

TWF series

Smart HD Led Video Wall Panel



TWF series

Wall mounting video walls occupy less than 94mm of depth from the wall, front installation and front service;

Unique 6-axis alignment features ensure the video wall is perfectly aligned and seamless;

Unique structure and magnetic tools, makes the front maintenance possible;

Besides of normal flat installation mode, also support 90° corner installations and faceted curved video walls;

Adopt accurate power voltage control technology (common cathode drive) and Smart black field management

system, can save over 30% energy when compared with normal traditional LED display;

LED Panel pass Class A electromagnetic radiation standard, low radiation;

Adopt aluminum alloy to the structure and frame, stronger, lighter and better thermal conductivity;

Convenient 27" diagonal size and 16:9 aspect ratio LED Panel;

LED panel equipped with two HDMI Interfaces and Network control interfaces;

High accuracy: Both LED panel and installation bracket processed in the factory with high accuracy CNC technology.

10 bit broadcasting video processing technology, ensures perfect image quality.



TECHNOLOGY ADVANTAGES

TWF Series adopts accurate power voltage control technology (common cathode driver), according to the R, G, B features, encapsulate the LED IC power components in the same translation circuit, and implement accurate power voltage to the Driver IC, so as to lower the product power consumption.

Unique 6-axis step less adjustment design.

Adopts HDMI interface, no external LED controller needed, greatly increase the universality of the product.

Integrate the LED control into the PCB board, reduce the failure points, and good for reliability and easy for both production and maintenance.

Adopts leading processing technology for all key components, improve the assembling alignment.

Power redundancy and signal redundancy design, system reliability can be guaranteed.

Adopts aluminum alloy to the structure and frame, stronger.

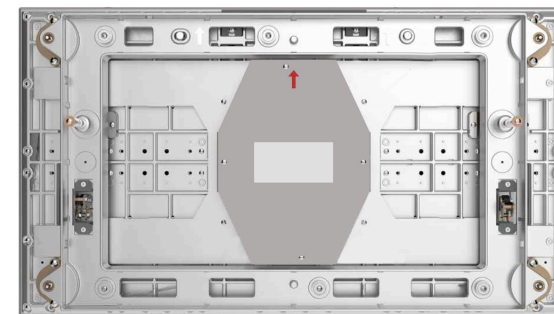
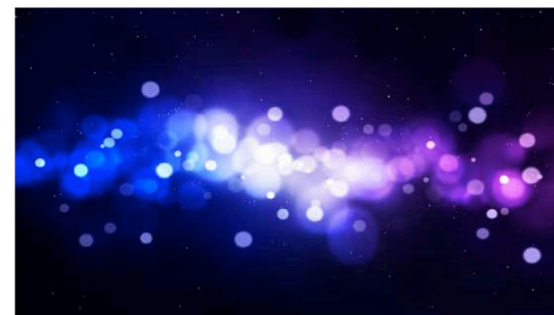
Adopts smart black field performance management system, allocate power consumption intelligently, lower the whole panel power consumption.

Adopts accurate color management system, to apply pixel by pixel 12bit color calibration to each LED via Secondary Filtering Algorithm.

Using non-linear calibration curve and color coordinate transformation coefficients matrix, to realize the constant improvement of video effect. All indexes meet the opto-electronic standard.

Convenient 27" diagonal size and 16:9 aspect ratio panel design, help to lower the production cost and engineering cost. Increase the working efficiency.

Standardized frame design, convenient for on-site installation, shorter the time and increase the working efficiency.



TWF series

FEATURES

- Common cathode driving mode
- Real seamless assembling and easy connection
- High contrast ratio
- Wide color gamut
- Unique 6-axis step less adjustment structure
- Accurate color rendering uniform brightness
- Pixel by pixel brightness and color calibration technology
- Long lifespan
- User friendly brightness adjustment
- Broadcasting level grayscale processing
- Low power consumption, energy saving, environment friend
- Nanosecond response time
- Less space required
- Super high refresh rate
- Low maintenance cost
- High reliable redundancy technology





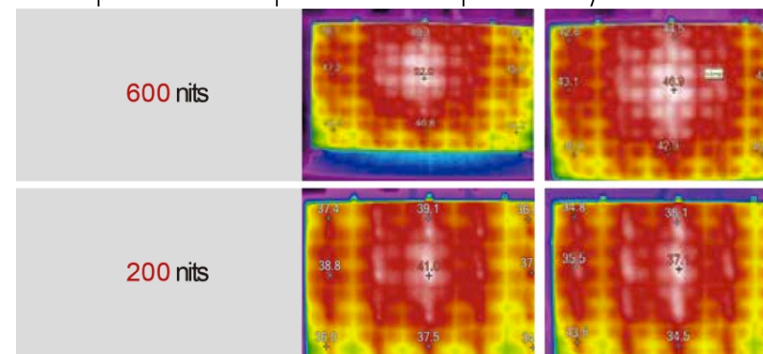
COMMON CATHODE DRIVING MODE

In common cathode driving mode, it can control the power voltage precisely, which can lower the power consumption, lower the heat productivity, minimize the damage to the LED and then prolong the LED lifespan.

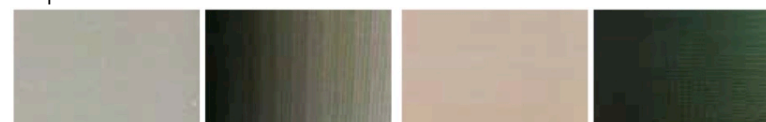
Reduce color shift in the areas of low brightness; Evener grayscale gradation; Exquisite visual effect and high image fidelity.

Eliminate the light dots (so called "Ghosting" Effect) around the white words.

Lower power consumption and heat productivity

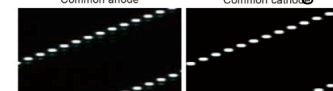


Exquisite Visual Effect

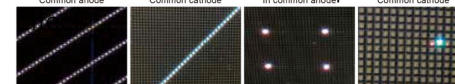


Color shift under conditions of low brightness, white balance Layered grayscale gradation Less color shift under conditions of low brightness and white balance Even grayscale gradation

Elimination of "Ghosting Effect"



Reduce the Failure LED Impact to the Display



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FRIENDLY BRIGHTNESS ADJUSTMENT

Equipped with external light sensor, the screen brightness can be auto-adjusted according to the ambient light, to be always in a suitable level.



HIGH CONTRAST RATIO

Adopts high quality black face LED lamp, increase the emitting brightness while lower the brightness of black frame. Black mask processing technology will also increase the contrast ratio.



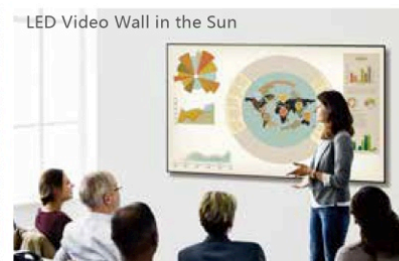
BROADCASTING GRAYSCALE PROCESSING

Perfect grayscale performance in the area of low brightness. It can display more screen layering and color degrees when compared to previous products. No detail loss.

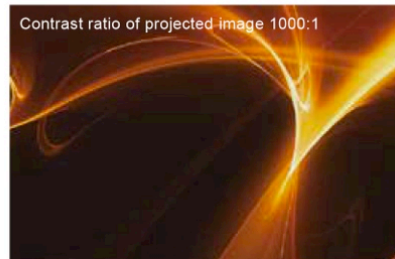
Normal LCD Video Wall in the Sun



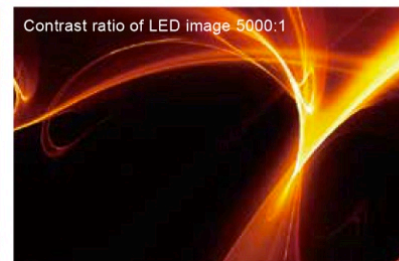
LED Video Wall in the Sun



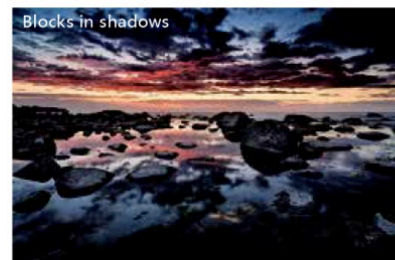
Contrast ratio of projected image 1000:1



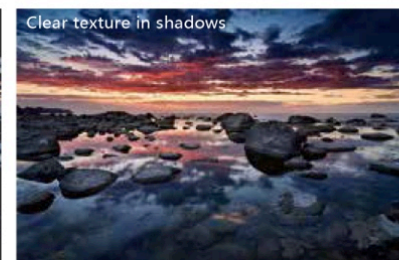
Contrast ratio of LED image 5000:1



Blocks in shadows



Clear texture in shadows



IDEAL FOR SHORT DISTANCE VIEWING

Finer pixel pitch LED Screen is ideal for close viewing without screen grain sense.

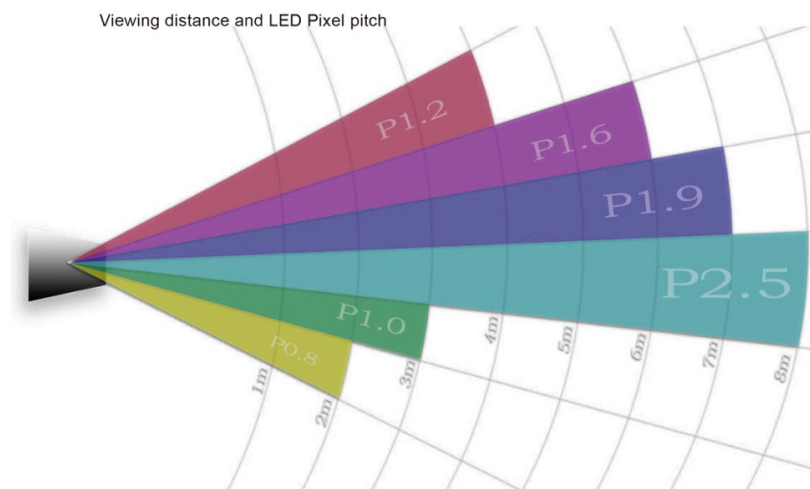


IMAGE SHARPENING PROCESSING

Image sharpening is able to create the appearance of a more pronounced edge, and this effect makes the image seem clearer, seemingly adding details. This is an image processing technology based on Differential Algorithm.

Sharpening can make the image seem clearer, but it will add the noise as well.



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IMAGE ENHANCEMENT PROCESSING

It's a process of enhancing the visual quality of images due to non-ideal image acquisition process. It may cause distortion of the image.

To emphasize the image features in whole or in part according to the application.

To make the dim image brighter.

To make the subject stand out better .

To improve the interpretability or perception of information in images for human viewers.



IMAGE DENOISING PROCESSING

Under dark environment, sometimes it may have to enlarge the image, and then it will cause some unnecessary noise. It's necessary for the image processing system to remove noise from the image .



RAPID DYNAMIC DISPLAY

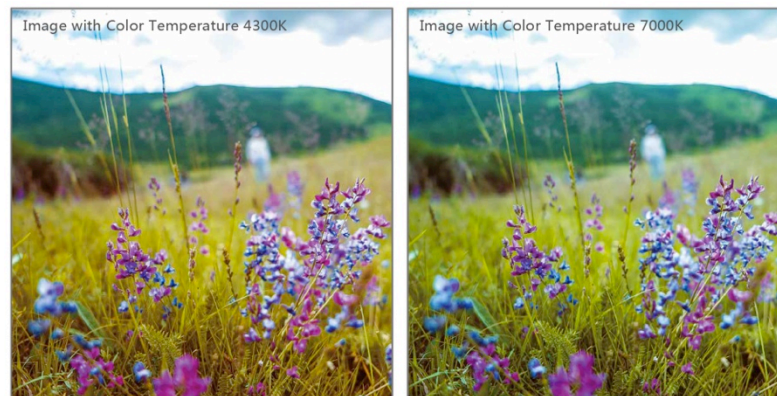
LED features Nanosecond response time, the interval between ON and OFF is extremely short. It could rapidly response without Visual Staying Phenomenon, very clear. It has big advantage for those applications requiring super good dynamic rendering effect.

The self emitting mode for LED needs no response time, no visual staying phenomenon happened even when people observe the rapid movement objects.



ADVANCED IMAGE PROCESSING TECHNOLOGY

Features: Strong video processing and calibration database arithmetic ability; High resolution video image output ability; Broadcasting video processing; 10bit grayscale processing; 16bit color processing which can display 281trillion colors; Self-adapting 50Hz or 60Hz video source; Frame by frame scanning; Enhanced image; Optimal image rendering ability, pixel by pixel rendering, sharp and clear. Realize image denoising and sharpening, color optimization, as well as color temperature adjustment.



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BRIGHTNESS & COLOR PIXEL BY PIXEL CALIBRATION

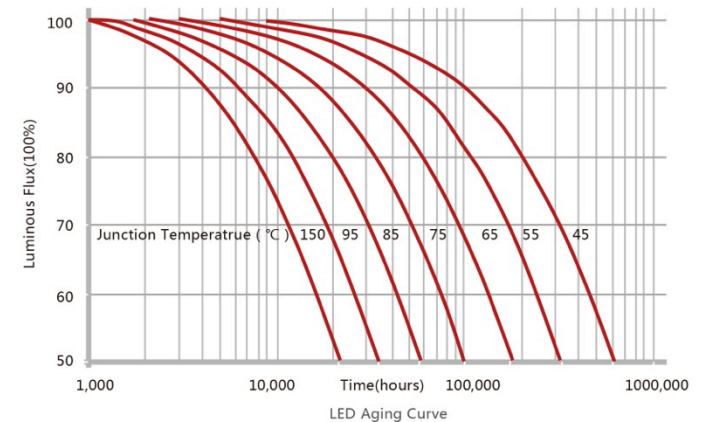
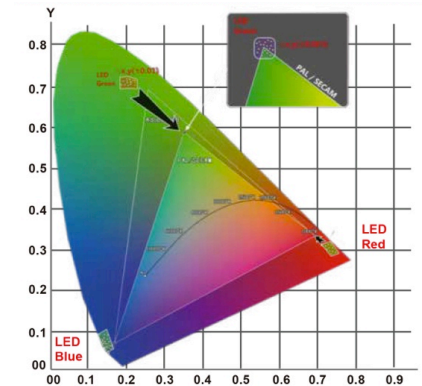
Professional pixel by pixel color and brightness calibration but not whole screen calibration, and the most accurate and best effect can be guaranteed. Color uniformity (X, Y coordinate) $< \pm 0.003$ (6500K white balance).

To calibrate discrete distribution LEDs of same beam and same batch, so as to make the LED screen video match PAL and NTSC format, truly rendering the color from the nature world, and make it pleasing to human eyes.

SUPER LONG LIFESPAN

Without considering of power and driver failure, the lifespan of LED reflects as its light decay. During working, the LED brightness will be lower and lower, until goes out. Normally, the standard lifespan of LED is defined according to 50% of the full brightness. The lifespan varies under different working temperature. The higher working temperature, the shorter lifespan. The typical lifespan of LED is 100,000 Hrs, which is much longer than traditional light source and bulb.

The lifespan won't be affected even under frequent On/Off usage.



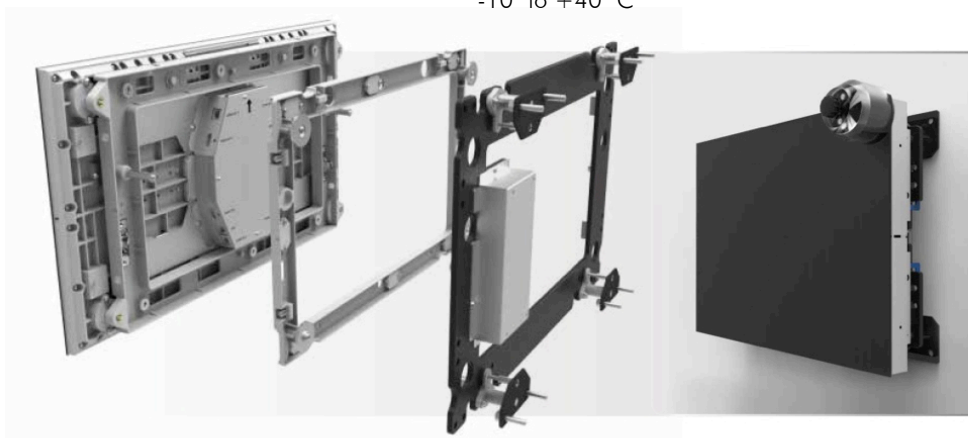
FEATURES

	TWF009	TWF012	TWF015	TWF18	TWF25
Pixel Pitch	0,9375 mm	1,25 mm	1,5625 mm	1,875 mm	2, 5 mm
LED Type	Commercial grade 3-in-1 Black SMD				
Pixel Density	1.137,777/sqm 105,700/sqft	640,000 dots/m2 59,450/sqft	409,600dots/m2 38,050/sqft	284,600 dots/m2 26,422/sqft	160,000/sqm 14,862/sqft
Brightness max	600 (cd/sq.m)	600 (cd/sq.m)	600 (cd/sq.m)	600 (cd/sq.m)	600 (cd/sq.m)
Display Size	600*337.5*95 mm				
Display Resolution	640x360 pixel	490x270 pixel	384x216 pixel	320x180pixel	240x135pixel
Display Weight	6,6 kg				
Color Gamut	100% NTSC				
Contrast Ratio	> 6.000 : 1				
Color Temperature	3.200 – 9.300 K				
Brightness Uniformity	>97%				
Color Uniformity	>97%				
Viewing Angle Horizontal	160°				
Viewing Angle Vertical	140°				
LED Lifetime	100.000 hrs				
LED Refresh Rate	1920 Hz	3000 Hz	3000 Hz	3000 Hz	5000 Hz
Power Consumption Max (W)	150 display - 741 sqm				
Power Consumption Typ. (W)	500 display - 247 sqm				
Line Voltage (AC)	100-240 V AC, 50/60Hz autoranging				
Acoustic Noise	Fanless Operation				
Maintenance Method	Front				
Video Inputs	2xHDMI in, 2xHDMI out				

TWF series

FEATURES

	TWF009	TWF012	TWF015	TWF18	TWF25
HDCP Compliant			Yes		
Video Input Resolution Max			1920x1080@ 60Hz		
Frame Rate			50, 60 Hz		
Video Signal Extension Options			CAT6 and Fiber Optic		
Video Signal Redundancy			Optional		
Video Extension Redundancy			Optional		
Display control			Control Software included		
Control Input Type			RS232 or Ethernet		
Operating Temperature/ Humidity			-10° to +40° C		



EXPLODED VIEW

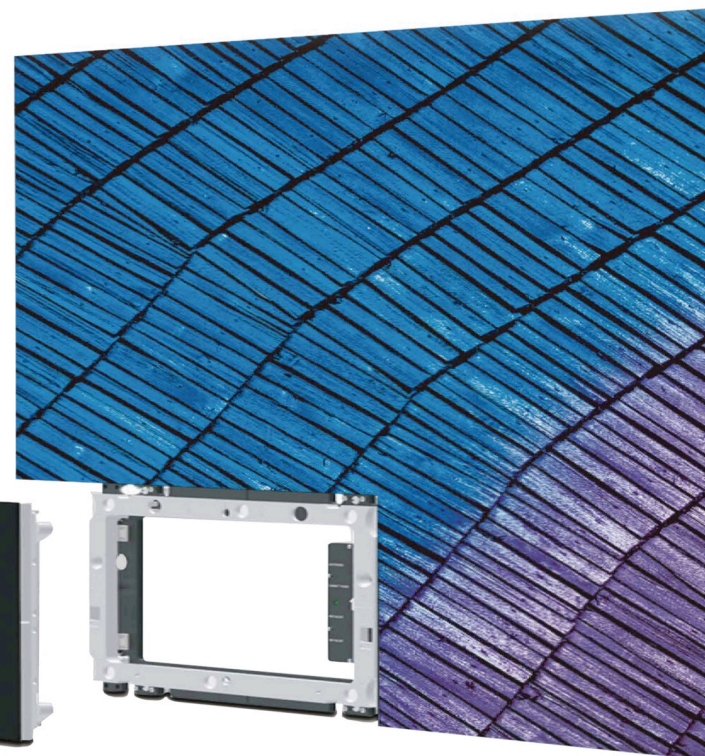
LED PANEL & BRACKET

FLEXIBLE ASSEMBLING

Resolution & Configuration List

	TWF009AS	TWF012AS	TWF015AS	TWF018AS
1X1	640X360	480X270	384X216	320X180
2X2	1280X720	960X540	786X432	640X360
3X3	1920X1080	1440X810	1152X648	960X540
4X4	2560X1440	1920X1080	1536X864	1280X720
5X5	3200X1800	2400X1350	1920X1080	1600X900
6X6	3840X2160	2880X1620	2304X1296	1920X1080
7X7	4480X2520	3360X1890	2688X1512	2240X1260
8X8	5120X2880	3840X2160	3072X1728	2560X1440
9X9	5760X3240	4320X2430	3456X1944	2880X1620
10X10	6400X3600	4800X2700	3840X2160	3200X1800
11X11	7040X3960	5280X2970	4224X2376	3520X1980
12X12	7680X4320	5760X3240	4608X2592	3840X2160

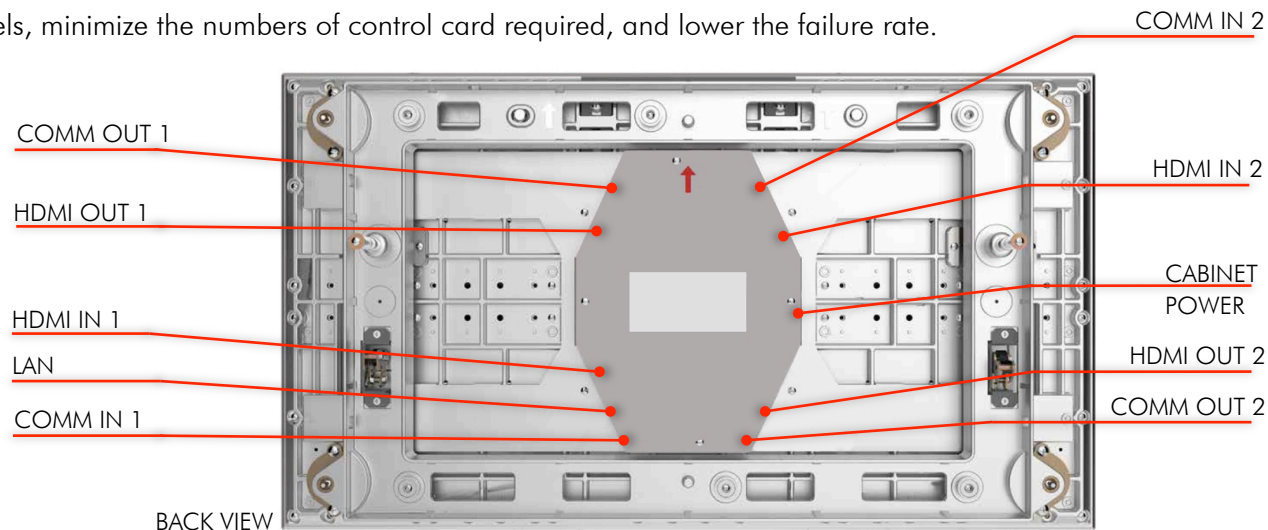
TWF SERIES ENSURES EVERY PIXEL PITCH IS DESIGNED TO EXACTLY ACHIEVE FULL HD, 4K OR 8K RESOLUTIONS



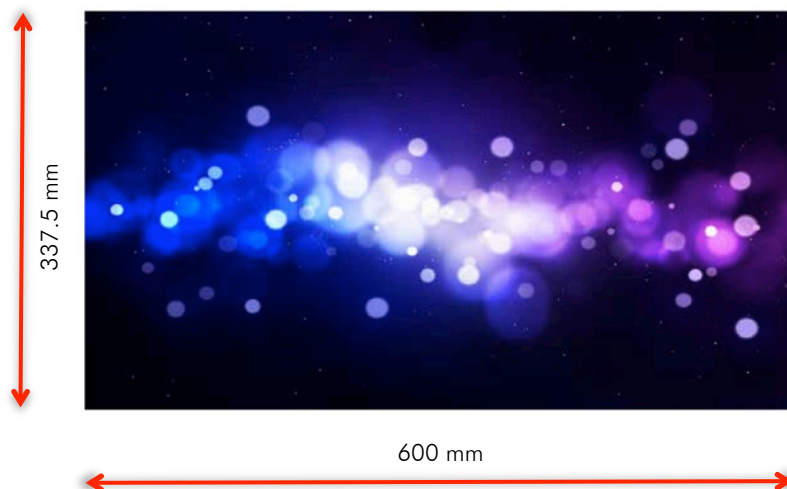
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VARIOUS INTERFACES AVAILABLE

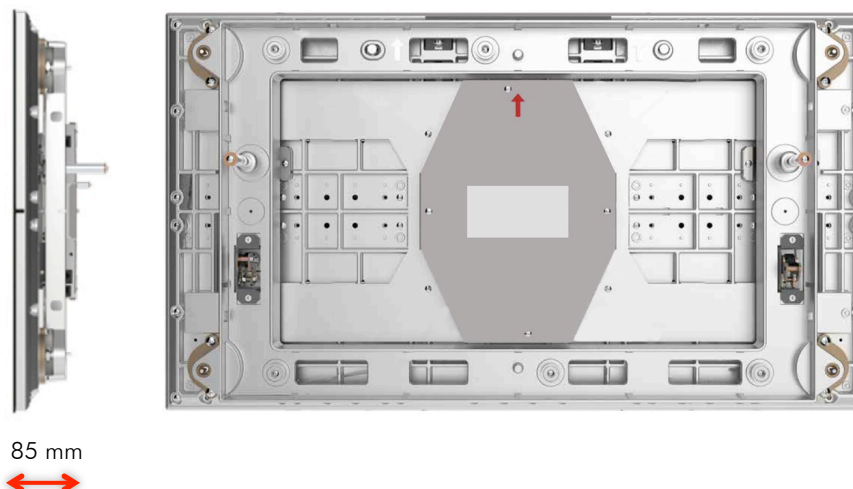
- Aluminum Alloy structure helps to shield the electromagnetic radiation, and have features of shock resistance, reliable and firm installation, lightweight, and so on;
- Accurate LED power supply system;
- Smart black field management system;
- Individual gamma adjustment design for each LED panel;
- Accurate color management system;
- Each card can drive up to 250,000 pixels, minimize the numbers of control card required, and lower the failure rate.



FRONT VIEW



BACK VIEW



TWF009	TWF012	TWF015	TWF018	TWF025
LED VIDEO WALL PANEL	LED VIDEO WALL PANEL	LED VIDEO WALL PANEL	LED VIDEO WALL PANEL	LED VIDEO WALL PANEL
SIZE: 600x337.5x95 mm	SIZE: 600x337.5x95 mm	SIZE: 600x337.5x95 mm	SIZE: 600x337.5x95 mm	SIZE: 600x337.5x95 mm
WEIGHT: 6.6 kg	WEIGHT: 6.6 kg	WEIGHT: 6.6 kg	WEIGHT: 6.6 kg	WEIGHT: 6.6 kg
ORDER CODE: UNITWF09	ORDER CODE: UNITWF12	ORDER CODE: UNITWF15	ORDER CODE: UNITWF18	ORDER CODE: UNITWF25