



LDC500/750/1000WPR User Manual



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Energy Saving Matters

Saving electric energy is a key to help protecting the environment. Please turn off all electrical products when they are not in use. To avoid power consumption in idle mode, disconnect all electrical equipment from power when not in use. Thank you!

Document Version: An updated version of this document may be available online. Please check www.aurorasingnage.com.au for the latest revision/update of this document before beginning installation and use.

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GENERAL INFORMATION

INTRODUCTION

Please read and understand the instructions in this manual carefully and thoroughly before attempting to operate this device. These instructions contain important safety and use information.

LDC500/750/100WPRFP series LED Video Panels offer the highest quality LED binning using 3-in-1 RGB SMD LEDs, with a brightness up to 7,000 NITS. Otherwise, all models have individual modules for quick and easy front and rear accessible servicing; are built on the same frame, which allows panels with different resolutions to be used together. In addition, each LDC500/750/100WPRFP series LED Video Panel model has position pin located at the top to allow users to temporarily connect two panels correctly.

The LDC500/750/100WPRFP series LED Video Panel connections include PowerLock In/Out and DataLock In/Out, and feature built-in Novastar A5s receiving card. An optional wooden Case (purchased separately) can carry up to 1x LDC500/750/100WPRFP series LED Video Panels or 8x LDC500/750/100WPRFP series LED Video Panels.

Aurora offers full packages with video processors, software, cabling, and modules so that you have everything you need to get up and running.

UNPACKING

Every LDC500/750/100WPRFP LED Video Panel has been thoroughly tested and has been shipped in perfect operating condition. Carefully check the shipping carton for damage that may have occurred during shipping. If the carton is damaged, carefully inspect the device for damage, and be sure all accessories necessary to install and operate the device have arrived intact. In the event damage has been found or parts are missing, please contact our customer support team for further instructions. Please do not discard the shipping carton in the trash. Please recycle whenever possible.

SAFETY GUIDELINES

This LDC500/750/100WPRFP LED Video Panel is a sophisticated piece of electronic equipment. To guarantee a smooth operation, it is important to follow all instructions and guidelines in this manual. Aurora is not responsible for injury and/or damages resulting from the misuse of this panel due to the disregard of the information printed in this manual. Only qualified and/or certified personnel should perform the installation of this panel and all included and/or rigging accessories. Any modifications to the panel, included and/or accessories will void the original manufactures warranty and increase the risk of damage and/or personal injury.



PROTECTION CLASS 1 - PANEL MUST BE PROPERLY GROUNDED.

THERE ARE NO USER SERVICEABLE PARTS INSIDE THIS PANEL.



DO NOT ATTEMPT ANY REPAIRS YOURSELF; DOING SO WILL VOID YOUR MANUFACTURES WARRANTY. DAMAGES RESULTING FROM MODIFICATIONS TO THIS PANEL AND/OR THE DISREGARD OF SAFETY INSTRUCTIONS AND GUIDELINES IN THIS MANUAL VOID THE MANUFACTURES WARRANTY AND ARE NOT SUBJECT TO ANY WARRANTY CLAIMS AND/OR REPAIRS. DO NOT PLUG PANEL INTO A DIMMER PACK! NEVER OPEN THIS PANEL WHILE IN USE! UNPLUG POWER BEFORE SERVICING PANEL! NEVER TOUCH FRONT OF PANEL DURING OPERATION, AS IT MAY BE HOT! KEEP FLAMMABLE MATERIALS AWAY FROM PANEL.



**DO NOT SOAK THE PANEL IN THE WATER!
DO NOT SPILL WATER AND/OR LIQUIDS ON OR INTO THE PANEL!**

DO NOT touch panel housing during operation. Turn OFF power and allow approximately 15 minutes for panel to cool down before servicing.

DO NOT: Operate a panel if any cover is open and/or removed.

DO NOT shake panel, avoid brute force when installing and/or operating panel.

DO NOT: Expose any part of the panel to open flame or smoke. Keep panel away from heat sources such as radiators, heat registers, stoves, or other appliances (including amplifiers) that produce heat.

DO NOT: Install/use panel in extreme hot/humid environments, or handle without ESD precautions.

DO NOT: modify this product in any way that not described in the instruction manual.

DO NOT operate panel if power cord is frayed, crimped, damaged and/or if any of the power cord connectors are damaged and do not insert into the panel securely with ease. **NEVER** force a power cord connector into the panel.

DO NOT try to repair cables If the power cord or any of its connectors are damaged, replace it immediately with a new one of similar power rating.

ALWAYS disconnect panel from main power source before performing any type of service and/or cleaning procedure. Only handle the power cord by the plug end, never pull out the plug by tugging the wire portion of the cord.

SAFETY GUIDELINES

ONLY use the original packaging materials and/or case to transport the panel in for service.

PLEASE recycle shipping boxes and packaging whenever possible.

CAUTION: To avoid physical damage, read the installation instructions carefully before installation.

CAUTION: Panels should only be installed/operated by qualified and trained professionals **ONLY**.

CAUTION: Always mount panels in a safe and stable manner.

CAUTION: The product can be normally used in the external temperature range of the maximum 40 and the minimum - 20 C.

CAUTION: Wear appropriate safety equipment during panel installation.

CAUTION: Turn OFF power to panel, computers, servers, system boxes, and monitors before making any type of power or data connections and performing any maintenance work.

CAUTION: Read user manual carefully to ensure normal operation and lifespan of the panel.

CAUTION: Electronics used in this panel are ESD (Electrostatic Discharge) sensitive. To protect device from ESD, wear a grounded ESD wrist strap or similar grounding device when handling panel.

CAUTION: Panel must be properly grounded before operating. (resistance must be less than 4Ω)

CAUTION: Ensure all power is disconnected from panel before unplugging any data cables from the panel, especially serial line ports.

CAUTION: Route power and data cables so that they are NOT likely to be walked on or pinched.

CAUTION: It should be installed from top to bottom and disassembled from bottom to top when hoisting.

CAUTION: Test panel for 2-hours per week, if not used regularly or for an extended period.

CAUTION: Cases used to transport panel must be properly waterproofed for transportation.

MAINTENANCE GUIDELINES

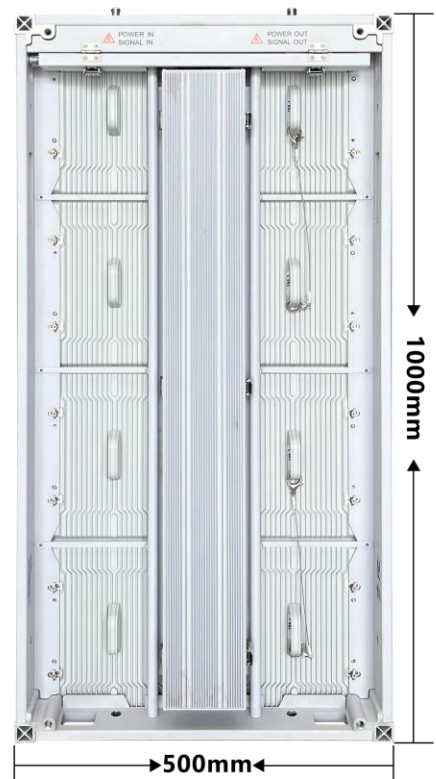
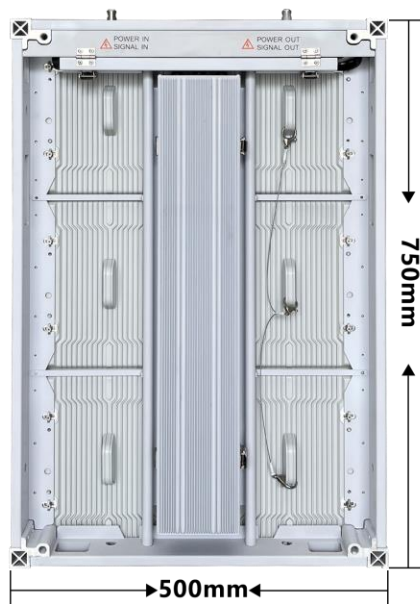
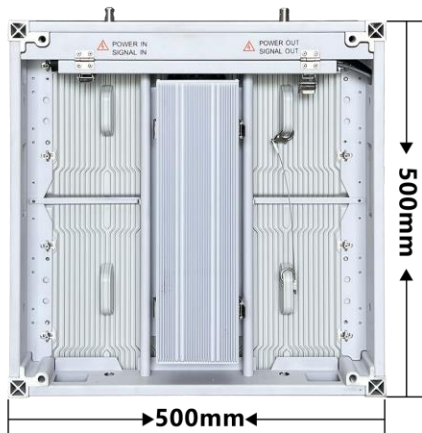
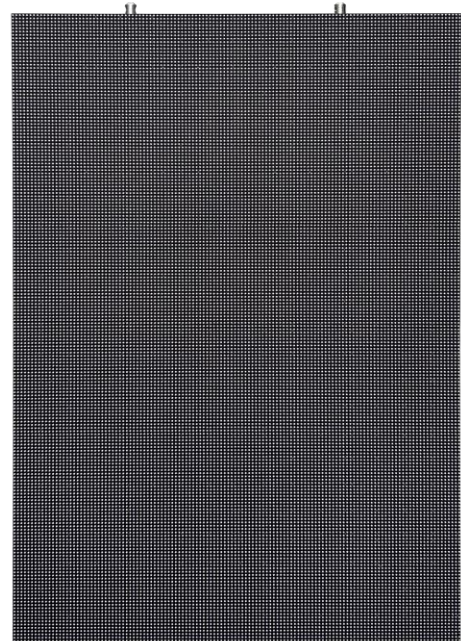
Careful and regular maintenance is necessary to optimize the potential functional lifespan of the LDC500/750/100WPRFP LED Video Panels.

1. Read the installation and operation instructions for correct operation of the LDC500/750/100WPRFP LED Video Panels.
2. Although the LDC500/750/100WPRFP LED Video Panels are designed and built to withstand some impact forces when installed correctly, take care to avoid impact damage when handling or transporting them, especially corners and edges, which are particularly frangible during transportation.
3. Check each LDC500/750/100WPRFP LED Video Panel for loose screws and other fasteners.
4. If the LDC500/750/100WPRFP LED Video Panel installation is fixed or displayed for a lengthy time, regularly inspect all connecting plates and installation equipment, and replace or repair it as necessary, and during long periods of non-use, disconnect the main power to the unit.
5. Use necessary ESD (electrostatic discharge) precautions when handling PT LED Video Panels, especially the LED screens, as they are ESD sensitive and easily damaged from ESD exposure.
6. The Null Line and Live Line connections from the computer and control system cannot be reversed and should therefore only be connected in original layout order.
7. If the GFI (Ground Fault Interrupt) breaker-switch trips often, check the display or replace the power-supply switch.
8. When operating the LDC500/750/100WPRFP LED Video Panels, power the computer before powering the LED Video Screens; conversely, when shutting down after operation, turn the LED Video Panels off before turning off the computer. If the PC is turned off first, a high intensity brightness might appear, causing catastrophic failure to those LEDs.
9. If while conducting an electrical test a circuit shorts, a breaker-switch trips, wires burn, and or any other abnormality appears, discontinue testing and troubleshoot units to find the problem before continuing with any testing or operation.
10. To ensure consistent operation, it might be necessary to learn operating parameters for installation, data recovery, backup, controller settings, and basic data preset modification.
11. Regularly check computer for any viruses and remove any irrelevant data.
12. Only a qualified technician should operate software system.
13. Remove any moisture found inside or outside of any LDC500/750/100WPRFP LED Video Panels before dismantling video installation and returning them to their optional flight cases (sold separately).
Ensure flight cases are free of any moisture, using a fan to dry them if necessary, and avoid ESD generating friction when returning LDC500/750/100WPRFP LED Video Panels.
14. The LDC500/750/100WPRFP LED Video Panels are within its IP66 rating parameters (front/ rear), limit or remove any unit exposed to moisture, condensation, or humidity, and consider using air conditioning where available.
15. When not in use, store LDC500/750/100WPRFP LED Video Panels in a dry, well ventilated facility.

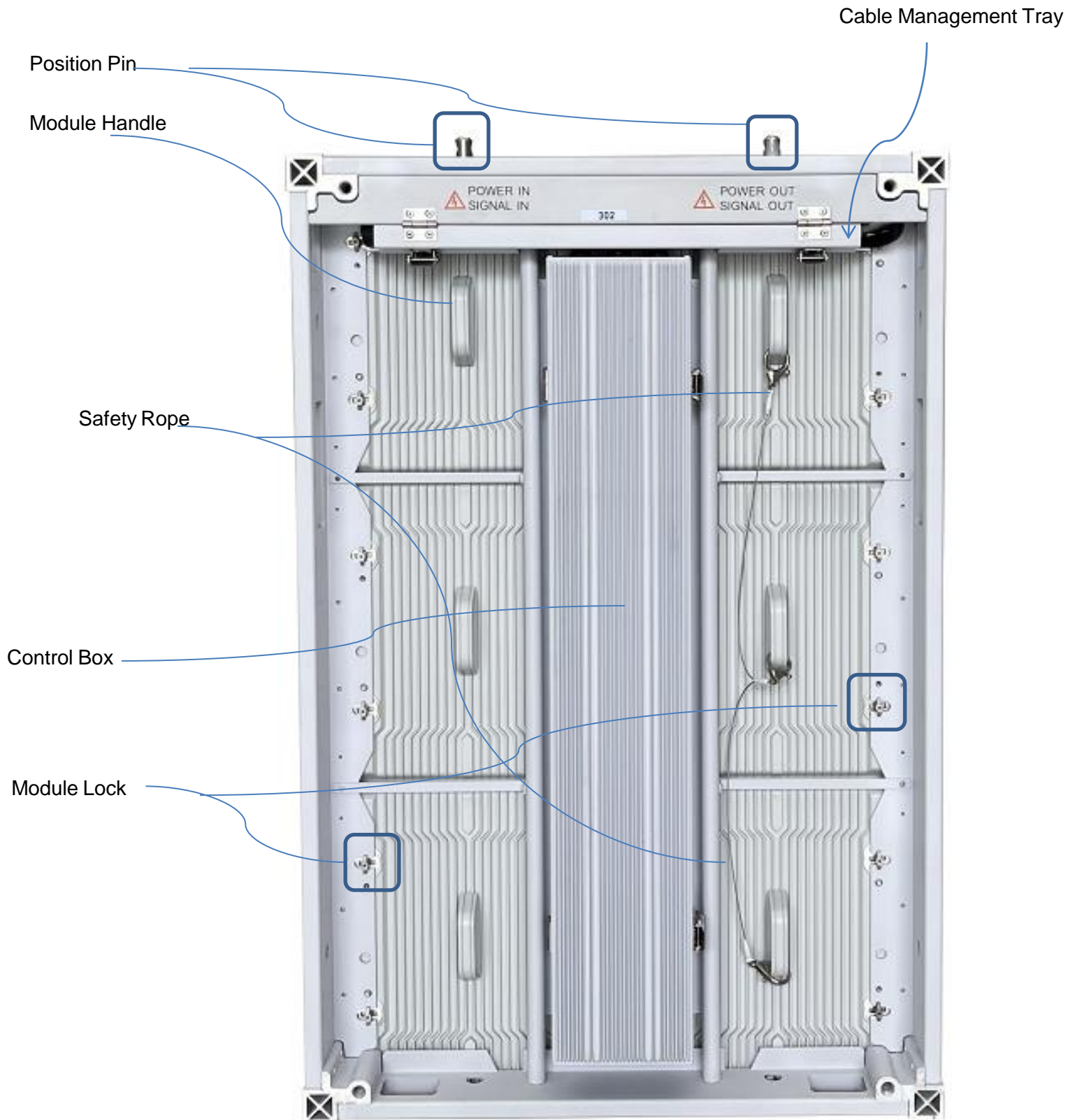
PANEL OVERVIEW

Dimension:

500x750x77mm/ 500x1000x77mm/ 500x500x77mm



PANEL OVERVIEW



PANEL OVERVIEW

Input Power Cable
& Input Signal
Cable









Power Supply

HUB Card

Receiving Card



THE LIST OF THE TOOL

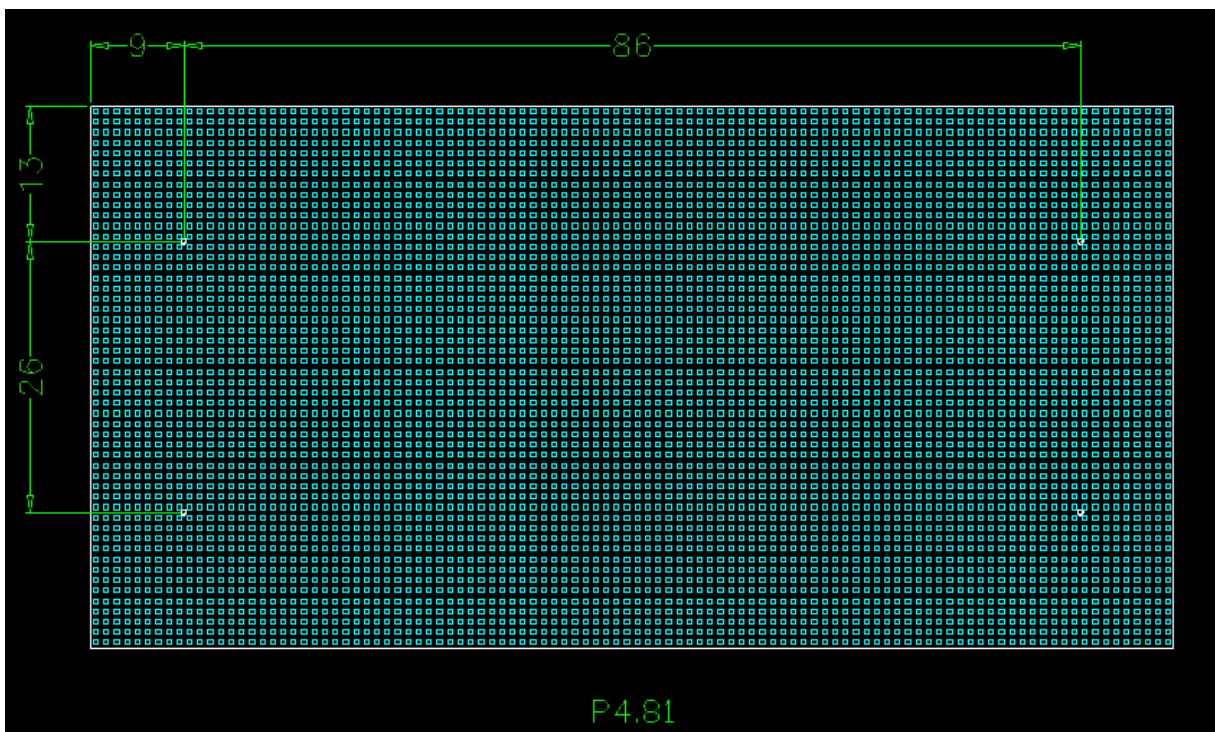
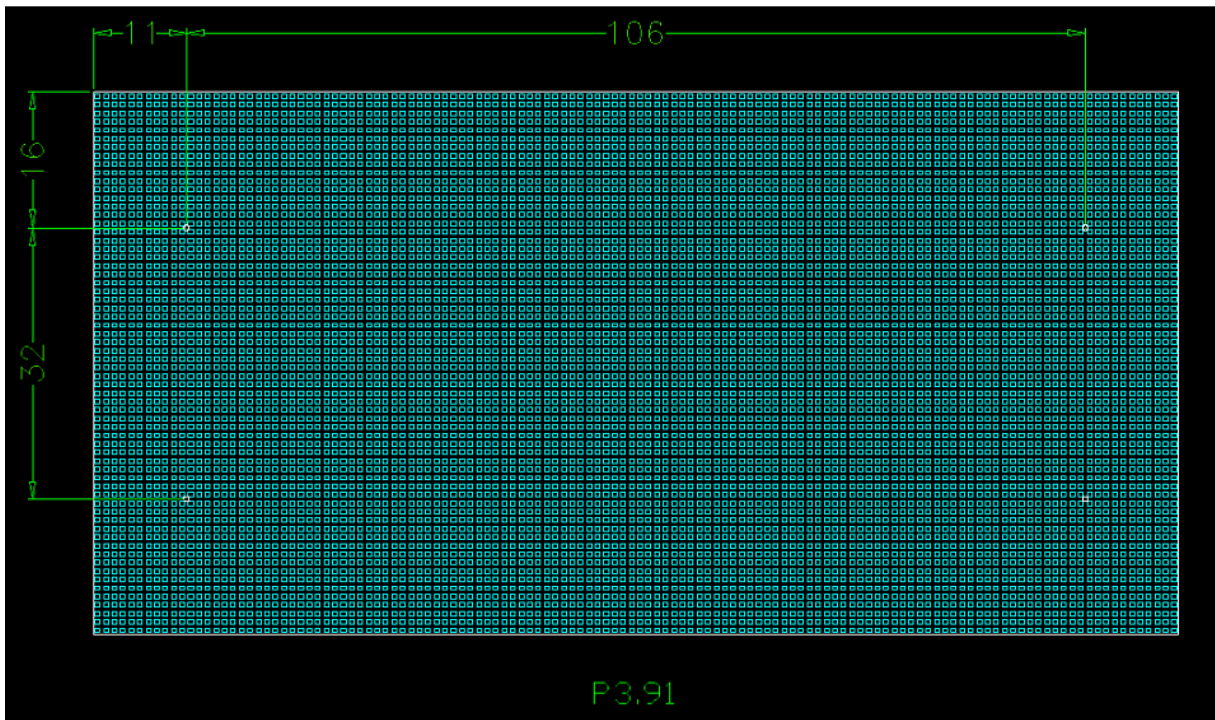
	Name	Specs	Picture
Front Installation	Connecting Plate between cabinets	143x77mm	
	Screw for the cabinet left and right fixed	M10*52	
	Screw for the cabinet front and back fixed	M8*95	
	T-type Allen wrench, for outdoor pixel pitch 4.8 mm, 3.9mm and 2.9 mm		
Side Installation	Connecting Plate for both side cabinets installation		
	Screw for the cabinet left and right fixed	M10*52	
	Screw for the cabinet front and back fixed	M10*75	
	Hex wrench for connection plate screws, front installation.	M6	

MAINTENANCE STEPS

1. Front Maintenance

A. Module Maintenance

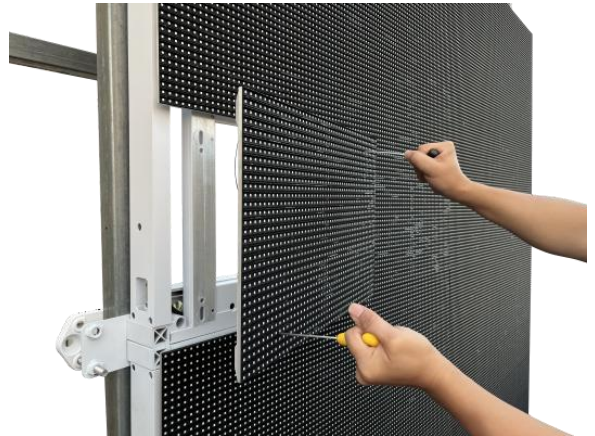
① There is 4 lock holes on each module, located at 4 directions; and different pixel pitch is of different locations; please refer above pictures.



- ① Insert T-type Allen wrench into each lock hole, rotate 90 degree to the left, to open the lock.



- ② Insert two T-shaped Allen wrenches into the diagonal lock holes, and pull outward at the same time, to remove the module.



- ③ There is a safety rope to catch each module, unhook the safety rope. Please do the same way to take other modules out.



B. Power box maintenance

① Remove modules from the front of cabinet;
there will be the power box at the middle.



② There is two plates with screws at the power box, one for the top, each side with 2 screws;
another one on the bottom, Total 8 screws;



③ Then please catch the power box up and down, and remove the power box.



2.Rear Maintenance

A.Module Maintenance



1) Locate the four mechanism locks



2) Release the 4 locks of each module by T-type Allen wrench



3) Unlock the safety rope



4) Catch the handle of the module



5) Push the module forward



6) Take the module out diagonally

B. Power box maintenance



1) There is two buckles on the power box, one is located at the top, another one is located at the bottom.



2) Open these two buckles.



3) Then you can do the maintenance for the power supply, receiving cards, HUB cards, etc.

Installation type 1: Wall-mounted directly

Application: Aurora designs the LDC500/750/100WPRFP cabinet for wall-mounted directly; it is good for outdoor small signs installation.

- Before Installation

- 1.check the stress condition of the wall surface, and the wall should be concrete structure.
- 2.check the smoothness of the wall surface, the wall surface should be the same level.

- Steps of installation

1) Install connecting plate



1)Drill the hole



2)Locate plate with screw



3)Fixed the screw



4)Complete the screws



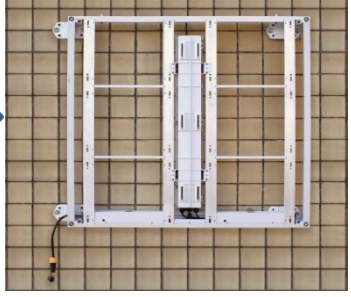
5)Fix the cabinet on top



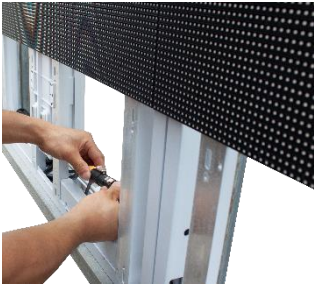
6)Fix the cabinet on bottom



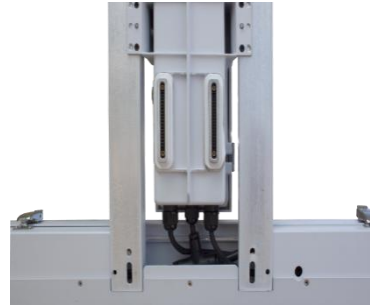
7) Tighten the screws



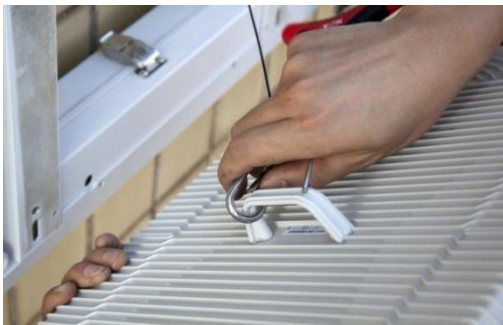
8) Finish installation



9) Connect the signal & power cable from front



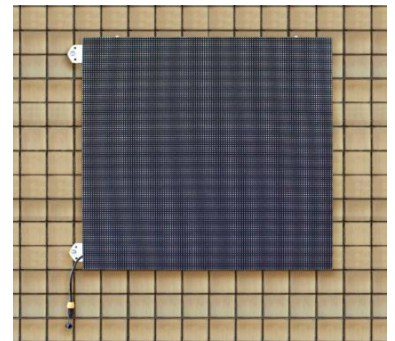
10) Cover the cable



10) Put the module onto cabinet



12) Lock the module



13) Finish install the modules

- After installation

1. Check that each corner is secure, tap the module to ensure the smoothness of the screen, to avoid bad installation caused by not bright.

2. Debugging software

Installation type 2: Totally front installation

Application: there is no space for rear installation and service; attach the steel structure into the wall first; then install all cabinets, cables, etc from front.

Preparation of install:

1. Install the steel structure, make sure the welding is correct according to the drawing, and spray paint.
2. Check the steel structure, make sure it is horizontal and vertical



- 1) Take off the corner modules and put cabinet on the first floor; put cabinets together.



2) Put the connecting plate and M8*95 screw first



3) Fix the screw with Hex Wrench M8



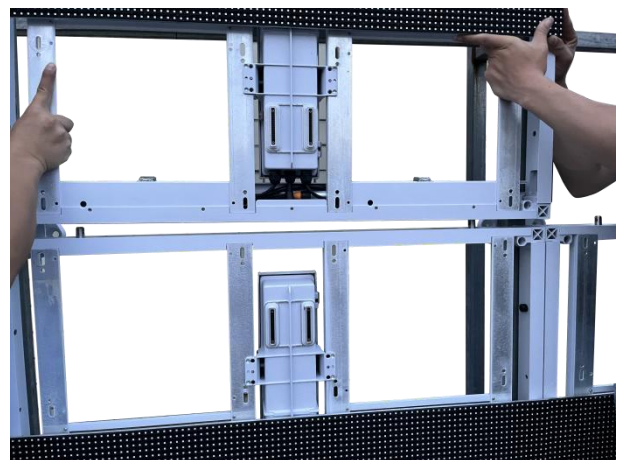
4) Connect two cabinets together with screws from side



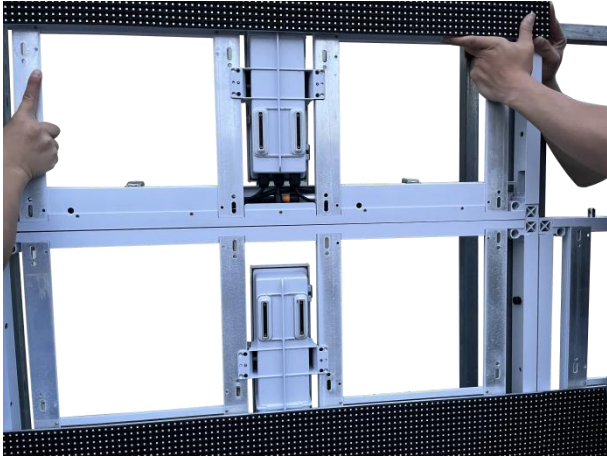
5) Put through the screws



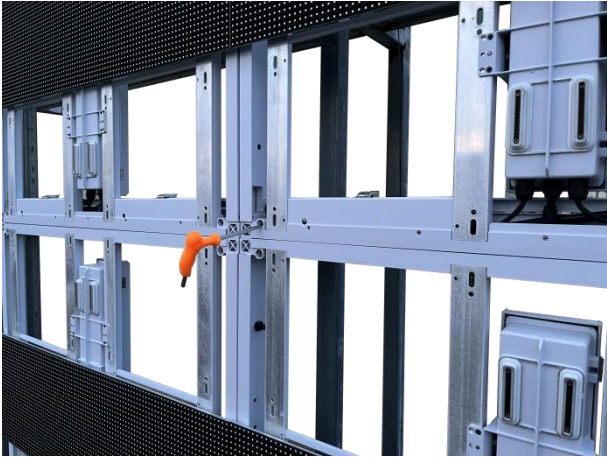
6) Fix the nuts, tighten cabinets together



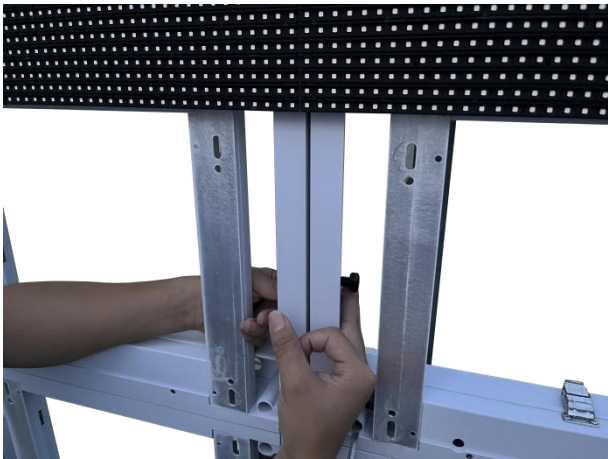
7) Put cabinet on top, located the position with two pins.



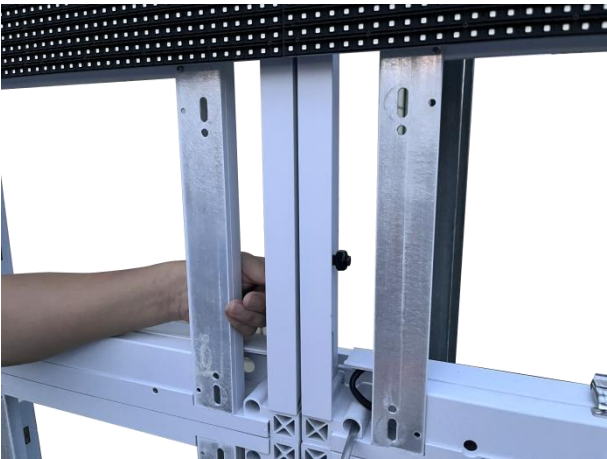
8) Then put the cabinet down.



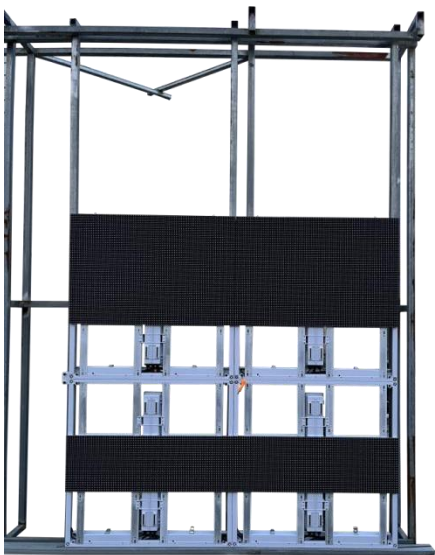
9) Lock the screw to the connection plate with hex wrench M8.



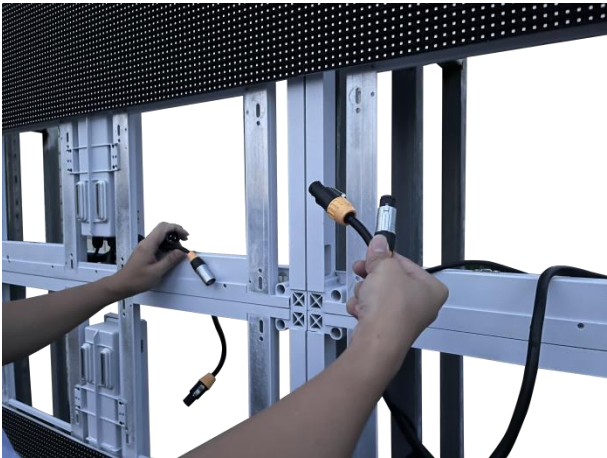
10) Lock two cabinets together with screw



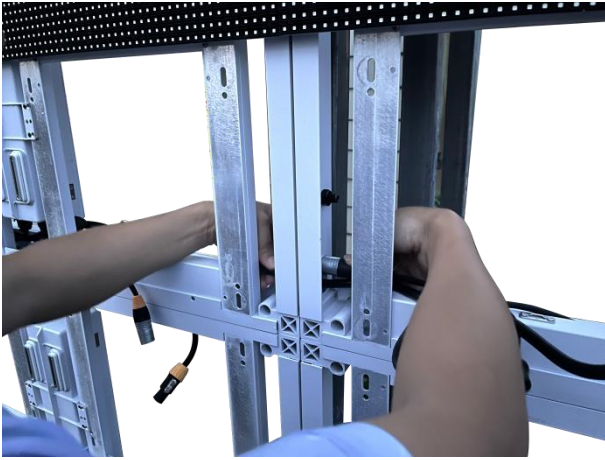
11) Tighten screw with nut



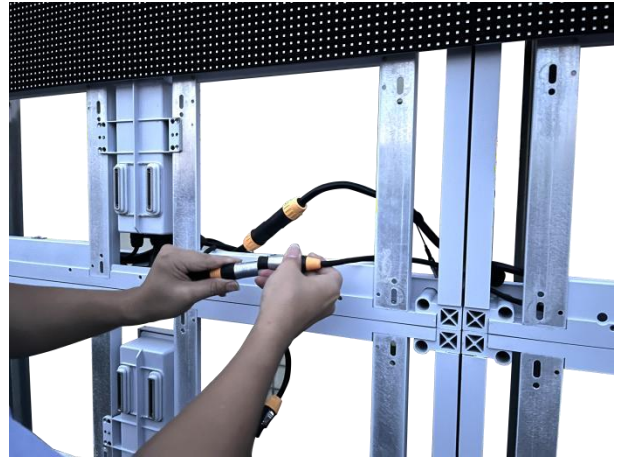
12) Finish installation of 4 cabinets.



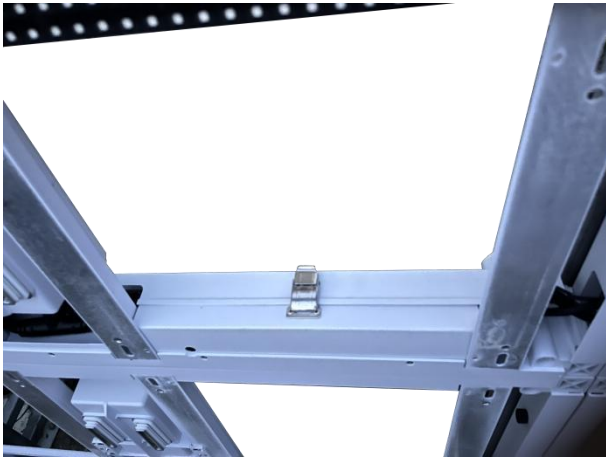
13) Take cables out from the bottom of cabinet



14) Go through the cables from the cabinet



15) Connect cables together



16) lock the cable cover.



17) Connect the plates and screws for side of the screen.



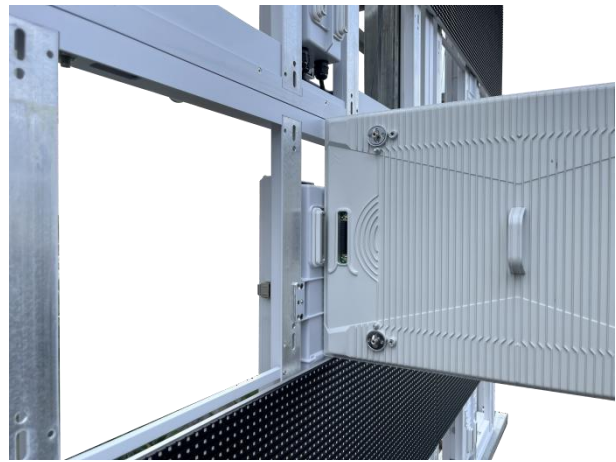
18) Fix the connecting plates from the left side.



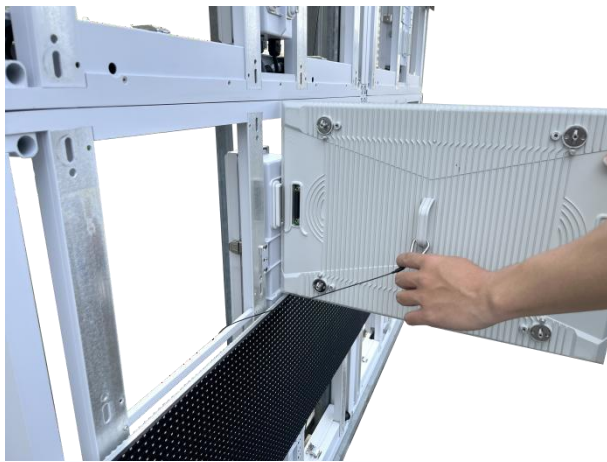
19) Fix the screws for the side plates.



20) Lock it together tightly.



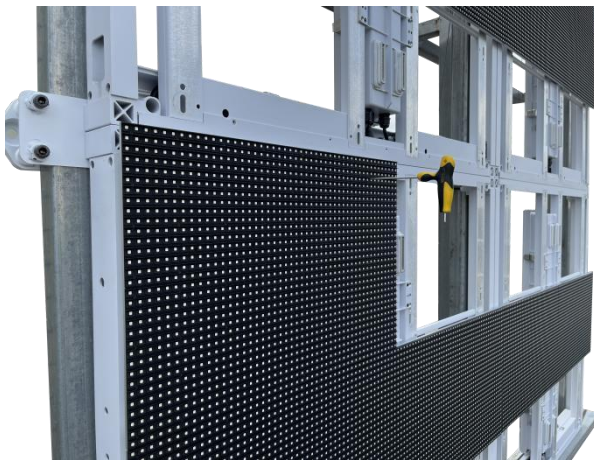
21) Put the module back



22) Put the safety rope.



23) Install modules onto the cabinet.



24) Lock the module with T-type Allen Wrench.

Installation type 3: Totally Rear installation

Application: there is space for rear installation and service



1) Prepare the structure and put the first cabinet.



2) Put two cabinet together first.



3) Lock the connecting plate to the cabinet with M10*75 screw from back.



4) Lock two cabinets onto the steel square pipe.



5) Connect left and right cabinets with screw and nut.



6) Put the screw through the cabinets.



7) Tighten the screw with nut.



8) Fix two cabinets together with top and down screws.



9) Put cabinet on top of the first row.



10) Locate the top cabinet with position pins.



11) Put screws through the connection plate to the cabinet.



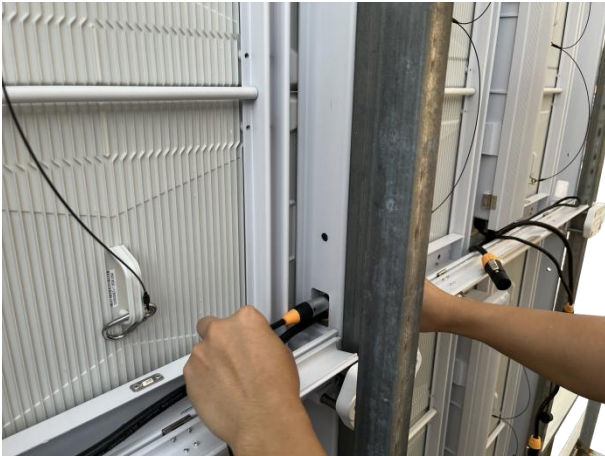
12) Fix the screw with Hex wrench.



13) Fix all screws to the connecting plate



14) One connecting plate for 4 cabinets.



15) Put the cables through the cabinets



16) Connect cables together.



17) Put cables back to the cover.



18) Lock the cover and finish installation.



19) Connecting plate for side screen.



20) Put the connecting plates



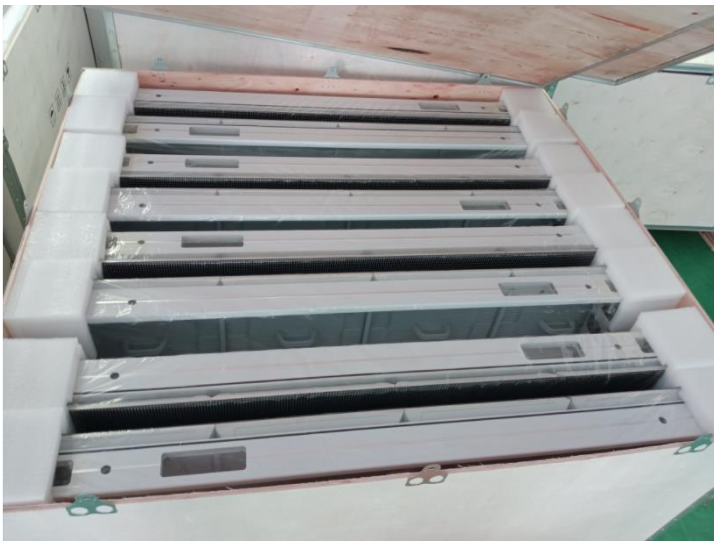
21) Lock the connecting plate with screws



22) Finish the installation .

Package and transportation

A.Package



B.Transportation

Some reference data for loading(Suppose the space is fully utilised)

Name	Size	Weight (GW)	Total Panels (960*960mm/pcs)	Total Wooden Cases(Qty)
Wooden case	1.09*0.97*0.68m	163KG	8pcs	1

Technical Specifications

Item Number	LDC50029WPR	LDC50039WPR	LDC50048WPR
Pixel Pitch(mm)	2.97	3.9	4.8
Pixel Density(dots/SQM)	7056	65536	43264
LED type	SMD1515	SMD1921	SMD1921
Module Resolution(pixels)	84*84	128x64	104 x 52
Module Size(mm)	250*250	500*250	500*250
Cabinet Size(mm)	500*500	500*500 500*750 500*1000	500*500 500*750 500*1000
Cabinet Weight(KG)	36	33	33
Brightness(Nits)	4000-4500	6000-7000	6000-7000
Refreshment(Hz)	3,840	3,840	3,840
Grey Scale(Bit)	≥15	≥15	≥15
Max Power Consumption(W/SQM)	700	650	650
Ave Power Consumption(W/SQM)	230	180	180
Maintenance type	Front/Rear	Front/Rear	Front/Rear
Protecting level	IP66/IP66	IP66/IP66	IP66/IP66
Certificate	CE, FCC, ETL, EMC, CB, ROHS		