



The pioneer of LED standardized commercial application display!

# Product Specifications

Product Name: P2.5 Outdoor Cube Screen

Cabinet material: Sheet metal cabinet

Cabinet size: 640\*640mm

Module size: 160\*160mm


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## 1. Scope of application

This technical manual is only applicable to indoor and outdoor magic cube screens. The following are conventional product parameters, which can be customized if there are special requirements.

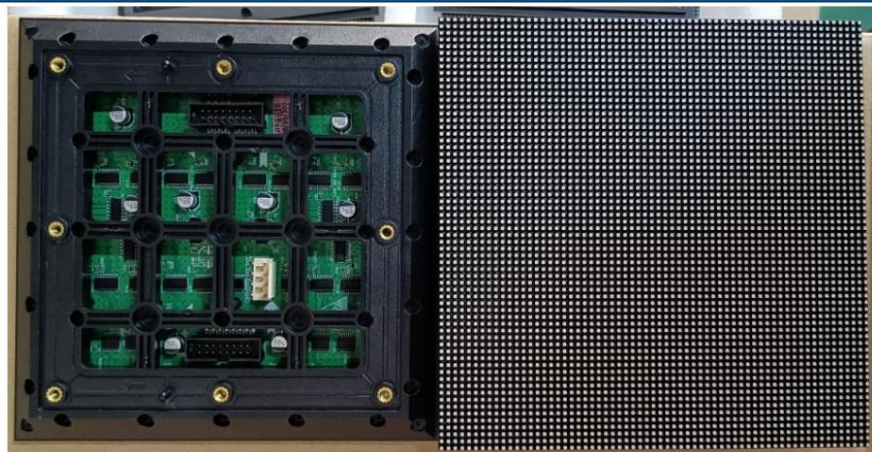
## 2. P2.5 Magic Cube Screen Technical Parameters

LED Parameters



Serial number	Project	Brightness	Viewing angle	Wave length	Test conditions
1	Red	300-500mcd	110°	615-630nm	1.8-2.4V/20mA
2	Green	700-1300mcd	110°	512-535nm	2.8-3.4V/20mA
3	And	100-180mcd	110°	460-475nm	2.8-3.4V/20mA
4	Blue	Vertical			
5	Arrangement pixel tube	2.5mm			
6	Pitch pixel structure	1R1G1B(three in one)			
7	Pixel Tube Model	SMD1415			
8	Emission Color	1677721 colors			

Module parameters



1	Module size	160mm×160mm×18mm (length×width×thickness)
2	Mod Kit	Bevel 45 degrees
3	Module surface treatment	Add mask, glue filling
4	Display resolution	64 dots × 64 dots (width × height)
5	Input voltage (DC)	4.5±0.1V

6	Maximum current	≤7A
7	Driver IC	6124/6353
8	Drive mode	1/16 Constant current drive
9	Module interface	CG-75
10	Module rated power	≤20W

#### Cabinet parameters



1	Box size	640mm×640mm×640mm
2	Cabinet Features	Conventional 4-sided/5-sided (can be customized single-sided, double-sided, three-sided)
3	Cabinet resolution	256×256=65536 points
4	Number of modules	Single-sided 16pcs
5	Box weight	Net weight 55KG/unit (five sides); including wooden box 73KG
6	Installation	Default four-sided side hanging, five-sided hanging

#### Screen parameters

1	Point Density	160000 points/㎡
2	brightness	4000cd/㎡ (adjustable)
3	Contrast	≥2000:1
4	Horizontal viewing angle / vertical viewing angle	140° (horz.), 140° (vert.)
5	Flatness	≤0.3mm

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6	Chromaticity uniformity	Within $\pm 0.003$ Cx,Cy
7	power supply	5V40A/5V60A
System control parameters		
1	Control host operating system	Windows 10
2	Asynchronous control box	Lifang Box/TB1/Magic Card (supports specified and customized)
3	software	Customized player (CG-V8)
4	Receiving Card	K12
5	Grayscale	16384 Level
6	Signal color processing bits	Red, green, blue $\gamma$ 16 bits each
7	Frame rate	50Hz -60Hz
8	Refresh rate	1920Hz--3840Hz
9	Brightness adjustment	Manual/Automatic/Programmable
10	Control method	Mobile phone control, support remote control (4G module can be added separately)
11	Control method	Wifi hotspot mobile APP control
Screen operating parameters		
		
1	Operating voltage	The default voltage is 200V and supports a wide voltage range of 100V~240V (50~60Hz) for matching plugs
2	Peak Power	$\sim 800W/unit$
3	Average Power	$\sim 300W/unit$
4	Continuous working time	$\sim 7 \times 24hrs$ , support continuous and uninterrupted display
5	Mean time between failures	$\sim 10000$ hours
6	Service life	$\sim 100,000$ Hours

7	Discrete out-of-control points	≤0.0001, factory default is 0
8	Blind spot rate	≤0.0001, factory default is 0
9	Usage Environment	Suitable for both indoor and outdoor use (indoor models cannot be placed outdoors in the rain)
10	Operating ambient temperature	-30℃~60℃

### 3. Wooden box dimensions (unit: mm)



### 4. Cube Screen Installation Instructions

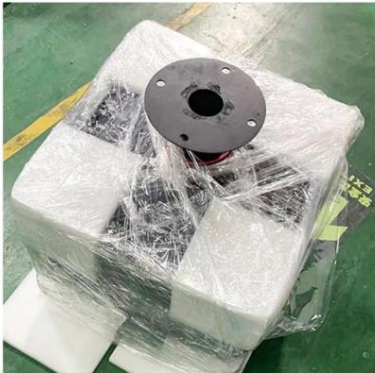


## Magic Cube Screen installation steps

- 1** After confirming that the wooden box is not damaged, open the wooden box



Handle fragile items with care  
Please do not tear off the protective film during installation to prevent damage.



- 3** Remove the screws at the boom, take off the base, drill holes in the wall according to the hole positions and fix the expansion screws



- 2** Four-sided screen side hanging,  
Five-sided screen hanging  
After fixing the LED Magic Cube screen, connect the power supply

**4**

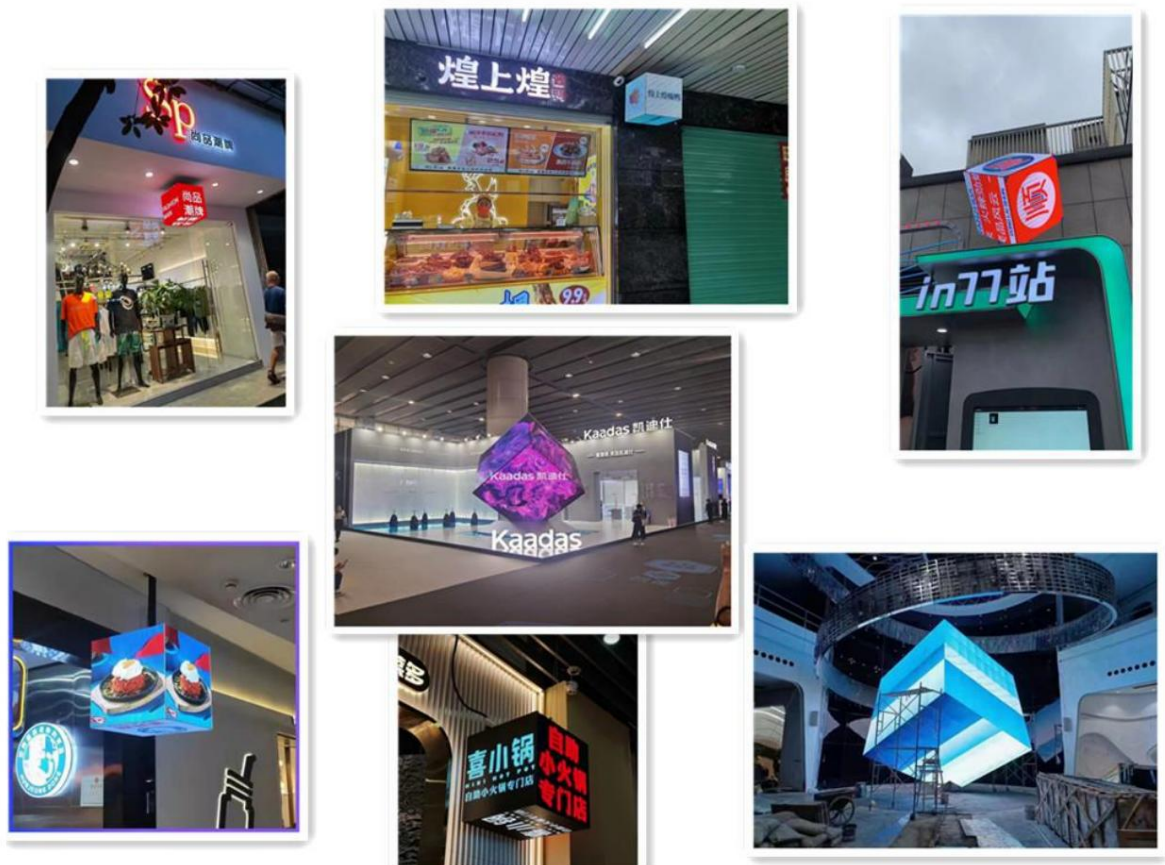


### 5. Instructions for using the Rubik's Cube System



6. Application scenarios (widely used in shops, storefronts, enterprise exhibition halls, exhibitions, KTV

Entertainment venues, etc., can be side-mounted/suspended/ground-mounted)



## 7. Maintenance methods

For the stability and safety during use, we uniformly adopt the post-maintenance method for assembly; this method

The advantages are good flatness consistency, safety and not easy to fall off, and not easy to fall apart during transportation; the first thing to do when maintaining the module is to

First, remove the screen body, then remove the screws on the boom cover, and then remove the screws on the module.



## 8. Precautions for use environment

1. The working environment temperature range is -20°C to 50°C, and the working environment humidity range is 10% to 90%RH.
2. Avoid using or storing in high temperature, high humidity, high acid/alkali/salt environment.
3. Keep away from flammable substances, gases, corrosive substances and dust.
4. Avoid strong collisions and collisions with sharp objects during transportation.
5. When the ambient temperature is too high or the heat dissipation conditions are poor, be careful not to use the screen for a long time.



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6. If the LED product is used in an environment with humidity exceeding the specified value, it may cause corrosion of components or even short circuit, thus causing damage to the product.

7. Water, iron powder and other conductive metal objects are strictly prohibited from entering the screen of indoor products. The LED display screen should be placed in a low-dust environment as much as possible.

Using it in a dusty environment will affect the display effect, and too much dust will damage the circuit.

If water enters the screen, please turn off the power immediately and do not use the screen until all components inside the screen are dry.

8. Because the screen surface is made of plastic, cigarette butts or high-temperature appliances cannot be placed directly on the screen surface to avoid damage to our products and

Security risks

## 8.2 Power supply considerations

1. The LED module is powered by DC (working voltage: 4.2~5.2V), and AC power supply is prohibited; the positive and negative poles of the power supply terminals are strictly prohibited to be connected in reverse (Note:

If connected in reverse, the product will be burned or even cause a serious fire).

2. The power supply voltage of the LED display screen is:  $220V \pm 10\%$  and the frequency is:  $50HZ \pm 5\%$ .

3. If any abnormality such as short circuit, tripping, wire burning, or smoke is found, the power should not be turned on repeatedly for testing. The power can only be turned on after the hidden danger is eliminated in time.

use.

## 8.3 Cleaning precautions

1. Regular cleaning and maintenance: When the LED screen surface is used for a long time, a lot of dust and dirt will accumulate on the surface, which requires regular and timely cleaning.

Clean it to avoid affecting the viewing effect.

2. To clean the module surface, please use a soft brush and brush gently. Do not use hard objects or any corrosive liquid substances to clean the LED module.

surface, otherwise the mask may be damaged.

3. Wipe correctly: The surface of the LED floor screen can be wiped with a damp cloth or a brush or vacuum cleaner.

Do not use alcohol or corrosive solvents to clean directly, as this may damage the mask or cause it to change color.

Cut off the power source and clean with a mop or rag after wringing out the water. Do not use a cleaning machine to clean. Wait for 1 hour after cleaning.

Turn the power on again and use it.

## 8.4 Moisture-proof and storage requirements

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1. Storage temperature requirements: Ambient temperature -40℃~60℃. After opening the package, LED products must be stored at a temperature <30℃ and humidity <60%.

environment.

2. Avoid insect bites and rodent infestation according to the environment of the display screen and control parts.

3. LEDs cannot be turned off for long periods of time. If not used for a long period of time, they should be turned on once a week and light up for at least 1 hour each time before being turned off.

To prevent the product from getting wet when not in use for a long time. In a high humidity environment, if the screen is not used for more than 15 days, you need to use

Preheating method: Preheat at 30%-50% brightness for 4-8 hours, then adjust to normal brightness (80%-100%) to light up the screen.

If the screen has not been used for more than 30 days, the preheating method should be used every time the screen is turned on.

Method: Preheat the screen at 30%-50% brightness for more than 12 hours, then adjust to normal (80%-100%) to light up the screen, so as to expel moisture.

Remove it so that there is no abnormality when using it.

#### **8.5 Troubleshooting (screen off, screen flickering, screen noise)**

1. Check whether the power is on and the power indicator or the Lifang box indicator is flashing normally;

2. Use your mobile phone to search for the WIFE hotspot that comes with the Magic Cube Screen. If you can find it, the screen is not lit, try uploading the program again; if you can't find the WIFE,

You can restart the computer and try searching again (30 seconds after booting up). If you still can't find it, the asynchronous box may be broken and you need to replace it with a new one.

3. If one module does not display properly, first check whether the power and network cable plugs are loose; or check whether the other modules display properly.

Replace the cable and power cable. If it works fine after replacement, it is a cable problem. If it still does not work after replacement, it is a module problem.

To replace the new module;

4. If one side is not lit, you need to adjust the parameters through the mobile phone APP. Generally, you can select the general 6 sides and re-upload the program to solve it.

Decision;

5. If there is a problem with one row or one chip, check the power supply and receiving card;