



Indoor surface mount P3.91 full color LED display Product specification

250*250 Standard series

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1、Scope of application

Mainly used in stage, industry and commerce, post and telecommunications, sports, advertisement, factories and mines, transportation, education system, station, wharf, airport, shopping mall, hospital, hotel, bank, securities market, construction market, auction house, industrial enterprise management and others Public places. It has media display, information release, traffic guidance, creative display and other purposes.

2、 Product Description

- High refresh rate: the refresh rate is above 3840HZ, the display quality is clear and real, and the playback effect is bright and smooth;
- High performance: dedicated driver chip and input buffer chip for LED high-density full-color screen, smooth playback and bright colors;
- Good effect: drive the driver chip of red LED, green LED and blue LED through OE signal, which can form 16777216 kinds of color transformation;
- Strong plasticity: this module can be spliced arbitrarily according to the horizontal and vertical directions, so as to form different sizes of display screens
- High portability: the weight is easy to install and disassemble; use super bright LED and high-quality plastic parts;
- Lower power consumption: LED is driven by constant current mode, with uniform light emission and low power consumption;
- Super wide-angle: using surface-mounted lamp (SMD2020), multi-directional viewing effect is the same;
- The pixel pitch is 3.91mm, with a total of 64*64 pixels, and each pixel is composed of 1R1G1B;

Unit board picture

front	back
	

(For reference only, please contact sales for accurate physical pictures, and the actual order shall prevail)

3. Product technical parameters

serial number	category	name		parameter
1	LED module parameter	pixel pitch		3.91mm
2		pixel composition		1R1G1B
3		Module size		250*250*15mm
4		resolution		64*64 dots



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5		scanning method	1/16 sweep, constant current drive
6		Structural features	Light drive in one
7		Lamp type	SMD2020KL
8		pixel density	65536 dots/m ²
9		Working voltage (input)	DC4.8-5V
10		Maximum current (white balance)	8±0.3A
11		Maximum power	≤25W
12		kit material	Polycarbonate PC material
13		weight	0.48±0.01Kg
14	Finished box parameter	Cabinet size	500*1000*80mm
15		Number of modules	(L)2*(H)4=8 pcs
16		Cabinet resolution	128*256
17		display area	0.5 m ²
18		Box weight	13.5kg
19		Maximum power (starting power)	≤700W
20		average power	≤240W
		Protection level	IP35
21	Screen parameters	brightness	> 800 cd/m ²
22		Uniformity of brightness	≥0.95
23		angle of view	Horizontal≥140°, Vertical≥140°
24		best line of sight	≥3m
25		use environment	Indoor
26		gray scale	16bits
27		display color	16777216
28		refresh rate	≥3840HZ
29		frame rate	≥60 frame/second
30		control method	Synchronize)
31		Dimming	256 levels, manual/automatic
32		input signal	VGA/DVI/HDMI/DP, S-VIDEO, etc.

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33	Working characteristics	service life	$\geq 100000\text{H}$
34		Decay rate (1 year)	$\leq 5\%$
35		MTBF	≥ 5000
36		Consecutive out-of-control point	0
37		range of working temperature	$-20^{\circ}\text{C} - 60^{\circ}\text{C}$
38		Working Humidity Range	10%-90%RH
39		Flatness	$\leq 1\text{mm}$
40		Blind spot rate	≤ 0.0001

4. Pin header signal pin definition (HUB75)

Footprint				Pin Function Description					
PIN pin map				Pin number	Function	Remark	Pin number	Function	Remark
1	•	•	2	1	R1	Red data signal	2		Green data signal
3	•	•	4	3	B1	Blue data signal	4		Power ground
5	•	•	6	5	R2	Red data signal	6		Green data signal
7	•	•	8	7	B2	Blue data signal	8		Power ground
9	•	•	10	9	A	A-Scan signal	10		B-Scan signal
11	•	•	12	11	C	B-Scan signal	12		GND
13	•	•	14	13	CLK	Clock latch signal	14		Shift latch signal
15	•	•	16	15	OE	Enable signal	16		Power ground

5. LED die parameters

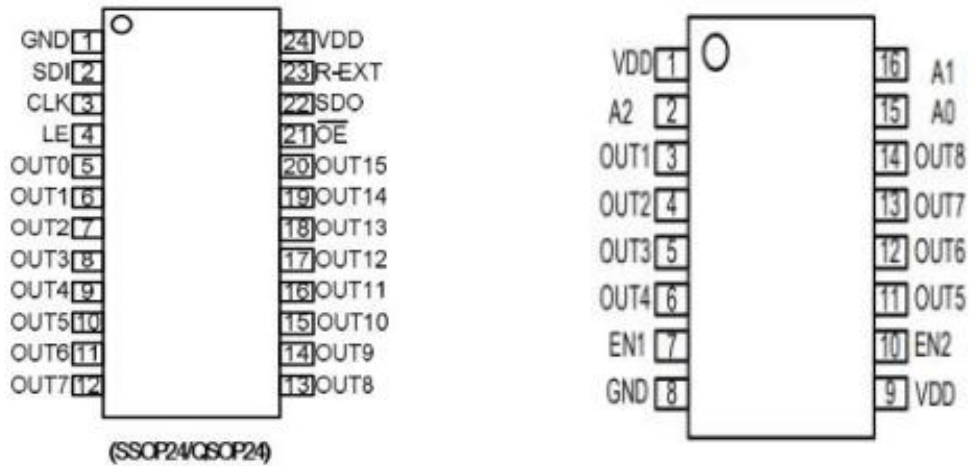
Glow color	Wavelength(nm)	Luminous intensity	Reverse current IR(uA)	Test Conditions	Beam angle (Typ.)	Forward voltage (V) (Typ.)
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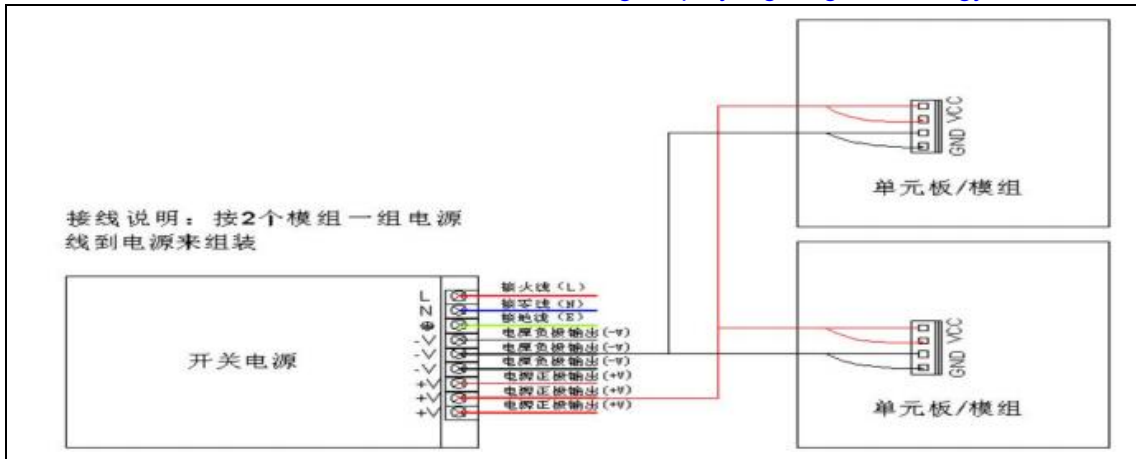
	Color temperature (K)	(mcd)				
	(Typ.)	typical value				
R red	617-625	28	VR=15V 时 0.5	IF=20mA	110°	
G green	510-532	80		IF=15mA	110°	
B blue	460-480	15		IF=10mA	110°	

Pin definition



6. Power configuration

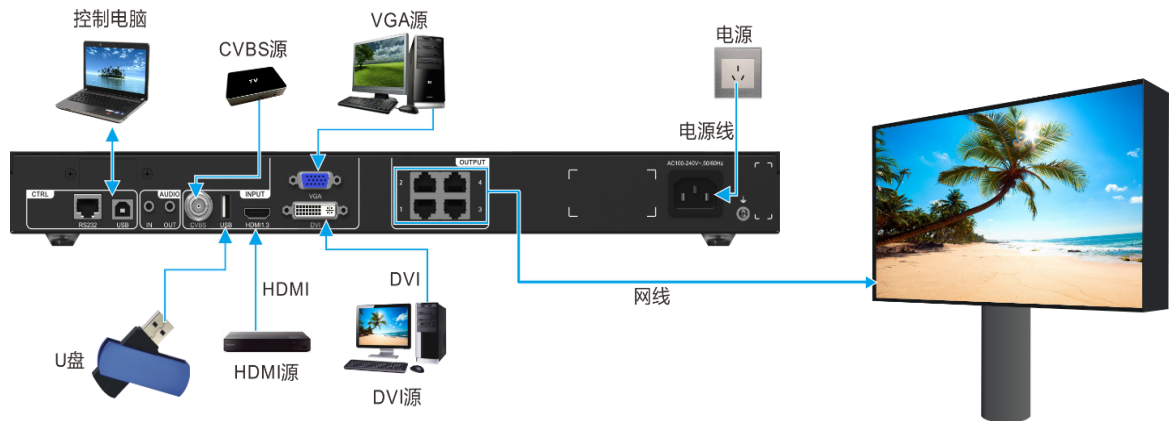
Model	Module maximum current	Recommended number of sheets
5V40A200W	5A	6



7. Cabinet appearance



8. Display topology



9. Product maintenance

◆ Repair soldering of LED tubes: It is recommended to use a heat gun (de-soldering station), and the temperature is not higher than 320°C, and solder once within 5 seconds

Complete; 2 repairs are required at 260°C within 5 seconds;

◆ Repair soldering of SMD chips: The temperature of the soldering iron must be below 320°C, and one soldering should be completed within 3 seconds.

Understanding of common signals on LED display

◆ CLK clock signal: In any case, when the clock signal is abnormal, the display of the entire board will be messy

◆ STB latch signal: In any case, when the latch signal is abnormal, the display of the entire board will be messy

◆ EN Enable signal: The brightness control signal of the whole screen is also used for blanking of the display screen. Just adjust its duty cycle to control the brightness

The change. When the enable signal is abnormal, the entire screen will appear unlit, dimly lit, or trailing.

◆ R\G\B data signal: color signal, when a certain color signal is abnormal, the display may be lack of color or always on

◆ ABCDE line signal: 1/4 scan needs AB signal, 1/8 scan needs ABC signal, 1/16 scan needs ABCD signal, 1/32 scan requires ABCDE signal. When the line control signal is abnormal, there will be display misalignment, highlighting or image overlapping.