FICHE TECHNIQUE

ECRAN P2.6 GOB

1. Scope of Application

This technical manual is only applicable to the indoor Q2-40S-H-R-1515 soft module , the following are conventional product parameters, and can be customized if you have special requirements.

2. Precautions

Item		Description
Environmental Precautions	Temperature requirement	Storage temperature range: -10°C - 30°C, over 30°C needs to do cooling treatment. Operating temperature range: -20°C -40° C, other temperature range, need to install temperature control equipment. Lamp surface temperature (working time): ≤60°C, temperature control equipment is required to be installed when temperature exceeding the standard.
	Humidity requirement	Storage humidity range: 10% RH-60% RH, humidity over 60% RH requires dehumidification treatment. Operating humidity range: 10% RH-65% RH, If the humidity exceeds the standard, it must be dehumidified before it can be used normally.
	Storage overdue processing	If the product has been stored for more than one month, it must be aged for 6 hours before use before normal use. The aging method is: full brightness setting 10% 1H, full brightness setting 30% 1H, full brightness setting 60% 2H, full brightness setting 80% 1H, full brightness setting 100% 1H (brightness gradually increases and aging).
	Dust-proof requirements	Indoor products have no protection level or IP30, and the display should not be exposed to heavy dusty environments, such as decoration and renovation. Special protection is required to protect the display. Installing LED display screen during decoration is strictly prohibited.
	Avoiding corrosive gas	Corrosive gas contains salt or acid gas in the environment,may cause corrosion of electronic components, crystallization, leakage and so on.

	Avoiding electromagnetic radiation	The display screen should not be installed in an environment where electromagnetic radiation and radio frequency radiation exceed the field strength of 5V/m interference source.
	Avoid strong light	Strong light will affect the display effect and life span of screen. It should be install in the direction where there is shorter direct sun shining.

Environmental Precautions	Keep away from water	Indoor products have low level of protection, water can make the module short circuit, and leads to circuit device damage, so it is necessary to keep away from the water source.
	Electrostatic hazard ，Prevent lightning strikes	The metal components of the screen, the shell of power supply and the cabinet should be grounded well, and the grounding resistance should be less than 10Ω. Prevent electrostatic damage to electronic devices in humid environment, while avoiding electric leakage to harm human body.
	Personal injury	The angle and height of the display installation should be appropriate, and the sharp corners should be packaged to prevent damage to the human body from the tough outer casing.
	Special environment	Display screen for special environment (1, seaside, swimming pool, bathing room, basement, tunnel; 2, chemical environment, vulcanization environment, halogen environment; 3, dust, dusty environment; 4, strong ultraviolet environment; 5 , the environment of strong electromagnetic fields; 6, less than -20 degrees, higher than +40 degrees of the environment),The review process is required before placing the order.
	Static Protection	The worker must wear an anti-electrostatic wrist strap and anti- electrostatic glove. Various tools must be strictly grounded during assembly
	Product batch control	Different batches of products cannot be installed in the same screen, otherwise there will be color blocks (mosaic) on the display.

Operational precautions	Product wiring	The module cannot be directly connected to 220V, and the module positive and negative poles connection must be right.
	Disassembly and transportation	Do not throw, push, squeeze or press the module to avoid damaging the display screen.
	Disassembly and maintenance liquid protection	Sweat or other liquid cannot be dripped on the display screen during disassembly and assembly operation. If it is dripped, then use alcohol to clean the product, to prevent the liquid from corroding the product.
	Installation Torque Control	In connection with power supply, it is necessary to ensure tightening of terminal joint screw to prevent joint position from loosening, resulting in wire burning or product damage caused by high contact resistance. Torque of M4 screw is

		6.0-8.0 Kgf.cm, and that of M3 screw is 4.0-6.0 Kgf.cm.
	Prohibited work with electricity	It is forbidden to assemble the LED module when the power is on. The LED module should be assembled with the main power input disconnected. It is not allowed to insert the power wire and signal cable when there are with electricity.
	Prohibited touch with electricity	It is forbidden for people to touch the LED display screen when the LED screen is in usage, so as to avoid electrostatic breakdown of LED lights and chips and other components caused by human body friction.
	Environmental inspection	Temperature and humidity meters should be equipped on the installation site to monitor the surrounding environment of the screen in time. After heavy rain, it is necessary to check whether there are any problems such as dampness, water droplets and over humidity in the screen in time.
Operational precautions		Within 10% ~ 65% RH relative humidity range, it is recommended to turn on the display 1 time per day, and work at least 4 hours to remove moisture on the display.

	Requirements for moisture proof	When the relative humidity of the environment is over 65% RH, dehumidification treatment should be carried out for the operating environment. It is suggested to use the screen for more than 8H per day in this environment, and doors and windows should be closed at night to prevent the display from dampness.
		When the display screen is not used for a long time, it is necessary to preheat and dehumidify the whole screen for 8H before using, so as to avoid damaging the lamp tube after dampness. The dehumidification methods are: full brightness set 10%- 1H, full brightness set 30% 2H, full brightness set 60% -2H, full brightness set 80% -2H, full brightness set 100% -1H (brightness gradually increasing aging).
		After usage , immediately put into flight case and seal the flight case;
		In each flight case, please put a desiccant or hygroscopic bag of not less than 50g.
		In the range of 10% to 65% RH relative humidity, the screen should be lighted on more than 2H every half month; More than 65% RH and in the resurgence weather, the screen must be lighted on more than 2H every week.

Operational precautions	Requirements for moisture proof	Rental screen display:	After finished the display, need to put it back to flight case, sealed and stored. (please check whether there is any failure of the desiccant or hygroscopic bag in the aviation, it needs to be replaced every 2 months, and more desiccant can increase the dryness inside the box.)
			When the display screen is not in use for a long time, it is necessary to reduce the brightness of the whole screen by 50% in advance and play it for 12 hours, and preheat it for "dehumidification" 12H to avoid damaging the light tube after the LED screen is damped.
			While renting, do not touch the display screen with water. If there is any water, make sure that the water on the screen is dried. After 2H, light the display screen 2H, and evaporate the water by lamp and IC heat.
			It is strictly forbidden to use indoor rental screens as outdoor rental screens, especially in the open air environment.
	Avoid construction work to the installed LED screen	It is strictly forbidden to rebuild after the installation of the LED display screen, so as to prevent the LED display screen from being affected by the impact of high current and dust, such as welding, electric saw and other equipment.	

3. Product Specification

3.1. The indoor full color display has a clearer and more detailed display, and the resolution can reach above 1080P; it can achieve high refresh rate, high grayscale and higher lamp utilization. And it has the functions of no afterimage, anti-caterpillar, low power consumption, low surge, etc.

3.2. The indoor full color display is mainly composed of a red LED chip, a green LED chip   and a blue LED chip packaged into a matrix of pixels, and then fixed to a plastic package.

3.3. The indoor full color display contains driving IC and input buffer chip, which can display video, image and text information when connected to the LED display control system.
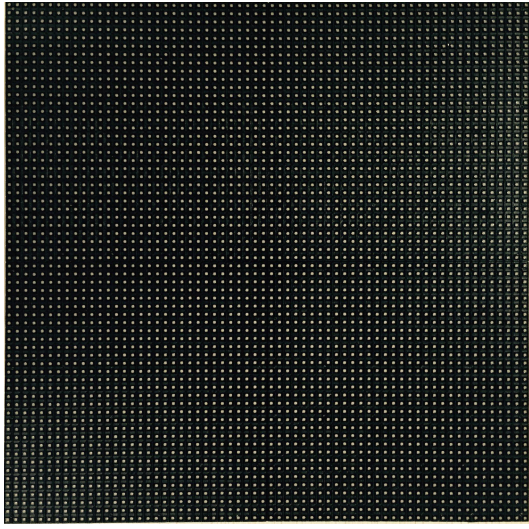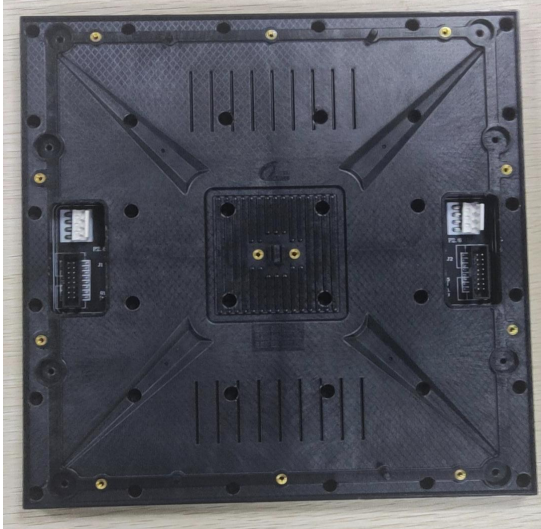
3.4. Through the system control to drive the red LED, green LED and blue LED driving IC, 4,398 billion color conversions can be formed.

3.5. The panel and the cabinet can be spliced arbitrarily in the horizontal and vertical directions to form different sizes of display screens.
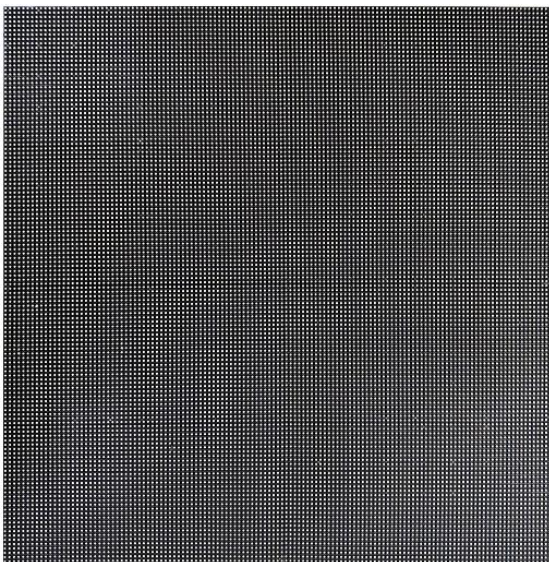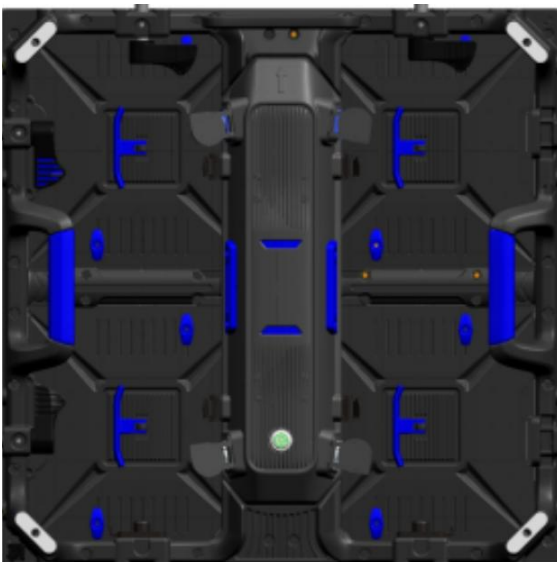
3.6. Features

- High-quality lamps, high-efficiency lamp brightness utilization rate, while guaranteeing lamp   lifespan and high-quality plastic component(塑胶件）
- High contrast can achieve good display effect.
- The weight is easy to install and disassembly.
- Single point and single lamp maintenance can be carried out, with low cost.
- It is driven by a constant current, with uniform light emission and low power consumption

3.7.LED Module Picture

Front View：	Rear View：

Remarks:

The driving IC uses a SSOP packaged constant current driving IC;

3.8.Match 500*500mm Cabinet

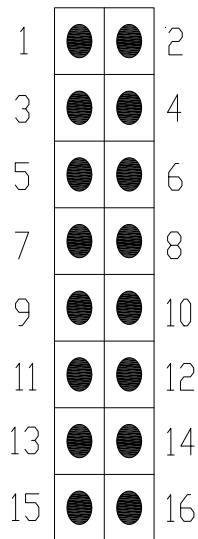| Front View	Rear View

4. Technical Specification

Module	Pixel Pitch	2.6mm	Pixel Density	147456Dots/㎡
	Configuration	1R1G1B	LED Lamp	SMD1515
	Size (Width*Height*Depth)	250*250*16mm	Weight	0.55kg±0.01kg
	Structure	Lamp & IC in same PCB	Resolution	96*96=9216Dots
	Input Voltage (DC)	4.5±0.1V	Maximum Current	≤9.375A
	Power Consumption	≤42W	Driving Method	Constant Current 1/24 Scan
	40A Power Supply for	4 pcs module	50A Power Supply for	4pcs module
	40A PFC Power Supply for	4-5 pcs module	80A Power Supply for	8 pcs module
Cabinet	Cabinet Size (Width*Height*Thickness)		500*500mm (Thickness including module、 cabinet and connecting piece)	
	Cabinet Pixel Density		192*192=36,864Dots	
	Cabinet Area		0.25 ㎡	
	Cabinet Weight		8kg±0.05 kg	
	Cabinet Max Power Consumption		≤144W	
	Average Power Consumption (1/3 Max)		≤48W	
	Distribution Power (Power Supply Capacity 78%)		≤184.6 W	
Screen	Brightness	700 cd/㎡	Brightness Uniformity	＞0.95
	Horizontal Viewing Angle	140 ±10 degree	Vertical Viewing Angle	130 ±10 degree
	Best Viewing Distance	≥3m	Black Spot Ratio	< 0.0003； 0 when shipped from the factor
	Max Power Consumption	≤675 W/㎡	Operation Environment	Indoor
	Grayscale	14-16bits (RGB each)	Display Color	4398 Billion
	Frame Frequency	≥60 frame/sec	Refresh Frequency	≥3840 Hz

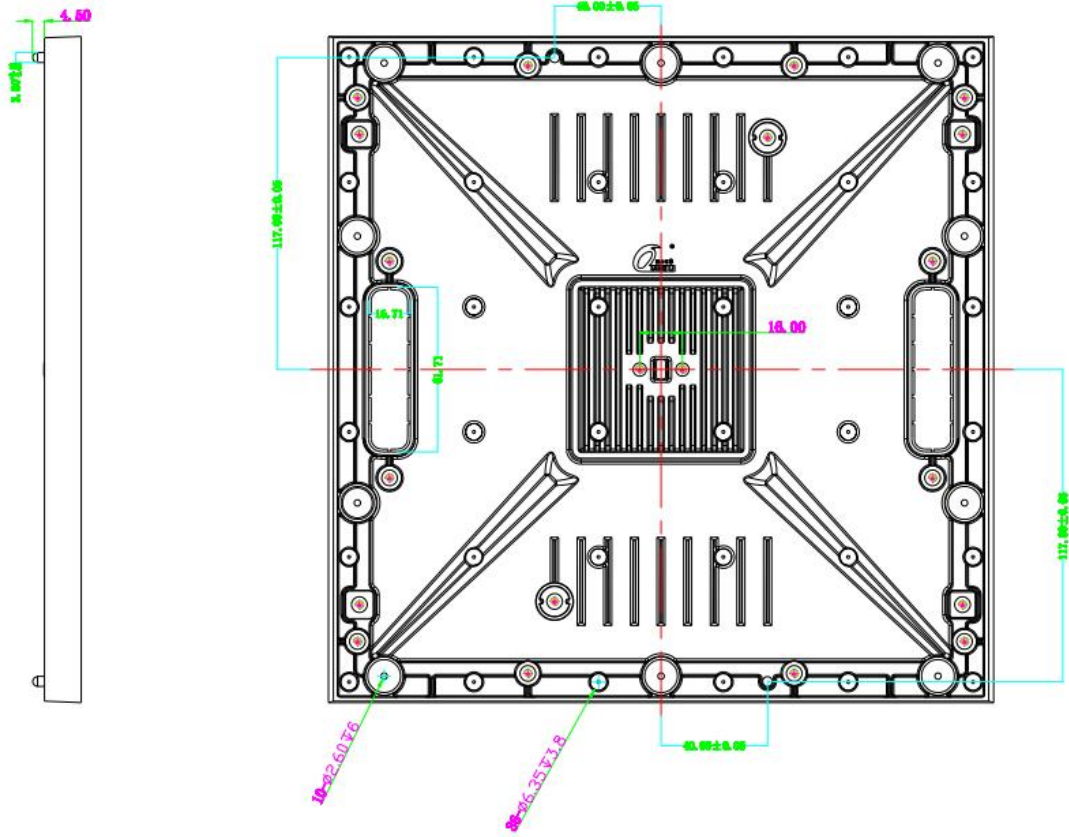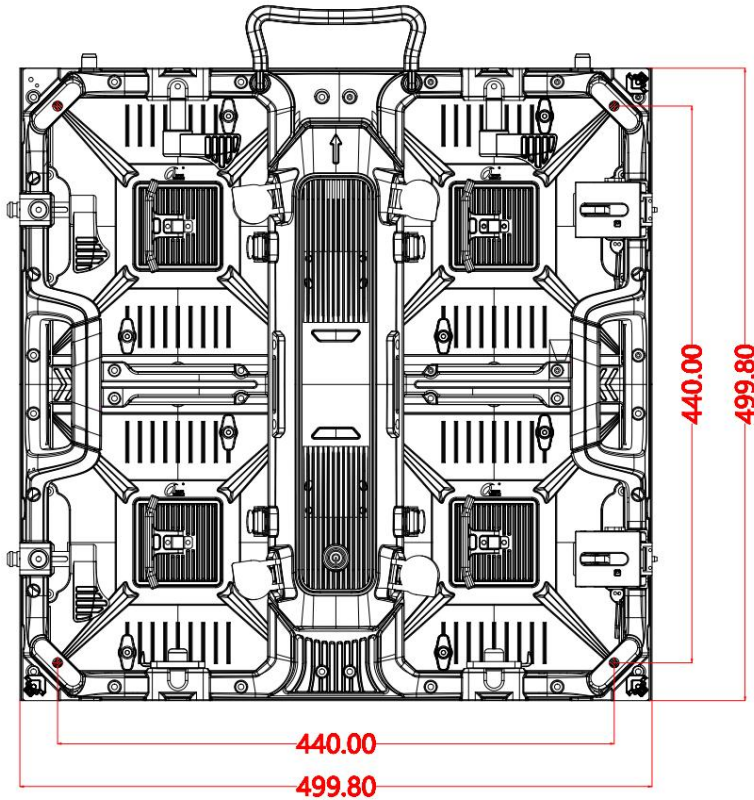|					
	Control Mode	Computer control, Point-to-point, Video synchronization, real-time display	Brightness Adjustment	256-grade manual / automatic	
	Life Span	≥100,000 hours	Average Failure Free Time	≥10,000 hours	
	Attenuation (3 years later)	≤15％	Operating Humidity	10％-65％RH (No condensation)	

5. Signal Pin

HUB75E

Pin	Signal	Function	Pin	Signal	Function
1	RD1	Red data signal	2	GD1	Green data signal
3	BD1	Blue data signal	4	GND	GND
5	RD2	Red data signal	6	GD2	Green data signal
7	BD2	Blue data signal	8	E	Line power control signal
9	A	Line power control signal	10	B	Line power control signal
11	C	Line power control signal	12	D	Line power control signal
13	CLK	Clock signal	14	LAT	Data locking signal
15	OE	Enable signal	16	GND	GND

6.Mounting Hole Bitmap

7. Recommended 500*500 cabinet installation hole map:

Remarks: All dimensions are in mm

The unit board and the cabinet adopt magnetic suction and front maintenance technology, which is convenient for disassembly and assembly