

3UVIEW

THANK YOU FOR USING IT

Shenzhen 3U View Co., Ltd.

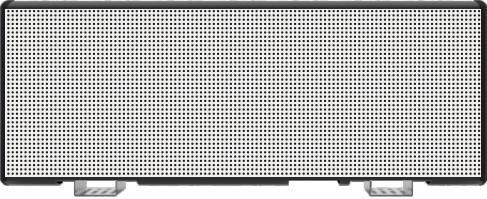
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VST Taxi Roof LED Display

Model: TB2

User Manual

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This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and

(2) This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- - Reorient or relocate the receiving antenna.
- - Increase the separation between the equipment and receiver.
- - Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- - Consult the dealer or an experienced radio/TV technician for help.

This equipment complies with the FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20cm between the radiator and any part of your body.

I Safety Information



Warning:

Before using the apparatus, please must read, understand and comply with all the safety information, warning and etc.



Only qualified mechanics are allowed to install the apparatus according to the hereby product manual. Do not connect the apparatus to alternating current. Input current is DC8-DC18. The positive and negative poles of the main power line must be connected to the positive and negative poles of the car battery, and the control line must be connected to the ACC position of the fuse box or the ignition switch (professionals can also modify other methods). After installation, make sure wire connection is right and fasten the wire connection. Do not step on power or data cables, and especially avoid pinching plugs, power sockets, and power/data cable. Damaged power and data cables should be replaced immediately. Only use accessories and accessories specified by our company. If the product is not stored for a long time, please keep the product in a dry environment and test it with electricity every 3 months. Please train the driver on the basic working principle of the product, so as to know the basic problem point when there is an abnormality. This product should be installed and serviced by qualified service technicians. When this product is damaged in any events (such as a damaged power cord or plug, the device does not work properly, or the device has been dropped), please contact a professional mechanics to fix. This product may only be used in conjunction with systems or peripherals specified by the manufacturer or included with the device. Be careful when lifting, moving or transporting this product to avoid product tip-over damage and personal injury.

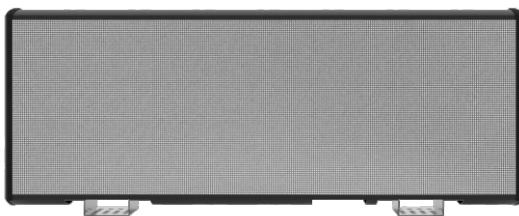


This product may cause injury due to short circuit, smoke and falling due to improper operation. When installing this product or wiring, please make sure that the vehicle is turned off to avoid damage to the vehicle. Please do not connect the input power terminal of this product to AC power. Please carefully check the power cord, power cord connectors, and wiring terminals for any problems before powering on the product. Do not use any damaged or exposed power cord or power plug. To reduce product abnormalities, do not disassemble the product.

Do not use this product if the ambient temperature outside the vehicle exceeds 80°C. As this product may generate heat, keep flammable and explosive materials away from this product. In order to avoid fire due to overloading of the power cable, please follow the instructions for use of this product or the Make sure that the installed cable is properly loaded and do not replace the power cord at will.

II Taxi Roof LED Display Series Introduction

1.Taxi Roof LED Display



2.Parameters and Features

- This series of Taxi Roof LED Display is vehicle safety voltage products.
- Unique structure design, easy installation, suitable for fixed installation on the car roof.
- Asynchronous Android system card, built-in 4G-GPS wireless transmission, support text, picture, picture animation, and video.
- Light and thin cabinet design.

	Item	Parameters
Module	Model Number	TB2
	Pixel Pitch(mm)	2/2.5/3.3/4
	LED Type	SMD1415/SMD1921
	Module Size(W*H)mm	320*160/320*320
	Module Resolution(W*H)	160*80/128*128/96*96/80*40
	Module Weight(Kg)	0.58/0.71
	Module Power(W)	≤60
	Brightness(cd/m ²)	≥4500
	Gray Scale(bits)	14
	Refresh Rate(Hz)	≥3840
	Cabinet Size(W*H*D)mm	1010*384*139
	Screen Resolution(W*H)	480*160/384*128/288*96/240*80
	Cabinet Weight(Kg/set)	16
	Mounting Weight(Kg/set)	4.5
	Max.Power	≤430
	Ave.Power(W/set)	≤120
	Best viewing distance(m)	≥3

- Onboard WiFi module, realize wireless communication, support AP mode, Station mode.
- Support secondary development and cloud platform remote cluster control.
- Built-in Web Sever, support local frontpage, support computer, iPhone, Android phone, Tablet stand-alone program editing, cross-platform systems compatible.

Item		Parameters
Module	Power	Charge from car battery, over-current and over-voltage protection, reverse polarity protection
	Power Line	Main power line: use 6mm ² *2+0.75mm ² *1 Pure copper cable (ensure enough to use and safety), overall length 5m, wire flame rating V0
	Protection	1. Adopt frosted anti-UV PC, which is impact resistance high tenacity. High heat and cold resistance, corrosion resistance and high transparency. 2. Frosted design is for anti-glaring, without affect in direct sunlight. 3. Good anti-UV performance and anti-yellow.
	Control System	Y71 is a highly integrated and high-performance quad-core Cortex-A17 core controller, can run up to 1.8 GHZ, with 2G memory and 16 GB EMMC high-speed flash memory
	Supported Formats	JPG, BMP, PNG, GIF, WMF, MP4
	Supported expansions	audio, camera, weather forecast, display content playback
	Input Voltage	DC 9-36V
	Operating Temperature	-40°C~80°C
	Operating Relative Humidity	10%~90%, without condensation
	Remark	Support second development : Provide secondary development kit
	Power consumption forecast	According to 20 hours of car use every day, the average power consumption per hour is 100W, that is, 20H*1000W=2000W, about 2 degrees of electricity consumption every day.
	Road test description	In the city road speed bump, the product installation is stable, no abnormal sound; When slows down from 60 km/h to 20 km/h in 3 seconds in the city road, the screen does not shake or tremble to the naked eye. When slows down from 120 km/h to 60 km/h in 3 seconds on the freeways, the screen does not shake or tremble to the naked eye. It has been tested on first-tier cities roads (including freeways) for one year and no adverse phenomena have been found.
	Code secondary development and maintain	Easy development and maintenance
	Material production	Material resolution is recommended the same as the screen resolution
	Device connection success rate and online rate	The concurrent power-on and online rate of all devices should be greater than 90% [Affected by the specific network environment and the number of powered on devices]
	The success rate of advertisement delivery and playback	Excluding material abnormalities and network faults and other objective factors, the success rate of playback should be close to 100%.
	OTA Upgrade success rate	Without the influence of objective factors such as abnormal power outage and network failure, the success rate of theoretical upgrade should be 100%.
	System Framework introduction	Native Android development environment, standard JAVA and Kotlin SDK.

SIM card notes:

The APN must be configured when the SIM card is used for the first time.

III Installation steps

1.The installation procedure of the luggage rack:



Installation steps 7:

- (1).prepare accessory a/b/c/d/e
- (2).assemble a/b/d together with screws
- (3).assemble c
- (4).open with key
- (5).pull the lock
- (6).insert e
- (7).ready

2.Taxi roof led display installation:



- (1).Install bracket,base, screws and key
- (2)(3).Install the screen at the central part of the bracket and make it tight
- (4).put at the top
- (5).use the key to open the lock,pull the lock hook to the dent part of the side (6)(7)(8),pull up and down to make it tight for the hook
- (9).turn on the sign after installation

Note:

Each type of vehicle has different mounting racks. Different lengths of mounting racks can be selected according to the type to be installed. The corresponding installation method can be designed according to different types of vehicles.

Warning:



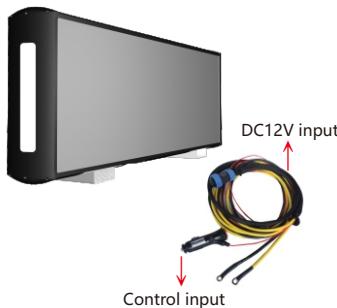
- Be sure to handle it with care during installation to prevent the LED vehicle mounted screen from falling and damaging.
- Pay attention not to damage the vehicle body when installing the installation tools.
- Keep personnel clean during installation to prevent vehicle body pollution.

VI Taxi Roof LED Display Trouble-shooting

Problems	Possible Reasons	Solution
Nothing displayed on the whole LED display	1.No power to the display; 2.The LED display is shut by the software; 3.Controller problem; 4.No display program file on the controller.	1. Proper AC power to the LED display; 2. Set the control software as working status; 2. Check if controller is connected properly: Green indicator flashing, and Red indicator ON. The Green indicator is ON or OFF in case that sending card is damaged or no signal. In this way, the control card shall be replaced; 4. Run the control software, upload the proper program file, and send to the receiving cards of the screen, then save it.
Display Chaos	1. Incorrect program; 2.Incorrect resolution setting.	1. Check if all programs are correct, or contact the supplier if the programs are lost; 2.Reset the resolution (It shall be connected to the terminal after changing the resolution).
“No Display Found” when running the terminal	1. No signal: connection to the SIM card; 2. Display power failure	1. SIM card socket damaged, no network traffic to the SIM card; Replace the card socket or SIM card 2.Connect the LED display to power.
Display images flashing	1. Ribbon cable loose; 2.Power cable loose.	1. Re-connect the ribbon cables between modules 2. Re-connect the power cables and fix them by screws.
Display images misplace or repeated	Improper configuration program.	Resetting the configuration program and the display connection program as per signal cable direction, then send it to the display and save it.
Single cabinet not working	1.Power supply damage 2.Controller damage	1.Check if power supply is proper in this cabinet 2.Check if controller card is powered properly (Red indicator ON), if there is signal transmission (Green Indicator Flashing): Cards need to be replaced if Green indicator ON or OFF.
Single module not working	1.Improper power supply; 2.Ribbon cable to this module is loosen. 3.Input ribbon cable to this module is damaged. 4.Signal IC of this module is damaged 5.No signal output from the module before this one.	1.Check if power supply voltage is proper 2.Re-insert the loosen ribbon cables 3.Replace the input ribbon cable of this module 4.Replace a new module 5.Replace the module before this one.
Color missing on the module	1.Ribbon cable to this module is loosen 2.Input ribbon cable to this module is damaged 3.IC damaged.	1.Re-insert the loosen ribbon cables 2.Replace the input ribbon cable of this module 3.Check and replace damaged IC related
Single LED not working, or missing color	1.LED damage, or pins fake-solder or short-circuit LED 2.Control IC to this LED is damaged	1.Re-solder the pins of the LED or the control IC, or replace new LEDs 2.Replace new IC
The LED display is out of control	1.Terminal setting not correct 2.Weak signal of the control system 3.Cabinet or module	1.Check if the terminal setting is correct; 2.Check the signal connection strength; 3.Check if any problems to the display modules.

IV Taxi roof led display connection

Wiring diagram of taxi roof led display



The main line is connected to the automobile battery, and the control line is connected to the fan safety terminal or the ignition switch:

- (1).+12V line is connected to the positive pole of the car head battery.
- (2).GND line is connected to the negative pole of car head battery.
- (3).The control end is connected to the ACC fuse of the fuse box or modified to the ignition switch.

V Packaging and transportation of taxi roof led display

Carton packaging or pearl cotton + wooden box packaging



Features:

Damp proof and shockproof provide better protection for led vehicle mounted ceiling lamp screen.

Warning:

- Before stacking or transporting wooden cases, please check whether the wooden cases and their fixing screws are worn or damaged.
- Before stacking or transporting wooden cases, please make sure that each wooden case is in normal use.
- Do not move the stacked wooden cases. When stacking, the lower wooden box shall be fixed to the final position first, and then place the upper box.
- If the wooden case is broken, the wooden case must be bound firmly to avoid collapse of the stack.
- Use a suitable forklift to handle the wooden cases and take necessary precautions to avoid personal injury.



VII Maintenance

Like any other electronic products, car LED screen not only needs to pay attention to the method during use, but also needs to be maintained to make the screen last longer.

1. Cabinet

(1)The detection mainly includes the following procedure:

- Check whether the power supply works normally and whether the power cord is loose.
- Check whether the screen is running normally, and remove the dust on the product.
- Check whether the box is blocked by debris, etc. If there is, remove the debris prevention.

(2)Others

Check the installation to ensure the safety.

2. Display Zone

Regular dust the surface of the screen, especially in the outdoor dusty environment. Due to the factors of the working environment, it is easy to be exposed to the sun and dust for a long time. On the one hand, dust removal can improve the display effect, and on the other hand, it can prevent the corrosion of the surface of screen by the particulate matter in the air or other chemical factors under humid conditions.

The application and maintenance of LED car ceiling light screen should pay attention to the following issues:

(1).The power supply system is required to be stable and well protected.

(2).Do not use it as much as possible under harsh natural conditions. Such as strong thunder and lightning weather.

(3).Metal objects that are easy to conduct electricity such as water and iron powder are strictly prohibited in the screen. LED screen should be placed in a low-dust environment as much as possible. Large dust will affect the display effect, and too much dust will cause damage to the circuit.

(4).If water enters due to various reasons, please turn off the power immediately and contact the maintenance personnel until the display panel in the screen is dry before use. Keep the humidity in the environment where the screen is used, and do not let anything with the nature of moisture enter your screen. Applying power to the screen that contains humidity will cause the components of the screen to corrode, resulting in permanent damage.

(5).The use of screen: A. Start the vehicle. After the car starts, the screen will be turned on, and the screen will be displayed in about 1 minute. B. After turning off the ignition switch, the screen will automatically turn off.

(6).The surface of screen can be wiped with alcohol, or dusted with a brush or a vacuum cleaner, and cannot be wiped directly with a damp cloth. To avoid possible problems, we can choose passive protection and active protection, try to keep items that may cause damage to away from the screen, and wipe the screen as gently as possible to avoid the possibility of injury to minimum.

(7).It is recommended that the screen rest for more than 2 hours a day, and the screen should be used at least once a week during the rainy season. Generally, the screen is turned on at least once a month, and it is lit for more than 2 hours.

(8).The screen needs to be checked regularly to see if it is working properly and whether the line is damaged. If it does not work, it should be replaced in time. If the line is damaged, it should be repaired or replaced in time.

(9).When playing, do not stay in full white, full red, full green, full blue and other full bright screen for a long time, so as not to cause excessive long-term current, excessive heating of the power cord, damage to the LEDs, and affect the service life of the display. Do not disassemble or splicing the screen at will.

(10).Non-professionals are not allowed to touch the internal circuit, so as not to cause damage to the circuit. If there is a problem, please ask a professional to repair it.

3. Storage

(1)Preservation of accessories such as uninstalled screens and spare modules

- The storage place should be well protected from moisture, the temperature should be appropriate, the relative humidity should be lower than 90%, and the ambient temperature should be 10°C~50°C (50° F~122° F).
- Avoid pests and rodents from damaging the screen and cables during storage.
- During storage, rainwater or other corrosive liquids should be prevented from entering and contacting the screen body, modules, etc.
- Cleaning should be done well during storage to prevent debris or dust from accumulating on the screen. Temperature rises to the starting condition. If necessary, a heater can be installed.

(2)Use and storage of screens in special environment

- The screens should be installed in places with accumulated water as far as possible.
- The vehicle should be grounded for lightning protection, and the product should be used in a thunderstorm environment to prevent lightning or screen leakage from burning out the screen and even causing personal injury or death.
- The screen installed in coastal areas should pay attention to the corrosion of the metal parts due to the salt in the air.
- The screen may not be able to start normally due to the low temperature in winter. You can turn on the car air conditioner until the temperature rises to the starting condition. If necessary, a heater can be installed.

IX After -sales service

3U View's after-sales service system is completely in accordance with IATF16949 quality management system. Our company has after-sales technical service center, which will provide technical support and after-sales service for users. It also provides a full set of evaluation opinions and relevant technical suggestions on the technical parameters, specifications, equipment configuration, function setting and environmental factors of the products. Ensure that the software and hardware of the device can run safely, stably, and efficiently, so that the customer business can run normally.

1.Free tel-hotline and email support

(1)If the user's maintenance personnel have any problems in maintenance or operation, they can call the after-sales service department of our company to consult the technical personnel about relevant problems.

(2)In any case, users may contact us through the 24-hour technical support email of our engineering service department. We will answer your questions in the shortest time and solve the relevant problems as soon as possible after receive the email.

2.Free remote assistance service

If the customer feedback related technical problems can not be solved in real time by phone or email, our company will conduct network remote assistance with the customer or send engineering personnel to the project site for assistance according to the actual situation.

3.Lifelong product maintenance services

(1)During the warranty period, our company is responsible for equipment quality assurance.

(2)After the warranty period, our company can provide users with spare parts of the same grade for emergency fault replacement and possible fault maintenance during screen operation to ensure the stable operation of the system, and only charge the cost price of the replacement spare parts.

(3)If there is a module, power supply or control system fault, user can also directly sent back to our company for maintenance, Our technical staff will timely return to the user after repair. If it can't be repaired, we can provide users with accessories of the same grade and only charge the cost.

4.Free upgrade

We will provide free life-long software upgrade for users' equipment and provide users with the latest version control software in a timely manner.

5.Other terms

The maintenance service is only valid for the equipment originally supplied and the place and user where the equipment was originally installed. If the relevant equipment is re-installed in another location, or the user transfers the ownership of the screen equipment provided by the contract, the user shall notify us in writing so as to re-evaluate the relevant services. Otherwise, the maintenance service will be invalid.

6.Long-term supply for spare parts, accessories and special tools

Within the terms of service, our company will reserve sufficient quantity of tube cores with the same display module and components with the same production batch number to ensure the quality of after-sales maintenance, which will not let purchaser delay the operation of the system due to lack of parts; In special cases, similar type of equipment can be provided for temporary replacement to ensure the smooth maintenance service of the project.

7.Notes

(1)The service does not cover all faults or damage caused by negligence, accident, natural disaster, failure to follow instructions, misuse, failure to handle products as directed. Self-modified products and missing parts are also excluded.

(2)Any damage caused by maintenance, alteration or unauthorized alteration of the system by persons not authorized by us is not covered by this warranty. If users remove any masks, LED lights and other devices by themselves, it may lead to safety risks or functional failures, so this product will not be included in the warranty scope.

(3)Our company will not take any legal responsibility or compensate for the property loss and casualties caused by natural disaster or improper operation.

8.After-sales service commitment

9.Our company promises to guarantee the whole set of products for two years (except human factors and irresistible factors).

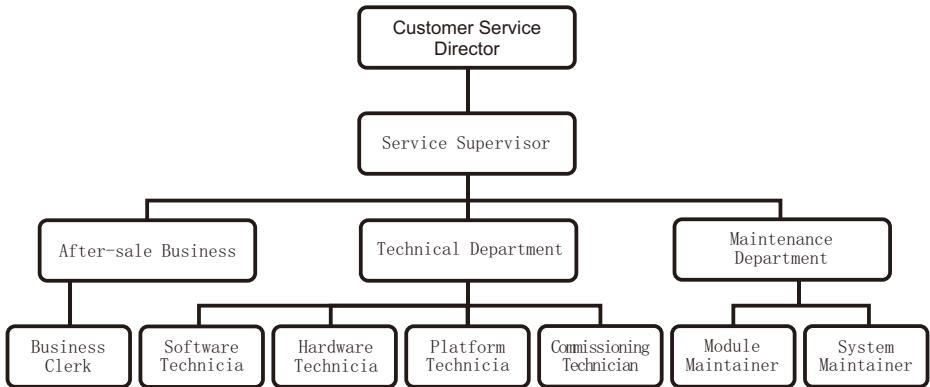
10.Our company adheres to the working principle of "customer satisfaction is the highest standard of inspection work", which has trained a number of professional and technical personnel, provide strong support to display products and provide customers comprehensive and meticulous services from project design, project installation, commissioning and operation. Our company promises "2-year warranty, lifetime maintenance", and guarantees the maintenance response time to the user in the form of contract.

Warranty service items: through telephone, E-mail and other ways to answer the problems encountered by users. Free upgrades to use software versions.

After the warranty, the software will be upgraded free of charge, and the replacement of spare parts will only be charged at cost.

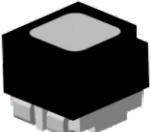
Replace and repair product quality problems caused by design, manufacture and materials. If the equipment is damaged due to human factors or irresistible, we will charge the

9. After-sale personnel structure



Attached: Basic Maintenance Method

1. Maintenance tools and components

		
Thermostat soldering iron & Solder wire	Blade & Tweezers	Digimer
		
Pliers	Long & Short screwdriver	Single Component RTV Silicone Rubber (black)
		
Spare IC	Spare LEDs	Spare Power Supply

2. Maintenance Content



(1). How to replace the module

- Remove the mask from the Taxi Roof LED Display.
- Remove the plastic screws from the damaged module.
- Remove the module from the damaged area
- The module can be installed onto the box in reverse order of operation.



(2). How to replace the power supply

- Open the plug on the left side of the mask of Taxi Roof LED Display.
- Remove the screws that fix the power supply and take out the power supply.
- Put the spare power supply back in accordance with the same.



(3). How to replace the control card

- Pull up the winding displacement.
- Use cross screwdriver removing the DC power cable(red/black)
- Remove the antenna.
- Remove the screws that fix the control card and power cable to take out the IC card.
- The IC card can be installed onto the box in reverse order of operation.



(4). How to replace the wire

- Winding displacement: remove and replace it with your hands.
- Power cable: use cross screwdriver counterclockwise remove the fixing screw on the power supply to be replaced to remove the power cable.
- Replace the wire in reverse order of operation.



Warning:

Please connect cables strictly according to the component labels when replace the power supply and control card, otherwise, components may be damaged!



(5). How to replace the IC card

- Heat the IC with a air pressure gun(390°C) until the pin tin surface melts, then use tweezers to pick up the IC.
- Clean the conformal and tin freezing point on the pad surface.
- Remove the IC, Clamp the IC both ends with tweezers so that each pin is aligned with the corresponding pin position on the pad.Note the IC direction.
- Accurately corresponds and appress to the IC pad.(Note that the pin at the concave dot in the upper left corner of the IC front side is the first pin and must be welded corresponding to the small circle of the circuit board IC silkscreen).
- Use soldering iron to drag the pins on both sides of the heating IC back and forth. Fuse the tin on the pad with the pin and fix it onto the pad.
- Tilt the lamp board to 45 degrees Heat the tin on the IC pin with a soldering iron, drag it from up to down and gently shake off any excess tin sticking to the soldering iron.Until all the IC pins are not connected.
- After module lights up and the display effect is normal, assemble the module back into the cabinet. Use single component RTV silicone rubber (black) to patch in the rubber where it has been scraped off and around the lamp board of the module which copper sheet is off.

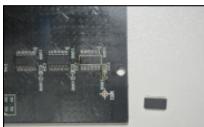
Opertion schematic diagram



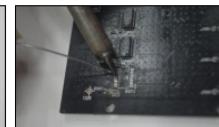
Use air pressure gun to heat the bad IC



Remove the bad IC



Clean the conformal coating on the pad surface



Clean the tin freezing point on the pad surface



Align the IC with the direction and the pad



Add tin to fix IC pin



Clean up excess tin from IC pins



Should not have connected IC



(6). How to replace the LEDs

① How to measure LEDs?

Observe the LEDs front four corners which have a very small unfilled corner, a lamp base of its bottom is the positive of LEDs and the remaining three anti-clockwise lamp bases are respectively the negative pole of red, green, and blue lamp. The most direct method is to observe the silk screen printing of "+, R, G, B" on LED light board or the unfilled corner direction of other LEDs.

Set the digimer to diode test, the red stylus touches any pin on the side of the LEDs and the black stylus touches the pin on the other side of the LEDs. If the LEDs is lit, the end of the red stylus contact is positive, the end of the black stylus contact is negative. If the LEDs is not bright, switch the red and black stylus and measure again. If it is still not bright, means that the LEDs is broken.



Note:
This measurement method is only applicable to LEDs of this product model.

② How to replace LEDs?



Heat the LEDs with the air pressure gun (200°C)



Remove bad LEDs with air pressure gun



Align the LEDs to the direction and the pad



Heat until the LEDs pad is melted and fixed

- Heat the LEDs with the air pressure gun. Note that the temperature of it is set to 200°C.
- Aim the air pressure gun at the bad LEDs and heat until the tin surface of the pad melts.
- Remove the bad LEDs with tweezers and set aside.
- Take out the LEDs of the same model as the product, measure and confirm the positive and negative poles of it according to the above

- Clamp the LEDs with tweezers and make every lamp base accurately corresponds and appress to the pad.
- Heat the LEDs pad with air pressure gun and place the LEDs in the corresponding position on the pad. Heat until tin surface of pad melts and fixed with air gun.(LEDs cannot float high and tilt)
- It can working properly after module is bright and display effect is normal.

Warning:

- Non-professional and technical personnel please do not try to repair the LED module without authorization. Send the module back to our company for maintenance.
- Do not use sharp tools when removing the lamp board of waterproof module, otherwise the circuit board line will be damaged.
- The temperature of the soldering iron should be 350°C when replace IC and LEDs. The welding should be quick and the welding time should not be too long. Otherwise, IC and LEDs may be damaged due to overheating.
- Be careful when operating the product to avoid being scalded by the soldering iron. Turn off the soldering iron power in time when not in use. keep it away from combustible and let it cool down naturally.

