

2.1-Inch 480x480 Round TFT LCD Display with 450cd/m² Brightness for Smart Home Appliances

Our Product Introduction

Basic Information

- Place of Origin: China
- Brand Name: BBI
- Certification: ISO90001 RoHS
- Minimum Order Quantity: 1000
- Price: 0.7-7USD
- Packaging Details: CARTON
- Delivery Time: 3-47WEEKS
- Payment Terms: T/T
- Supply Ability: 100000/MONTH



Product Specification

- Surface Lumiance: 450/cd
- Lcd Size: 2.1 Inch
- Commodity: 1.3 Inch TFT LCD Display
- Lcd Resolution: 480x480 Dots
- Outline Dimension: 69.19-71.74*2.45 Mm
- Storage Temp: -20 ~+ 70
- Highlight: 2.1-inch round TFT LCD screen , 480x480 smart appliance display, small home appliance LCD screen



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Product Description

2.1-Inch 480×480 Round TFT LCD Smart Small Home Appliance Display Screen

High-resolution round TFT LCD display designed for smart home appliances and industrial applications with excellent visibility and touch capabilities.

Product Specifications

Model Number	BBI210005B0
Number Of Pixels	480×3RGB(H)×480(V)
LCD Type	Normally Black
Drive Element	TFT Active Matrix
Pixel Pitch (W×H)	0.111×0.111 mm
Operating Temperature	-20°C to 70°C
Brightness	450 cd/m ²
Size	2.1 Inch

Key Features

Product Name: Round TFT LCD
 Size: 2.1 Inch
 LCM Interface: RGB 18 BIT Interface
 Drive Element: TFT Active Matrix
 LCD Type: Normally Black

Technical Parameters

Parameter	Value	Unit
Size	2.1	Inch
LCD Type	Normally black	--
Drive element	TFT active matrix	--
Number of pixels	480×3RGB(H)×480(V)	Dots
Pixel arrangement	RGB stripe	--
Pixel Pitch (W×H)	0.111×0.111	mm
Active area	Φ53.28	mm
Mechanical Outline Size (W×H×T)	56.18×59.71×2.2	mm
Viewing direction	ALL O'CLOCK	-
LCM Driver IC	ST7701S	-
LCM interface	RGB 18 BIT Interface	-
LCM pin count	40	
Backlight LEDs	4	pcs
Backlight current	80	ma
Backlight voltage	2.8-3.3	v
Operating temperature	50	
Storage temperature	50	
Brightness	450	Cd/

Product Introduction

Display Performance

Resolution and PPI: The screen resolution is 480×480, and at a size of 2.1 inches, the PPI is as high as 274, with a pixel pitch of only 0.111×0.111mm, allowing for clear display of minute details.

Brightness and contrast: Utilizing IPS full-view technology, the screen brightness reaches 820cd/m², with a contrast ratio of 800:1, maintaining clarity even in outdoor strong light.

Color gamut and viewing angle: Supports 16.7M color display and 178° full viewing angle, ensuring good color consistency when viewed from different angles.

Interfaces and Drivers

Interface types: Supports multiple interfaces such as SPI, RGB, MIPI, etc., and can be compatible with ARM Cortex-M series microcontrollers and processors like RK3566, with strong compatibility.

Driver IC: Uses the ST7701S driver chip, supporting 18-bit RGB data transmission and PWM dimming, achieving millisecond-level response speed.

Touch technology: Supports capacitive touch, with a response time of less than 10ms, a false touch rate of less than 0.1%, and smooth and precise operation.

Environmental Adaptability

Operating temperature: Supports wide temperature operation from -20°C to 70°C, and can work stably in different environmental temperatures.

Protection level: Obtains IP65 protection certification, possessing certain dust and water resistance capabilities, and can adapt to harsher usage environments.

Backlight design: Uses 4 white LED backlights, with a current of 80mA and a voltage of 2.8-3.3V, with a backlight lifespan of up to 50,000 hours.

Main Applications

Smart home: It can be used for smart temperature control knobs, which can display and adjust temperature, humidity, and other parameters in real time, helping users precisely control the indoor environment and reduce energy consumption. It can also be applied to smart door lock knobs, supporting functions such as face recognition and fingerprint unlocking, improving the security and intelligence level of the door lock.

Smart wearables: For example, smart watches can clearly display health data such as heart rate and blood oxygen. The high PPI makes the font edges sharp, enhancing the user's reading experience. Smart rings can also be embedded with this screen to achieve real-time display of exercise data and message alerts.

Medical equipment: It can be used in portable monitors, which can display physiological parameters such as ECG and SpO₂ in real time. The high contrast design helps medical staff accurately identify waveforms and reduces the error rate. When applied to endoscope knobs, the high-brightness screen enables doctors to operate the equipment clearly in low-light environments.

Automotive electronics: It can be used as an in-car knob screen, supporting touch control adjustment of functions such as air conditioning and seats. The full-lamination design enables rapid operation feedback. It can also be used in HUD knob controllers to achieve rapid switching of navigation information and driving modes.

Industrial control: It can be applied to intelligent knob switches, supporting multi-level menu switching and parameter adjustment, improving equipment operation efficiency. When applied to AGV scheduling terminals, it can display real-time task allocation and path planning information, improving scheduling efficiency.





Packaging & Shipping

Packaging: Carton boxes, Cupboard, EPE, Blister Tray. About the package way, it is up to the size of products, according to customer request and demand. Different countries have not same requirement.



Shipping: Express way as DHL, Fedex, EMS, UPS, air shipping, sea shipping. Any shipping method you prefer.

						
	2-7days	2-8days	2-7days	3-15days	2-5days	2-7days
Notice	<ol style="list-style-type: none"> EMS for Brazil, Russia and Remote areas . SF for Hong Kong, Taiwan, South Korea, Japan, Thailand, Singapore and Malaysia . Having logo product can' t be sent by FEDEX . The Brazil want to use FEDEX/DHL , need to offer CNPJ / CPF to us ! 					

Payment Method:



Frequently Asked Questions

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

No problem. Firstly, please kindly send us your specification/ drawing paper. If you have not the specification, you can also provide your samples; we will recommend the suitable one if it is standard products. Or we can customize for you based on your own requirement.

This LCD is just what we want, but it is big size, do you have any smaller size? And the display content need to be changed a little.

For the segment type LCD module, if you need modify the outline size or display content, a new LCD glass module is need. We have to open new tooling for you.

This LCD display is HTN type, but I want STN type, can you make?

That's all right. We can change for you as per you request.

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

Yes, we can. Please send your drawing paper. If you have not, please advise me the outline size of the LCD display, display information (Glass thickness, Polarizer, Display Type, Connector mode, Storage Temp. Operating Temp. Supply Voltage, Viewing direction, drive condition), we can customize for you.

What is leading time for tooling?

General speaking, it will cost 15 to 25 days after drawing paper confirmation and tooling charge payment, we can report you the exact time when you confirm the drawing paper.

Can you send us samples for checking?

Yes. Samples order is available.

What is the Leading Time?

If we have stock for the standard ones, the leading time is one day after payment. If it is the mass production for special ones, the leading time is about 15-30 days. suppose we can finish earlier, we will report the information in advanced.

Our Services

Free repair within one year after the shipment of products from us.

Replacement within 30 days after the shipment of products from us due to products' problems.

We can print your logo and stick your model No.on the cameras.

We have long cooperation with many shipping companies and our export volume is large. The shipping companies can offer us good discounts.

Professional technician supports. We have a good after-sales service team. They can solve your problems in time.

All goods will be inspected and tested by our engineers and QC/QA before packing and shipment.

Customers satisfactory is most important to us. If you have any problem or questions regarding our transaction. Please contact us by Email or online. It will be responded within 24 hours.

Products pictures only for your reference. please kindly refer to the specification. we can provide the products basic on the specification. or you can offer your own specification or drawing , we can customize all kinds of LCD displays for you. thanks for your kind support always.



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