LED SCREEN

LED MODULE SCREEN - TRANSPARENT LED SCREEN

INTRODUCTION

WHAT IS AN LED SCREEN?

LED stands for Light Emitting Diode, Large LED screen use a large number of these diodes to light up the screen. These diodes are low power consumption devices that provide high brightness. As a result, an LED screen has several benefits over other display alternatives. LED screen can display the entire colour spectrum by combining red, blue, and green colours (RGB). LED display technology has become popular in the last 5-6 years, the evolution of the LED screen has taken over half a century.
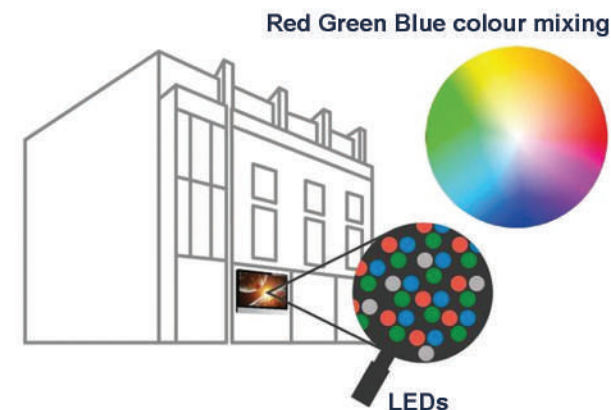
BENEFITS OF LED SCREEN

One important question to ask is why are LED screen so popular?
Size: you can fix any size you need and anywhere indoor or outdoor screen.
Power Consumption: LEDs consume a minimal amount of electricity. Therefore, even a large LED display.
Lifespan: Due to no moving parts and a simple design, LED screen tend to last longer.
Viewing Angle: LED displays are evenly lit. Therefore, they provide a wider viewing angle.
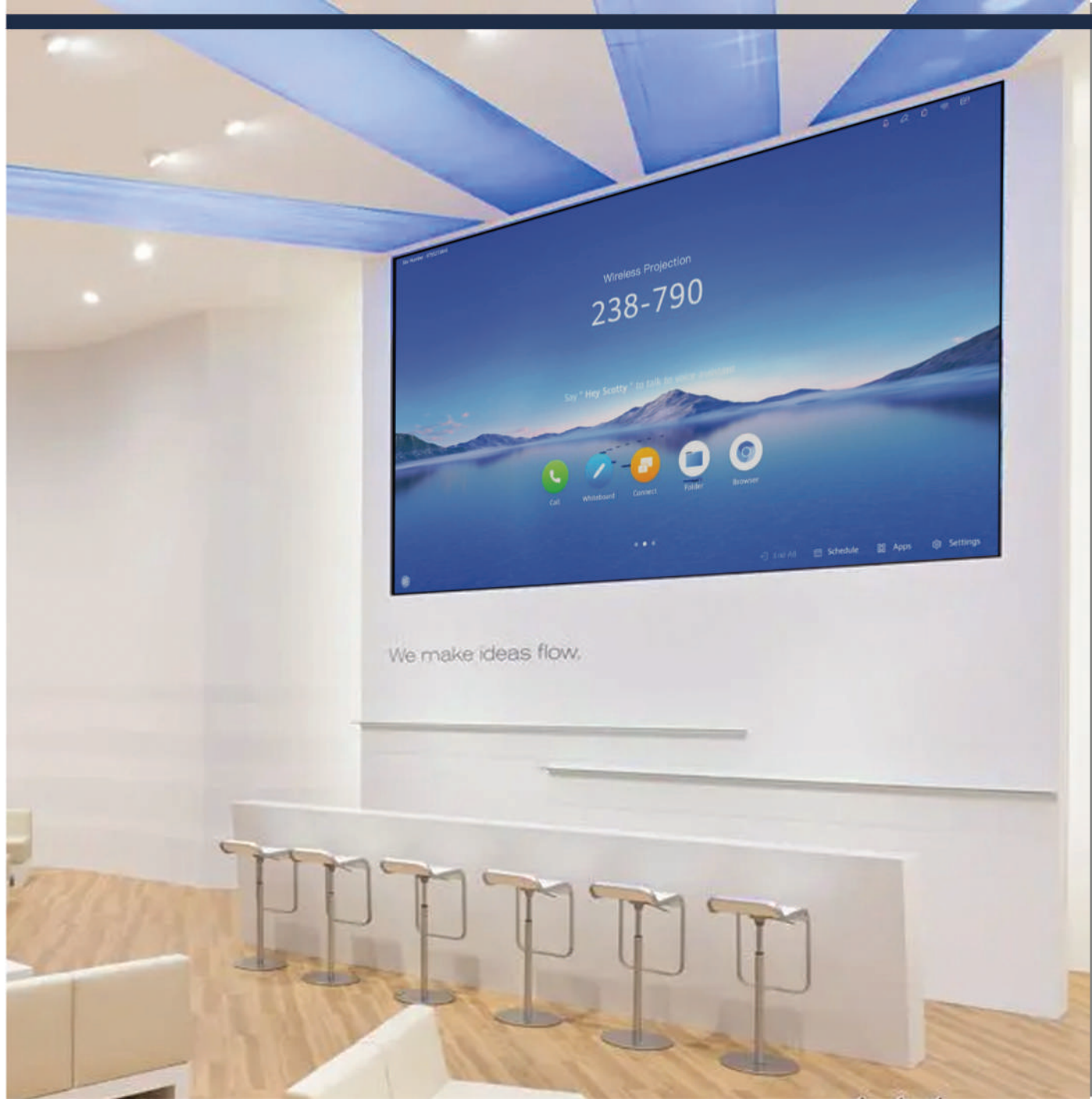

Red Green Blue colour mixing

LEDs

The great development that took place in the LED industry provided the possibility of a huge development for LED screens, as LED screens began with a DIP LED type, which was causing high heat generation and short life time of the screens, and when a new generation of SMD LEDs appeared, with the advantages of less energy consumption and a longer life span And a greater resolution of the screens, which contributed to improving the quality of the indoor screens as Hight resolution FUD,UHD with fine-pixels and innovating the display on the outdoor screens as 3D (Naked-eye) display , which contributed the advertising industry to create innovative ideas as Naked-eye 3D advertising videos.

INDOOR LED MODULE SCREEN

Indoor displays are mainly used in conference rooms, auditorium halls, stadiums, stages, shopping malls, hospitals, service halls, alarm centers, traffic control centers, various dispatch centers, monitoring centers and, other occasions. They are used to display information, monitoring screens, video programs, advertisements, promotional videos and, so on.

Indoor Video LED screen, we using advanced LED technology new generation, with high brightness, high contrast, high grayscale, high refresh rate, high-definition resolution, and the ability to customize various sizes and various length-to-width ratios.

FEATURES:

• Provide customized solutions for any requirements.
• With top-quality, super-bright LEDs, high uniformity, low color shift, and high reliability.
• PWM constant current driver IC is used to achieve high brightness, high grayscale, and high refresh rate.
• Advanced heat dissipation design, low light decay, ensure long-term and reliable operation of the display.
• Front access maintenance, modular design, easy service.

AVAILABLE PIXELS AND SPECIFICATIONS:

There are some types available in terms of resolution by Pixels, according to a specific viewing distance, where the average resolution used for indoor screens can be as follows 1.2mm, 1.5mm, 1.8mm, 2.0mm, 2.5mm, 3mm, 4mm,5mm, 6mm.

GENERAL TECHNICAL SPECIFICATIONS

Pixel Pitch(mm): 1.2mm, 1.5mm, 2.0mm, 2.5mm, 3mm, 4mm, 6mm, etc.
Pixel Configuration: 1R1G1B.
Brightness: 600~900 cd/m².
Viewing Angle: 140°/140° (H/V).
LED Type: SMD (3-in-1).
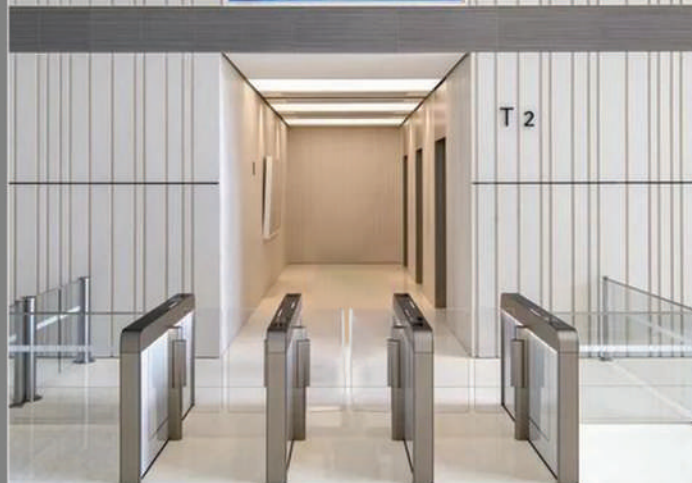Repetition Frequency: 60Hz.
Refresh Rate: ≥1920Hz ≥3048Hz.
Power Requirements: 110 or 220VAC± 10% /50~60Hz.
Working Temperature: -10°C to +40°C.
Humidity Range: RH 95% (non-condensing).
Average LED lifetime: 100000 hours.

AVAILABLE CABINETS (TYPES & SIZES):

The type of cabinets used for indoor led are aluminum di-casting, front or rear maintenance, and they come in several sizes suitable for all indoor installations.
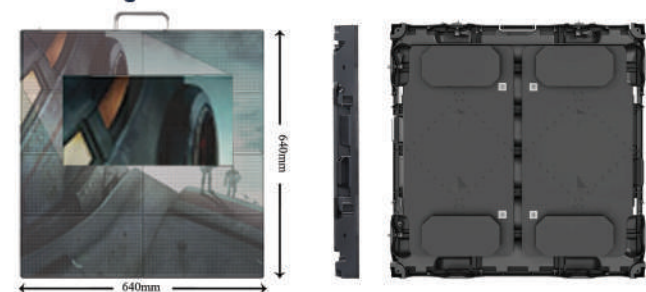
ALUMINUM DI-CASTING CABINET:

This type of cabinets is made of aluminum, have several options for maintenance (front and rear). Front services cabinet can placement close to walls, easy & quick serviceability, available in several sizes (64cmx64cm, 64cmx48cm).

Di-casting Front services cabinet:

Di-casting Back door services cabinet:

OUTDOOR LED MODULE SCREEN

Full color Outdoor LED Modules screen:

Outdoor LED Modules screen mainly installed on the outer walls of commercial centers, on the building roofs, by the main roads, highways, stadiums, plazas, parks, and school gates, to display advertisements, information, announcements, video programs, and advertising videos. Outdoor LED Modules, using advanced LED technologies, with high brightness, high contrast, high grayscale, high refresh rate, high-definition resolution, and the ability to customize various sizes and various length-to-width ratios, it has a high degree of visual impact and influence and is an important component of outdoor media.

FEATURES:

• High brightness, high grayscale, and high refresh rate.
• Provide customized solutions for any requirements.
• With top-quality, super-bright LEDs, high uniformity, low color shift, and high reliability, will work clearly in outdoor environment.
• Low voltage-driven, energy saving and low heat dissipation. So that it can withstand the high temperatures.
• Modular design for flexible display configuration.
• Intelligent brightness adjustment function: prevent light pollution
• With surge protection, leakage protection, and other safety measures.

AVAILABLE PIXELS AND SPECIFICATIONS:

There are some types available in terms of resolution by Pixels, according to a specific viewing distance for outdoor use, where the average resolution used for outdoor screens can be as follows: 2.5mm, 3mm, 4mm,5mm, 6mm, 8mm, 10mm.

AVAILABLE CABINETS (TYPES & SIZES):

The cabins used in the outdoor screens are very important to be appropriately designed Waterproof and dustproof, (IP65 and IP67) protection factor back door maintenance to ensure better quality in isolating the cabinets from weather conditions (heat, rain, dust...etc.) and that will keep led screen work for long time.

Backdoor iron cabinet

A. ALUMINUM DI-CASTING CABINET:

This type of cabinets is made of aluminum, available in several standard sizes (960x960 mm, 640x640 mm) with back door services.
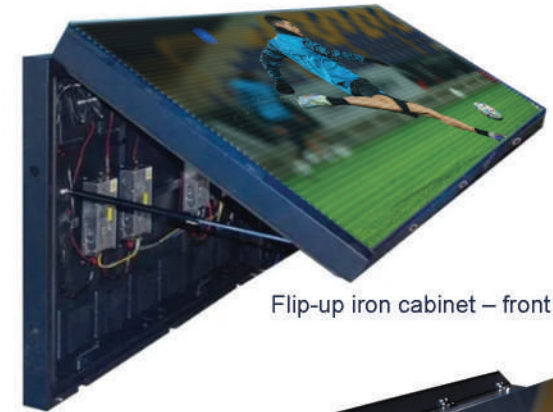

Flip-up iron cabinet – front services

GENERAL TECHNICAL SPECIFICATIONS

Pixel Pitch: SMD:(2.5mm, 3.91mm, 4mm, 6mm, 8mm, 10mm, etc).

Pixel Configuration: 1R1G1B.

LED Type: SMD.

Controller Type: Video Screens system (large-size, synchronous) or PS system (small-size, asynchronous).

Viewing Angle: SMD:140°/140° (H/V);

Brightness(cd//㎡): 4000 to 6500 nits.

Refresh Rate: ≥1920Hz.

Repetition Frequency: 60Hz.

Brightness Control: Auto/Manual/Timing.

Casing Material: Die-casting aluminum, customized iron.

Installation Method: Hanging, mounting, against the wall installation.

IP Level: Front: IP65; Rear: IP54.

Humidity Range: RH<95%(non-condensing).

Working Environment: -20°C to +50°C.

Power Requirements: 110 or 220VAC±10% / 50~60Hz.

Back door services outdoor cabinet
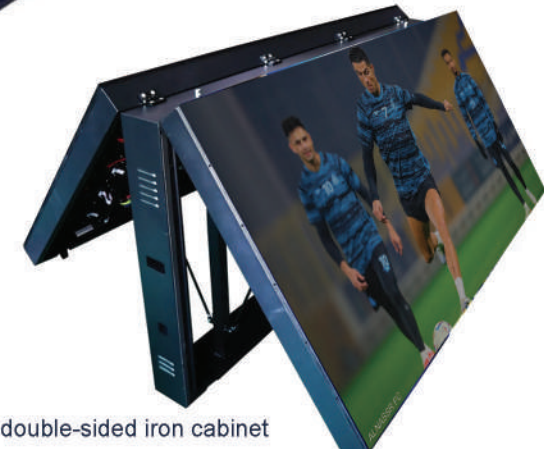
B. IRON CABINETS:

One of the advantages of this type of cabin is the possibility of manufacturing according to the size required for the cabin, as well as designing the cabin from the inside and installing several cooling and heat dissipation fans to keep the electronic parts inside the cabinet.
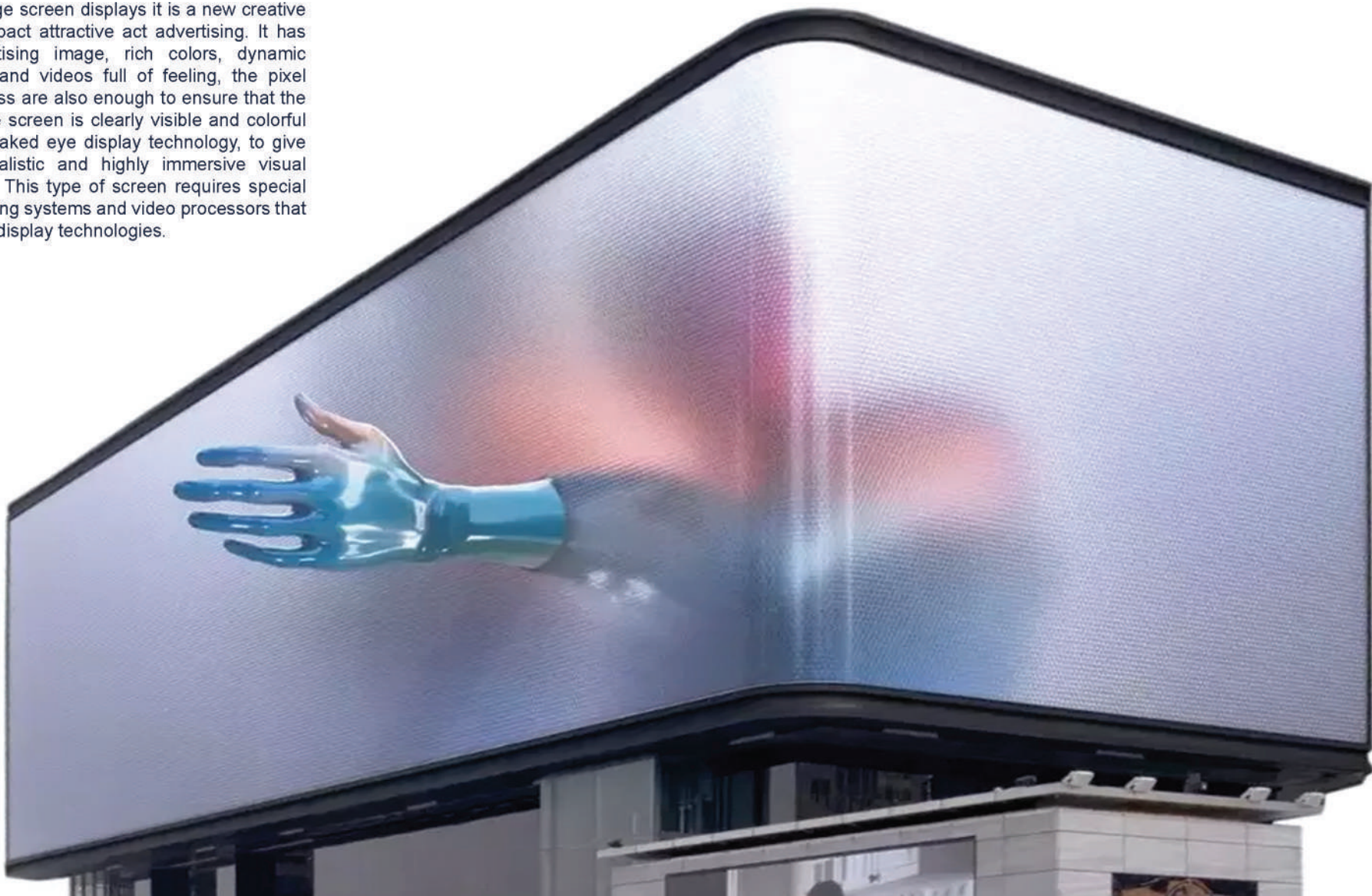

Flip-up double-sided iron cabinet

THE 3D LED Large Screen Display

Outdoor 3D LED large screen displays it is a new creative way to make an impact attractive act advertising. It has High quality advertising image, rich colors, dynamic advertising images and videos full of feeling, the pixel density and brightness are also enough to ensure that the video content on the screen is clearly visible and colorful combined with 3D naked eye display technology, to give people a highly realistic and highly immersive visual sensory experience. This type of screen requires special video design, operating systems and video processors that support high-quality display technologies.
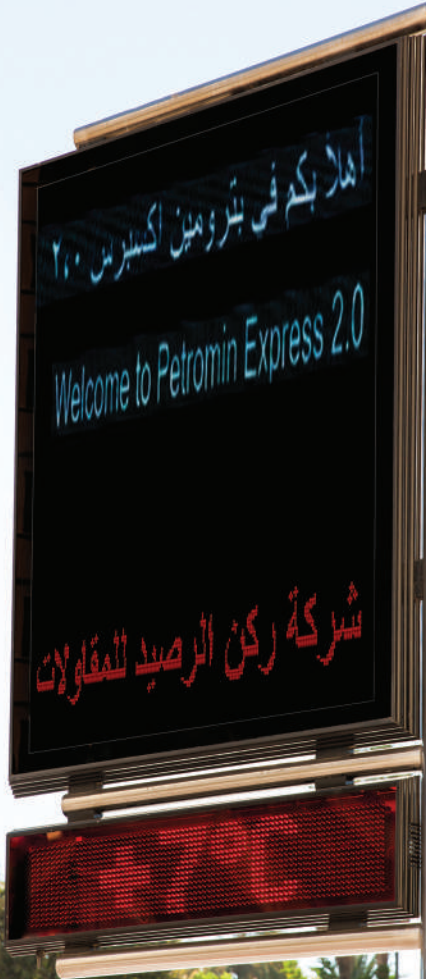
SINGLE COLOR LED SCREEN
(Text screen)

Single color led screen while this type is the one that depends on displaying the advertising material in the form of written words, knowing that the texts on it, whether in Arabic or English, may be programmed and processed with various programs that work to make it more attractive to the audience of viewers.

The display of texts on the screen can be controlled through a mobile application or through a computer control program, powerful embedded control system, all displayed contents are stored in on-board memory, As well as a group of text display can be connected in network via a central control point.

FEATURES:

• Display all languages supported by Micros oft Windows, digits, calendar, time, pre-defined animations, etc.
• programmable different speeds.
• Real time clock displays time and date.
• Built - in timer to power on/off during the day.
• Low power consumption and low cost.
• Mounting methods: wall or ceiling.
• Display real temperature (Optional).
• TCP/ IP network control (Optional).

RESOLUTION: The resolution commonly used in this type of screen is P10, as it is only required to display text in a clarity that helps only reading and does not require high resolution to display text content as in video displays that contain more details included.

CABINETS USED: for the outdoor installations, iron cabinets will usually be used because of their flexibility in manufacturing, as the led screens for text phrases are greatly variable in size according to demand. (Also, can use any other types of cabinets).

GENERAL TECHNICAL SPECIFICATIONS

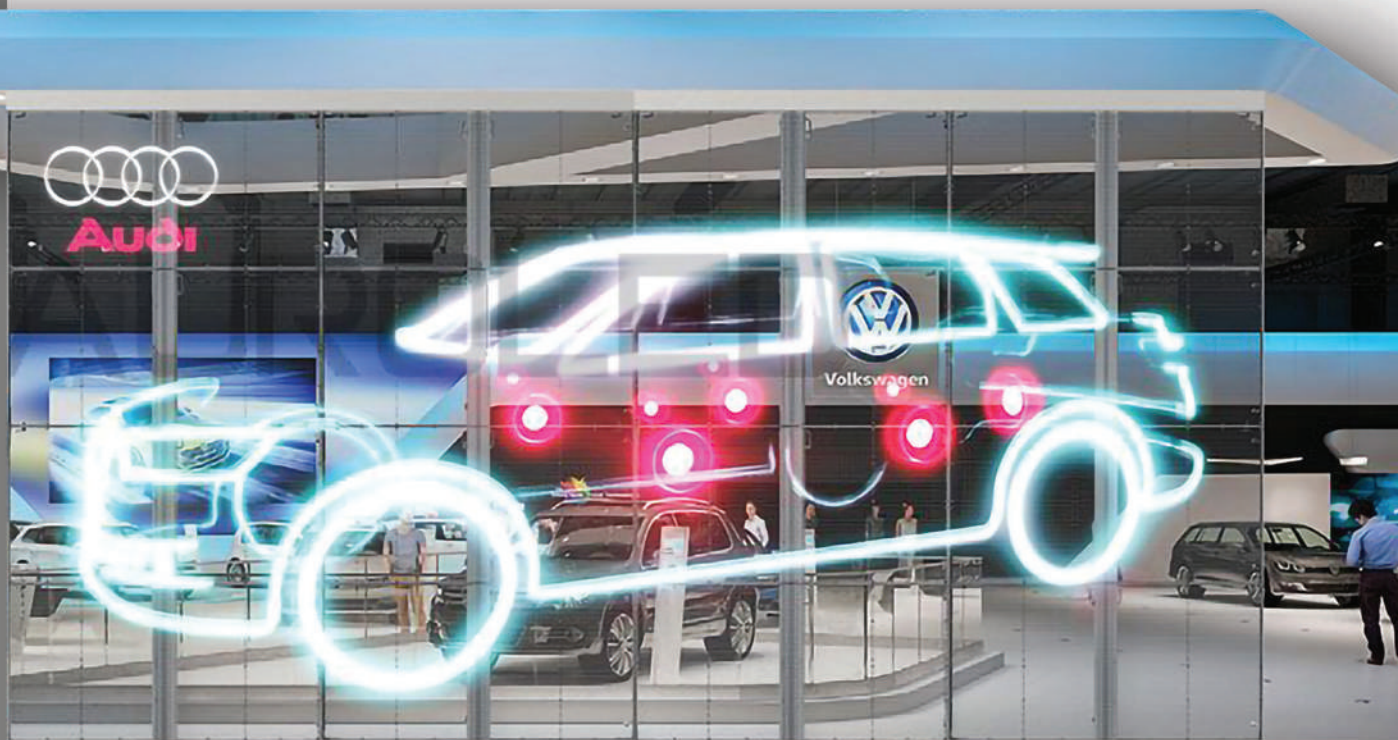|	
Pixel Pitch(mm): P10mm	
Pixel Configuration: Single color, white – Red – Green….	
Brightness: ≥8,500 cd/m².	
Viewing Angle: 110°/ 70° (H/V).	
LED Type: Dip.	
Refresh Rate: ≥1920Hz	
Power Requirements: 110 or 220VAC±10% / 50~60Hz.	
Working Temperature: -10°C to +70°C.	
Humidity Range: RH<95%(non-condensing).	
Average LED lifetime:100000 hours.	

TRANSPARENT LED SCREEN

TRANSPARENT LED SCREEN TYPES:

1. Outdoor / Indoor Curtain Mesh transparent led screen.
2. Outdoor Mesh transparent led screen.
3. Indoor (adhesive-Film) transparent led screen (Outdoor use / Indoor fix).

In recent years, with the continuous development of the market economy, there are many high-rise buildings in the city, and the transparent LED display screen has been widely used in the fields of landscape lighting for urban glass curtain walls and architectural art improvement.

the difference between a transparent LED screen and a traditional LED screen to keep it simple, while the ordinary LED screen has a sort of filter to block light from passing, a transparent LED is permeable since it does not have a filter that blocks light from passing through it. This makes it suitable for use on glass surfaces like on the wall's buildings and skyscrapers, a storefront window, etc.

INDOOR Transparent Led Screen

Indoor Transparent led screen with high transparency and brightness. Transparent video screens can be applied into indoor or inside building to see it from outside (as outdoor). The applications, such as shopping mall, restaurants, building façade and rental etc. Transparent led video wall is designed and perfect for transparent glass window advertising.

Cabinet sizes:

The indoor curtain mesh screen cabinet is integrated solution in a Lightweight transparent panel design for indoor use with standard size 1000x500mm. it's fitted with customized frames to facilitate easy handing and fast building while protecting the panels in an exquisite frame, creating efficient transport conditions.

Features:
- High Transparency: Transparent led screen is 70%-75% transparency with unique see-through technology.
- High Brightness: Transparent led screen has low, middle and high brightness level according to different applications. Brightness sensor is also available for self-adjustment at day and night.
- Aluminum & Light Weight Cabinet: LED transparent screen weight is only 10kg/m² and ultra-thin aluminum cabinet is 61mm thickness.
- Fast Installation and Maintenance: LED supplies standard and integrated cabinet for fast and easy installation. Led transparent screen can save installation time and cost.

GENERAL TECHNICAL SPECIFICATIONS:

Pixel Pitch:	H3.9-V7.8(mm), H7.8-V7.8(mm), H10.4-V10.4(mm).
Brightness /m²:	800 nit – 5000 nits.
LED Configuration:	SMD1921.
Max.Power Consumption:	160W/m² - 560W/m².
Transparency:	70% - 75%.
Viewing Distance:	> 3M – > 10m.
Refresh Rate:	≥1920Hz.
Module Size:	500X125mm.
Cabinet Size:	1000X500mm.
Max.Power Consumption:	400W/m² - 800W/m².
Ave.Power Consumption:	260W/m².
Cabinet Weight:	4kg/Panel.
Viewing Angle (H/V):	140°/140°.
Cabinet Materials:	Aluminum Profile AL 6063-T5.
Operation Power:	AC110~ 159V/AC160~ 240V, 50/60Hz.
Working Temperature:	- 30°C~60°C.
Working Humidity:	10%~90%.
Operating Life:	≥100,000hours.

OUTDOOR Transparent Led Screen

The led curtain display is a high transparent outdoor led screen. It is made of DIP led strips, it has a good display performance with high brightness and super transparency. It can be widely used in building curtain walls, outdoor lighting advertisements, bridge, and others. Although the brightness of the curtain led display is very high.

Features:
- **High Transparency:** 60% Transparency, presenting an ultra - high - definition visual experience without affecting indoor lighting.
- High Brightness: using DIP led, good viewing in day light.
- **Super Light:** 13.5 Kg/sqms, greatly reduce the load-bearing requirements on buildings and steel structures.
- **Average Power:** Consumption 180W/sqm, Energy Saving Reduce Operating Costs.
- IP 67 Protection: Level Waterproof, moisture-proof, cold-proof, dust-proof.

GENERAL TECHNICAL SPECIFICATIONS:

Materials: Aluminum Profile & PC Protect Mask in-line package.

LED Type: LED (1R1G1B), DIP LEDs.

Pixel Pitch: H16mm V16mm/H25.6mm, V16mm/H25mm, V25.6mm/H25mm, V42.6mm/H 51.2mm, V25mm.

Module Size: (1536×256mm) / (1024×256mm); for P16.16 (W256×H1536mm) / (W256×H1024mm); for P25.16 (1600×256mm) / (1200x256mm), for P25.25 (1600×256mm) /(1200x256mm), for P25.42 (256×1500 mm), for P51.25.

Transparency Rate: 30%, 60%, 75% ,80%.

Brightness: 6000-13000 nit.

Weight: 11.5 kg/m2 - 18kg/m2.

Input Voltage: AC 110 -240 V.

Consumption: Max 400 w/m2 Ave130 w/m2.

Ip Grade: IP67.

Gray Scale: RGB 16384 (3× 14bit).

Refresh: ≥1920Hz.

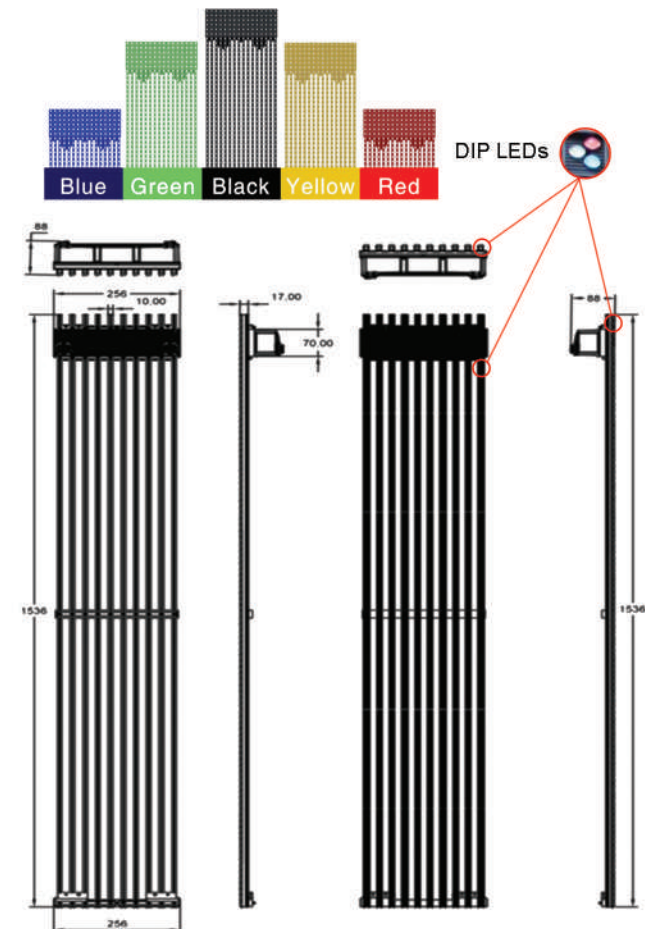Operating: Temperature: -30℃ to +60℃.

Environment: Humidity: 10%-90%.

Available cabinet Size:

There is standard size as cabinet sizes, the unit length can be customized, but the height cannot, several sizes are available to suit different installations 250mm to 1500mm in high.
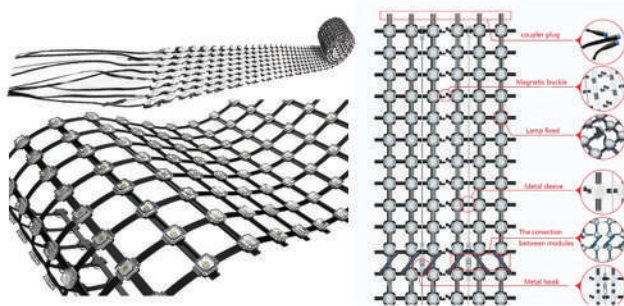
Avariety of colors can be customized:

Blue | Green | Black | Yellow | Red

DIP LEDs

OUTDOOR Mesh Led Screen

In a word, the flexibility feature makes it very easy to do the preparation job, installation, and maintenance so the LED Mesh screen have become a popular choice for outdoor building facade, ceiling LED, water curtain screen film, decoration lighting, etc.

led mesh display designed for large area screen, no effect on the building facade, people could see the advertising even in a far distance. There is different brightness from 1000 to 6000nits, and many pitches are available from 16 to 200mm, can meet different applications.

Features:

- **Rollable:** The Flexible Dot-style Media Mesh is rollable. Even 10 meters of length led mesh can be rolled into a small pillar.
- **No limit for the mesh screen size:** Any size is possible, Taking P100mm for example, the standard module is 0.8m width by 12.8m length. By assembling many modules, it can do any size.
- **No complex frame structure required:** The mesh screen is supplied in rolls, completely preassembled and ready-to-go for installation. And there is no complex frame required on the building facade to fix the huge mesh.
- **Long-distance transmission available:** For some special projects, especially the glass wall, the client wants the entire LED media wall to be very clean, using ultra-long-distance transmission, no additional power supply is required in the middle of the 50-meter-high LED mesh.
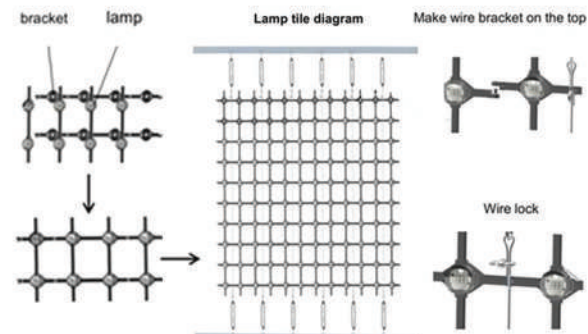
Cabinet Size (Roll):

The concept of the cabinet for transparent screens is different from the normal screens, as the size of the cabinet is the same as the size of the transparent led module , for the mesh screen module is like plastic strip roll sizes reach up to 30 meters in height , it can be customised size according to some specifications.

bracket lamp Lamp tile diagram Make wire bracket on the top

Wire lock

GENERAL TECHNICAL SPECIFICATIONS:

Pixel Pitch: 31.25mm, 40mm, 50mm, 55mm, 62.5mm, 75mm, 100mm.

Brightness: 600CD/m² - 10000CD/m², (Day & Night or Night only).

Module Size: (E330.25m*10.3m) (0.32m*13.2m) (0.4m*16.5m) (0.44m*18m) (0.5m*20.6m) (0.6m*24.8m) (0.4m*33m).

Max.Power Consumption: 160W/m² - 560W/m².

Ave.Power Consumption: 154W/m².

Transparency: 42%/m² - 80%/m².

Screen Weight: 2.3kg/m² - 9.4kg/m².

Sub-Controller Weight: 640W-5.8kg, 1280W-7.2kg, 2100W-9kg, 2400W-9kg.

Unit Power Consumption: 0.45W.

DOT Size: L20XW18XH14(mm) D18mm.

Available DOTs: 1dot, 2dots, 4dots, 6dots.

LED DOT Type: RGB 3IN1 SMD3535*1 Nationstar Golden Wire.

Viewing Angle: 120°(H)/120°(V).

Gray Scale: 12bit.

Display Scale: 68.7 billion.

Refresh Rate: ≥1920Hz.

Input Voltage: AC110~ 240V, 50/60Hz (DC7.5/12V).

Working Environment: Temperature -30℃~+60℃, Humidity 10~90% RH.

IP Rating: IP66.

Operating Life:≥100,000hours.

ADHESIVE-FILM (Sticker)

Adhesive led display screen is flexible and ultra-thin, which can be stuck on the building surface, and the glass walls easily. The effect as same as led transparent screen, but without any frame, which saves the structure.

It can play text, graphics and videos when it is turned on and can be used as the decoration of windows when it is turned off.

Features:
- **Rollable:** The high transparency of the adhesive led transparent screen will not affect the indoor and outdoor lighting and will not affect the original design.
- **Super Thin & Light:** Normal transparent screen is 36mm, Adhesive led transparent screen is 3.97mm and less.
- **Easy Installation:** The adhesive led transparent screens can be attached to a glass wall directly without complicated steel structures, which saves manpower costs.
- **Wider Viewing Angle:** Viewing without dead angles and color casts, the image is always perfect and seamless.

Available cabinet (module) size:
The concept of the cabinet for transparent screens is different from the Normal LED module screens, as the size of the cabinet is the size of the module and there are several sizes that suit the installation requirements.

GENERAL TECHNICAL SPECIFICATIONS

Pixel Pitch(mm): (P4,8), (P5,10), (P6.5), (P8), (P10), (P16), (P20), (P20-40).	
Module Size mm: (960*320) (1000*320) (1040*416), (960*320) (960*320) (960*384), (960*320) (960*4000) , (500*500*2 for fixable film).	
Brightness(cd/㎡): ≤2000 - ≤5000.	
Transparency: ≤50% - ≤92%.	
Ave. Consumption(w/㎡): ≤26.0 - ≤90.	
Max. Consumption(w/㎡): ≤800 - ≤300.	
Screen Weight (KG/㎡): 7.	
Led Lamp: SMD1921.	
Gray Scale: 16 bit.	
Refresh Rate: ≥3840Hz.	
Viewing Angle: 140°±10°.	
Input Voltage: AC110/220V±10% 50-60Hz.	
Working temperature(℃): -20℃-55℃.	
Working Humidity（RH）: 20%-90%.	
Span Life: 100000H.	
Waterproof Grade: IP30.	

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