Product Specification

Product Model	YT078
Product Name	P0.78 Full Color Display Screen
Version Number	V1.3
Control Status	受 控 Controlled

Document Change History

Version	Change Date	Department	Change Personnel	Change Reason	Change Content
V1.1	2025/6/16	R&D Department	厍,洪博	New Release	None
V1.2	2025/8/9	Production Dept.	谢域河	Version Update	Updated floating connector height info
V1.3	2025/11/4	Marketing Dept.	刘林	Version Update	Product Information Update

Table of Contents

1. Scope of Application

This specification applies to Yitong Optoelectronics LED display products.

2. Product Description

2.1 Each pixel on the front of the LED display consists of R, G, B full flip-chip packages forming the display module. The driver chips are located on the back of the PCB, directly controlling the LED chips.

2.2 The LED display module features front maintenance design and comes with professional suction cup tools for installation and debugging.

2.3 Utilizes unique surface treatment technology for excellent ink consistency and contrast, achieving superior display performance. High-definition refresh rate reaches 7680Hz.

2.4 High reliability: Full flip-chip, integrated packaging.

2.5 Integrated lamp and driver, constant current drive, uniform illumination, low power consumption.

2.6 Surface light source, wide viewing angle, excellent display effect.

2.7 Simple disassembly and assembly process for the display module.

3. COB Lamp Board

a.Lamp Board Renderings
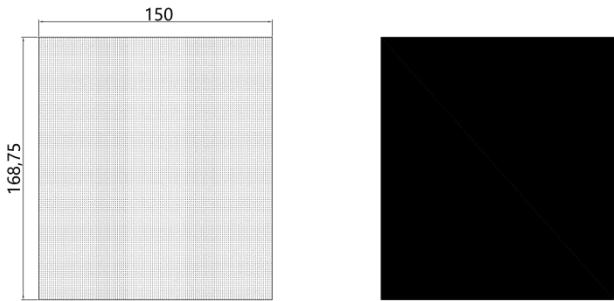
b.Lamp Board Dimension Diagram
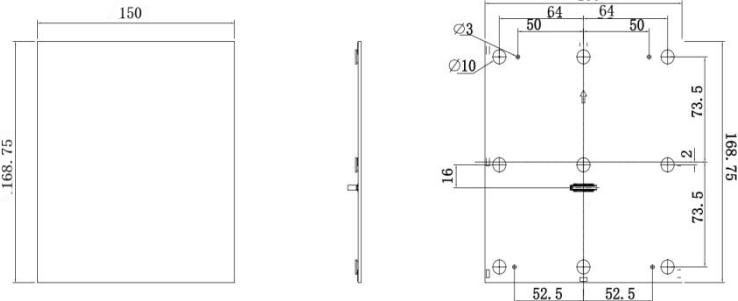
c.Lamp Board Interface Definition
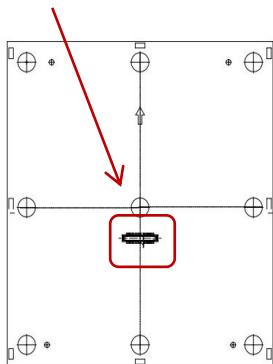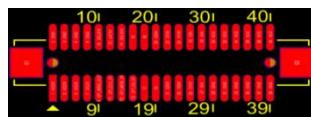
Interface & Pin Definition		Pin No.	Pin No.	Interface & Pin Definition	
Power Supply	VCCR	1	2	GND	Power Ground
Power Supply	VCCR	3	4	GND	Power Ground
Power Supply	VCCR	5	6	GND	Power Ground
Power Supply	VCCR	7	8	GND	Power Ground
Lamp Board Flash Data Output	SPI_MISO	9	10	DCLK	Driver IC CLK Signal
Lamp Board Flash Clock Input	SPI_CLK	11	12	LAT	Driver IC LAT Signal
Lamp Board Flash Data Input	SPI_MOSI	13	14	GCLK	Driver IC OE Signal
Lamp Board Flash Chip Select Input	SPI_CS	15	16	None	/
/	None	17	18	None	/
/	None	19	20	G2	Green Data Signal
Blue Data Signal	B2	21	22	B1	Blue Data Signal
Red Data Signal	R2	23	24	R1	Red Data Signal
Green Data Signal	G1	25	26	C	Serial Data Input
Register Clock	B	27	28	A	Serial Data Shift Clock
Power Ground	GND	29	30	VCC	Power Supply
Power Ground	GND	31	32	VCC	Power Supply
Power Ground	GND	33	34	VCC	Power Supply
Power Ground	GND	35	36	VCC	Power Supply
Power Ground	GND	37	38	VCC	Power Supply
Power Ground	GND	39	40	VCC	Power Supply

The interface uses a floating male connector: 40-pin, 0.8mm pitch. Male connector height: 6.8mm; combined mated height: 11.75mm.

4. Three-in-One Driver Board

a.HUB Board Appearance and Dimensions
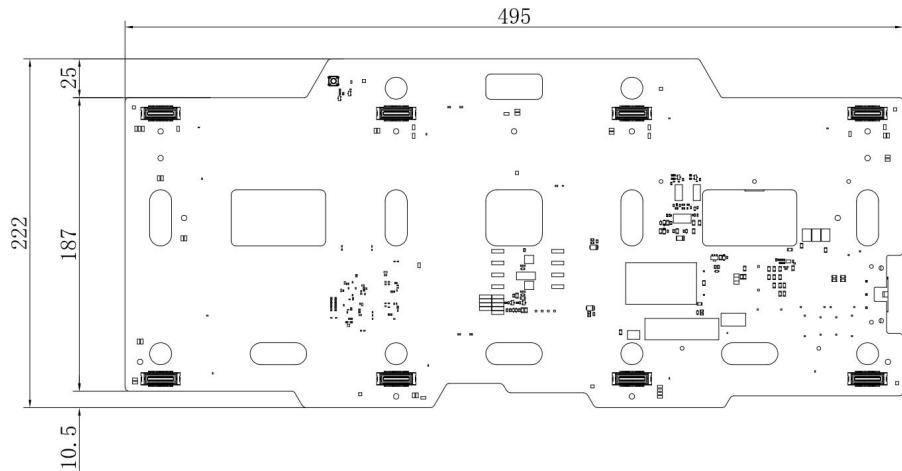
b.Cabinet Explosion Diagram

Die-Cast Aluminum Cabinet

COB Lamp Board

Three-in-One Driver Board
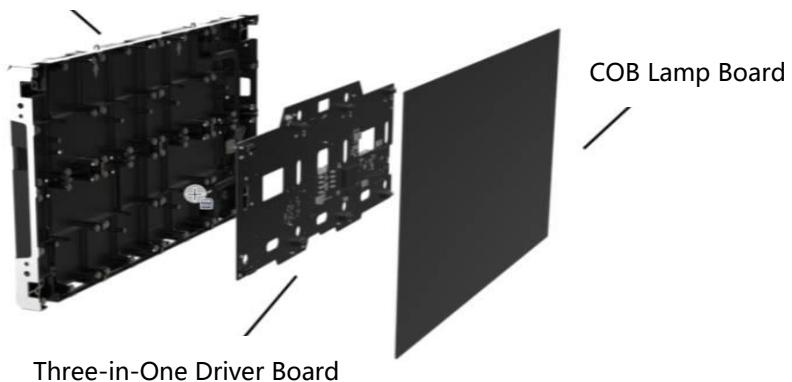
c.Unit Assembly Diagram
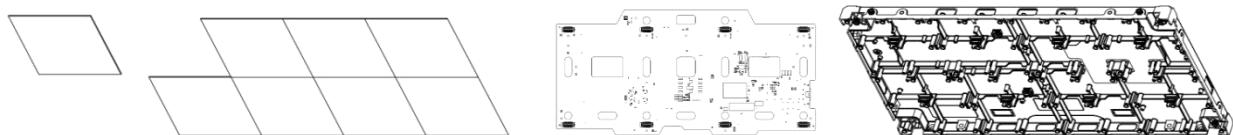
8 Lamp Boards + Three-in-One Driver Board + Die-Cast Aluminum Cabinet

600*337.5 Unit

5. Cabinet

a. Cabinet Physical Diagram

b. Cabinet Dimensions & Specifications
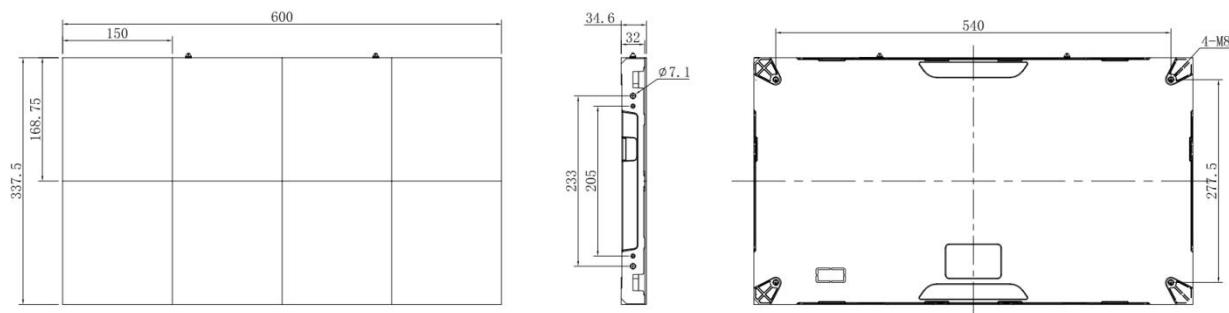
6. Product Packaging Description

1. Lamp Board Packaging

Description: 64 modules per case
Dimensions: 742*416*302MM
Weight: Approx. 10.5KG
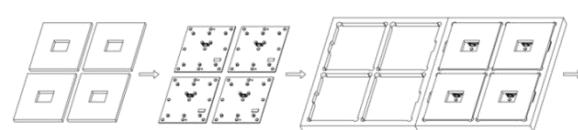
PE Foam Cover Plate   COB Module   Module Polyfoam   Module Carton

2.Die-Cast Unit Cabinet Packaging
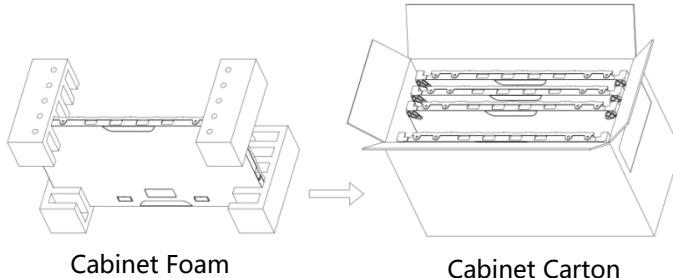
Description: 5 per case
Dimensions: 652*287*390MM
Weight: Approx. 15.5KG

Cabinet Foam   Cabinet Carton

7

7. Parameter Table

| Product Model		YT078
Module	Pixel Pitch (mm)	0.78
	Module Resolution (dot)	192*216
	Module Dimensions (mm)	150.00*168.75
	Module Weight (g)	< 144.5
Cabinet Composition	Cabinet Module Composition (pcs)	4*2
	Cabinet Resolution (dot)	768*432
	Cabinet Dimensions (mm)	600.0*337.5
	Cabinet Weight (kg)	< 3.1
	Full Cabinet Thickness (mm)	34.6
	Pixel Density (dot/m^2)	1638400
	Cabinet Material	Die-Cast Aluminum
	Cabinet Flatness (mm)	≤0.1
Electro-Optical Parameters	Calibrated Brightness (nit)	450-600
	Refresh Rate (Hz)	7680
	Frame Change Frequency (Hz)	60
	Color Temperature (K)	3000-10000(Adjustable)
	Brightness Uniformity	≥99%
	Horizontal Viewing Angle (°)	≥170
	Vertical Viewing Angle (°)	≥160
	Color Gamut	NTSC 110%
	Contrast Ratio	10000：1
	Drive Method	Common Cathode
	Scan Method（S）	1/60
	AC Operating Voltage (V)	100-240
	Single Cabinet Power consumption (W)	≤44

|		
Application Parameters	Operating Temp. Range(℃)	-10 ~ +40
	Storage Temp. Range(℃)	-40 ~ +60
	Operating Humidity Range(RH)	10% ~ 90%
	Storage Humidity Range(RH)	10% ~ 90%
	Module Maintenance Method	Front Maintenance
	Power Supply Maintenance Method	Front Maintenance
	LED Life(hrs)	≥100,000

8. Usage Precautions

Item	Description
Temperature Requirements	Operating Temp: -10°C to +40°C, requires temp control equipment if exceeded. Storage Temp: -40°C to +60°C, requires cooling if >60°C. Surface Temp: ≤60°C during operation, requires temp control if exceeded.
Humidity Requirements	Operating Humidity: 10% ~ 90% RH, requires dehumidification if exceeded. Storage Humidity: 10% ~ 90% RH, requires dehumidification if >90% RH.
Prolonged Storage Handling	If the product is stored for over one month, a 6-hour aging process (with gradually increasing brightness) is required before use: operate at 10% brightness for 1 hour → 30% for 1 hour → 60% for 2 hours → 80% for 1 hour → 100% for 1 hour.
Dust Prevention	The display's low IP rating requires protection from dusty environments, such as studio renovation or remodeling.Special protection for the display screen is required.
Corrosive Gas Prevention	Avoid environments with salt or acid vapors to prevent component corrosion and current leakage.
Electromagnetic Interference Prevention	The module should not be placed near interference sources where electromagnetic/radio frequency radiation exceeds 5 V/m field strength.
Vibration Prevention	The display screen should be installed on a strong and reliable mounting structure without strong vibration.
Rear components: Keep away from water	Indoor products have a low IP rating. Water conductivity can cause short circuits and damage components. Keep away from water sources.
Static/Lightning Prevention	Prevent damage to electronic components from static electricity in humid environments and avoid electric shock hazards.
Personal Safety	Ensure suitable installation angle and height. Package sharp edges/corners to prevent injury.
Safety Requirements	Electrical Compliance: A stable power supply (stable frequency, voltage, harmonics) is required. The display metal casing must be grounded with the frame (resistance ≤1Ω, leakage current ≤5% input). Dielectric strength must meet SJ/T 11141-2017, section 5.7.5.
Others	Clean screen surface only with pure water and fine lint-free cloth. Do not use alcohol or other solvents. Do not touch screen surface directly; wear ESD gloves during disassembly/assembly.

9. Product Usage Guide

1、Engineering Installation Instructions:

M8X60 Hex Socket Screw

Rear Mounting Link Plate

Wall Surface

Display Unit

Steel Structure

Front Mounting Link Plate - Full Set
M8X60 Hex Socket Screw

Front Mounting Link Plate - Half Set
M8X60 Hex Socket Screw

LED Board
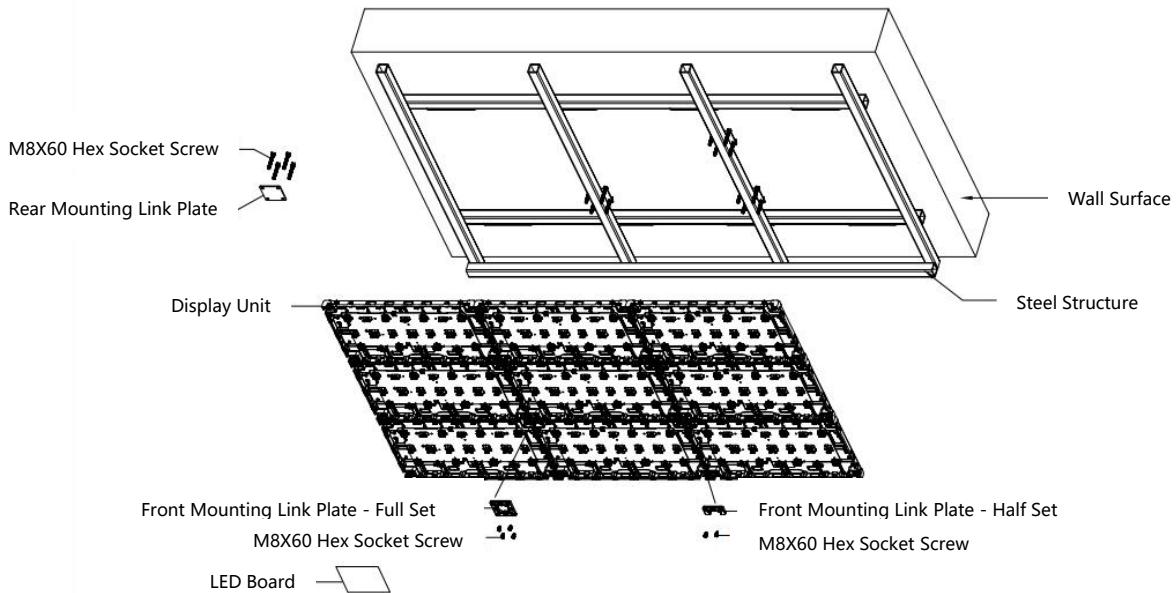
1) Use suction cup tools for installing/removing display modules. Operate perpendicular to the screen. Avoid impact between lamp board edges.

a. Ensure the bracket is perpendicular to the mounting surface during cabinet fixation to prevent improper installation.

b. Do not over-tighten the pivot screws, as this may cause cabinet bending, structural damage, or compromised flatness.

c. If the surfaces between cabinets are not flush, then adjust the latch screws between them to improve flatness.

d. Do not force the lamp board into place during installation, as this can cause dead pixels along the edges.

e. Ensure the internal magnetic screws are fully tightened during lamp board installation to maintain consistent fixing point height.

2) Wear ESD gloves when installing/removing display modules.

3) After installation, clean the screen surface with a lint-free cloth dampened with pure water only. Do not use other solvents.

Note: The above installation instructions are for reference only. Detailed steps should be adjusted according to the actual installation environment.

2、Safety Instructions

1) For aerial work, implement safety measures. Operators must wear qualified safety helmets, safety belts, and other necessary protective equipment.

ESD Gloves	Safety Helmet	Safety Rope

2) Single LED display weighs approx. 5KG. Exercise extreme caution for personal safety during operation. Do not throw tools or materials. Use isolation facilities for necessary overhead work.

3、Precautions

1) not subject the display to excessive external pressure or impact, as this may cause damage.

2) When cleaning the display surface, follow the guidelines and use only a soft, lint-free cloth.

3) Power must be disconnected before disassembling the display.

4) All installation accessories are designed exclusively for the installation and connection of this specific LED display model.

5) Modification or replication of any components is prohibited. This display uses special materials and manufacturing processes to ensure component strength.

6) Strictly adhere to the installation instructions. For any questions regarding safe application, consult the factory. The manufacturer assumes no legal liability for consequences resulting from incorrect, incomplete, irresponsible, or unsafe use of the installation system.

Friendly Reminder: Handle the LED modules with care during transportation, installation, and operation to avoid damage caused by impact.