Display Mode	Normally Black	-
Resolution	170 x RGB(H) x 320(V)	Pixels
Viewing Direction	ALL	-
Module Size	25(W) x 49.33(H) x 2.11(T)	mm
Active Area	22.7(W) x 42.72(H)	mm
Pixel Size	0.1335(W) x 0.1335(H)	mm
Color Arrangement	RGB Vertical Stripe	-
Interface	SPI/Parallel	-
Surface Brightness	800	cd/m ²
Display Colors	262K	-
Driver IC	ST7789P3	-
Touch Panel	Without	-
Operating Temperature	-20 ~70	
Storage Temperature	-30 ~80	

External Dimensions



Interface Pin Definition

Pin.No	Symbol	Description
1	GND	Ground
2	VCC	Power supply for Analog
3	IM2	Interface Mode Selection
4	IM1	Interface Mode Selection
5	RESET	LCM Reset pin
6	CS	Chip select pin ("Low" enable)
7	DC/SCL	Serial clock pin
8	WR/RS	Register select pin
9	RD	Read enable in 8080 MCU parallel interface
10	SDA	SPI interface input/output pin
11-18	DB0-DB7	MCU parallel interface data bus
19	SDO	SPI interface output pin
20	LED+	Backlit anode
21-24	LED-	Backlit cathode
25	GND	Ground
26-29	NC	NC
30	GND	Ground

IM1	IM2	Interface Mode
0	0	8080-8bit
1	1	4-line SPI

Product Introduction

This compact color TFT IPS display module features a 1.9-inch diagonal size with an effective display area of approximately 22.7 × 42.72 mm and a resolution of 170 × 320 pixels. Equipped with the industry-standard ST7789 series driver IC, it supports both SPI (4-wire serial) and MCU (8080 parallel) interfaces. The SPI interface is ideal for scenarios with limited pin resources, while the MCU parallel interface provides faster data transmission rates for enhanced performance.

The high-brightness design (800 cd/m²) combined with IPS technology delivers full viewing angle (80°/80°/80°/80°) display performance without significant color deviation or brightness attenuation from any angle. Supporting 262K colors, the display produces bright and clear images. Operating at 3.3V (with some modules compatible with 5V input), it features a working temperature range of -20 to +70 and storage temperature range of -30 to +80. The module offers strong anti-interference capabilities, stability, and supports backlight PWM adjustment for power consumption control. With a thickness of 1.4-2mm and connection via a 30-pin FPC flexible cable, it integrates easily into narrow spaces.

Core Advantages

Dual-Interface Flexibility: SPI minimizes pin usage while parallel MCU interface boosts speed, compatible with mainstream microcontrollers including ESP32, STM32, Arduino, and Raspberry Pi Pico

IPS Full-View + High Brightness: Maintains clear visibility in outdoor or multi-angle observation scenarios without requiring direct screen viewing

Low Power Consumption + Ultra-Thin Design: Ideal for battery-powered portable devices and wearable products without adding thickness burden

Industrial-Grade Reliability: Wide temperature range operation, vibration resistance, RoHS compliant, available in touchless or capacitive touch versions with customization options

Main Applications

Smart Wearable Devices: Smart wristbands, small smart watches, motion monitors displaying heart rate, steps, notifications, and time

Portable Instruments: Handheld blood glucose/blood oxygen meters, environmental detectors, temperature and humidity recorders, mini

multimeters

Vehicle Electronics: Tire pressure monitors, small head-up displays (HUD), car key displays

Smart Home & IoT Terminals: Small gateway panels, smart switch displays, pet feeding/drinking machine status interfaces

Consumer Electronics & DIY Projects: Mini game consoles, MP3 players, camera viewfinder/parameter screens, open-source hardware projects



Frequently Asked Questions

I want the LCD display 8 digits and the outline size is 65x30x2.8mm?

No problem. Please send us your specification/drawing paper. If you don't have specifications, you can provide samples and we'll recommend suitable standard products or customize based on your requirements.

This LCD is what we want, but it's too big. Do you have smaller sizes? The display content needs slight modification.

For segment type LCD modules, modifying outline size or display content requires a new LCD glass module. We would need to create new tooling for you.

This LCD display is HTN type, but I want STN type. Can you make it?

Yes, we can change the display type according to your request.

I want to customize a new LCD module. Can you do it?

Yes, we can customize LCD modules. Please send your drawing paper. If you don't have one, provide the outline size, display information (glass thickness, polarizer, display type, connector mode, storage temperature, operating temperature, supply voltage, viewing direction, drive condition).

What is the lead time for tooling?

Typically 15 to 25 days after drawing paper confirmation and tooling charge payment. We'll provide exact timing upon drawing confirmation.

Can you send us samples for checking?

Yes, sample orders are available.

What is the lead time?

For standard products in stock, lead time is one day after payment. For mass production of special orders, lead time is approximately 15-30 days. We'll inform you if we can complete earlier.



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