

**GEM<sup>®</sup> DISPLAY**

# **GEM LED PHOTOELECTRIC GLOBAL TRANSPARENT DISPLAY SOLUTION MANUFACTURER**

SHENZHEN GEM LED PHOTOELECTRIC TECHNOLOGY CO. ,LTD

# Content

<b>Company profile</b> .....	05	<b>Publishing system of Transparent LED Display</b> .....	46
<b>Product Intellectual Property</b> .....	06	<b>Case Show</b> .....	49
<b>Product introduction</b> .....	10		
GB Glass LED Display Series .....	13		
GS Soft Flexible Film LED Display Series .....	23		
GSP Adhesive LED Display Series .....	29		
GM Transparent LED Display Series .....	35		
Holographic Transparent LED Display .....	41		



The background features a 3D rendering of several transparent LED display modules. These modules are rectangular with a fine grid of small, square light-emitting elements. They are shown in various orientations and positions, creating a sense of depth and perspective. The color palette is dominated by light blues and teals, with a dark blue horizontal band across the center where the text is located. Faint, diagonal watermarks of the text 'GEM DISPLAY' are visible across the entire image.

# LEADING BRAND OF FULL RANGE SERIES TRANSPARENT LED DISPLAY

# Company profile

Shenzhen GEM LED Photoelectric Technology Co., Ltd. established in 2013, is a leading manufacturer of a full range of intel-ligent transparent displays. We engage on the R&D and manufacturing of glass LED display, Soft Flexible Film LED Display, adhesive LED display, small pitch LED display. With the world's leading technology, we are devoted to providing integrated and systematic solutions for customers in China and abroad.

Shenzhen GEM LED Photoelectric Technology Co., Ltd. is a national high-tech enterprise, as well as a modern digital enterprise integrating software and hardware R & D, production, sales and services. We are committed to leading the transparent display industry in China and abroad, so as to provide customers with high-quality transparent display products and excellent solutions.

## Feature:

**GB Glass LED Display Series:** crystal clear; full glass display; slim thickness and light weight; elegant product.

**GS Soft Flexible Film LED Display Series:** crystal clear; soft shape; smooth surface ; easy adhesive with light weight, able to cut and bend at any shapes.

**GSP Adhesive LED Display Series:** high-definition; high transparency; soft shape; slim thickness and light weight; easy maintenance.

**GM Transparent LED Display Series:** high brightness; high refresh rate; wide viewing angle; light weight; high transparency; easy maintenance.

**Cooperation partners:** cultural and tourism enterprises; governments; banks; science&technology museums; exhibition center; retail shops; subways; airports; theaters; commercial complex; chain stores.



# GEM<sup>®</sup> DISPLAY



• High tech enterprise certificate



• AAA certificate



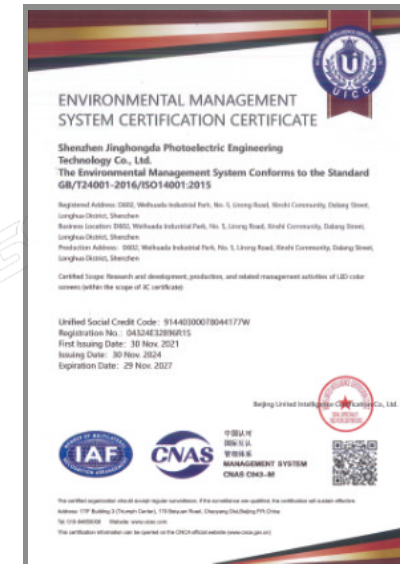
# Certificates



CCC certificate



Quality Certification of ISO



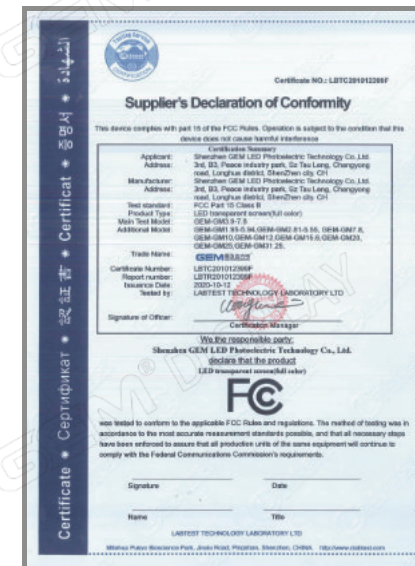
Environmental Certification of ISO



ROHS



CE



FCC



## Product Intellectual Property



## Glass LED display Invention patent



## Adhesive Film LED Display Invention patent



### Soft Flexible Film LED Display Invention patent



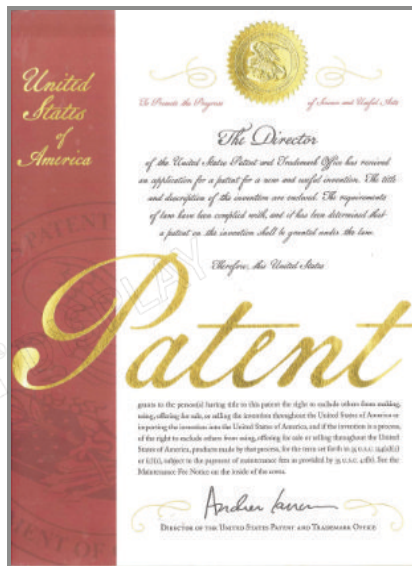
## Transparent LED display Invention patent



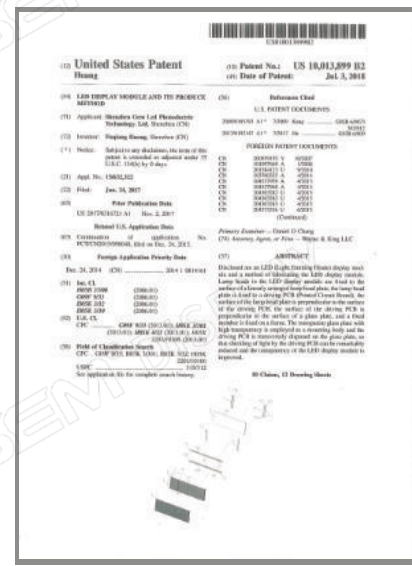
## Transparent LED display Invention patent



## EU Invention Patent



US Invention Patent



# Certificates



Related patents of Glass LED Display



Related patents of Glass LED Display



Related patents of Soft Flexible Film LED Display



Related patents of Soft Flexible Film LED Display



Related patents of Adhesive LED Display



Related patents of Adhesive LED Display



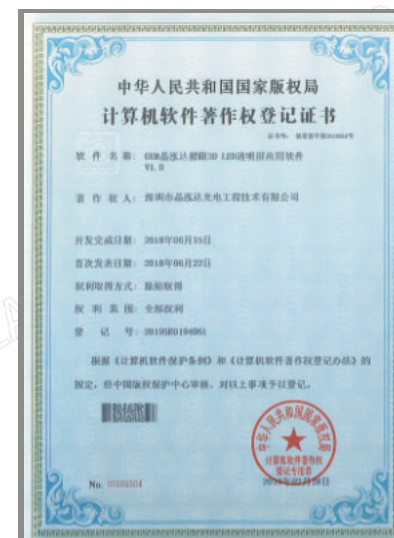
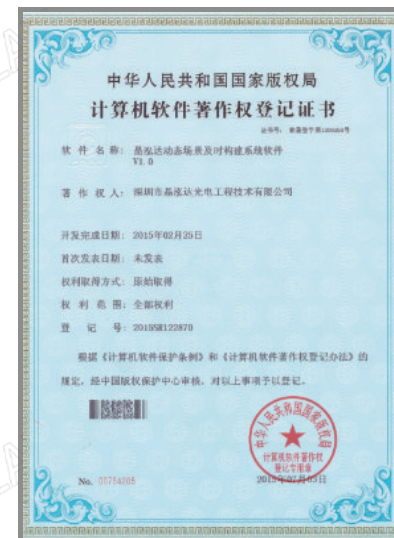
Related patents of Transparent LED Display



Related patents of Transparent LED Display



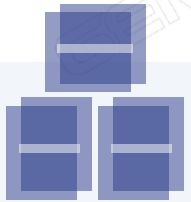
# Software copyright certificate



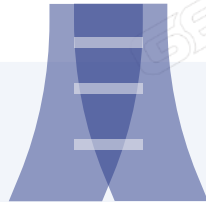


# Product introduction

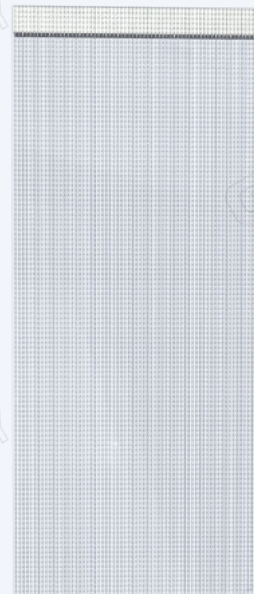
## Four Series:



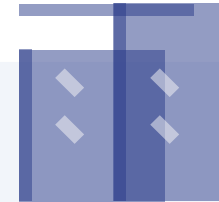
GB Glass LED Display Series



GS Soft Flexible Film LED Display Series

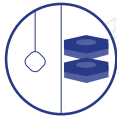
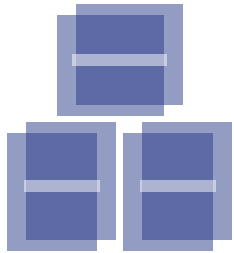


GSP Adhesive LED Display Series



GM Transparent LED Display Series

## • Main Advantages



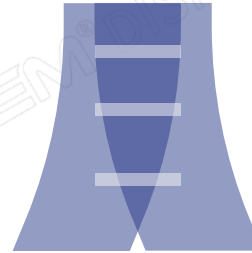
Hanging&Fixed  
Installation



Integrated  
Disassembly



High  
Transparency



Bending  
&Flexible



Ultra-thin



Creative



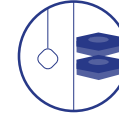
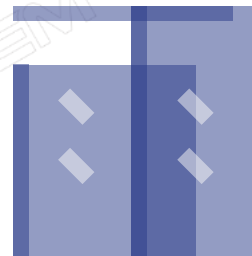
Bending  
&Flexible



Ultra-thin



Accurate  
Maintenance



Hanging&Fixed  
Installation



Accurate  
Maintenance



Integrated  
disassembly and  
assembly



Excellent Experience



All Orientation Innovation



Newly Presented Products

More Excellencies to be Continued.....









# GEM<sup>®</sup> DISPLAY

## | GB Glass LED Display Series

The Glass LED Display is integrated with using technologies such as transparent glass wires and Mini LED source. Through specific processes, the LED light source is fit with the glass, maintaining the original transparent characteristics of the glass while achieving dynamic image effects While playing videos. While playing videos of the two presents a transparent texture and a brilliant appearance, making the Glass LED Display more full of Sense of technology, fashion, and future.

There are currently Three types of products in the glass LED display series: Window glass LED display, Fence glass LED display, and Hanging guide glass LED display.

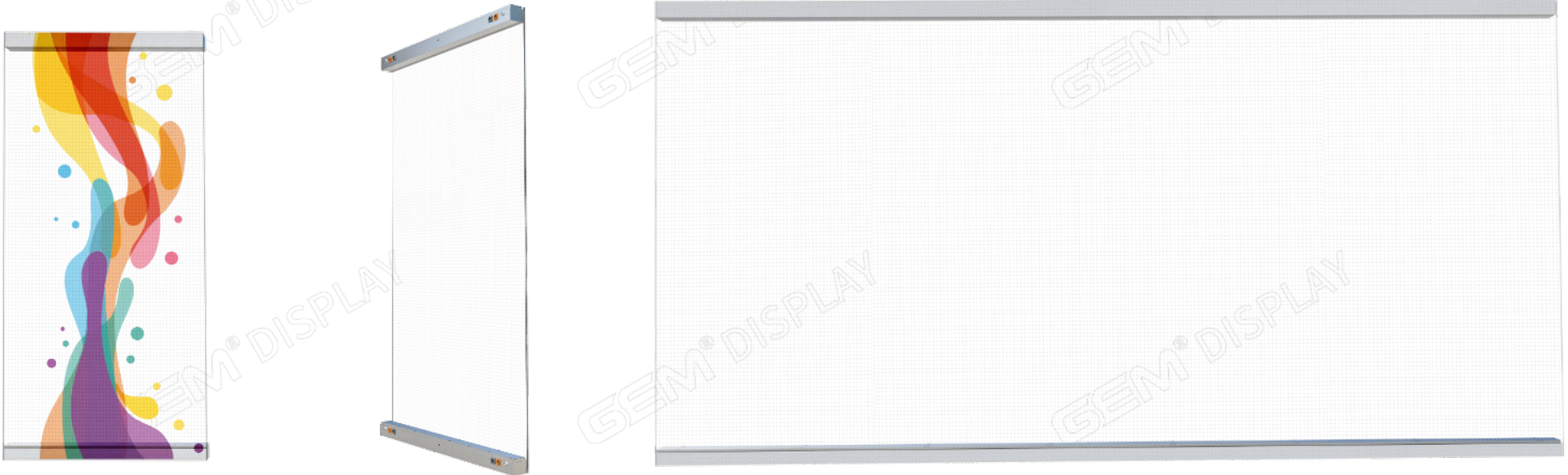
### Product Features:

- 1、 No steel structure, quick and convenient installation, plug in and use immediately.
- 2、 High contrast, ultra wide viewing angle, High brightness, attracting attention.
- 3、 The overall style is simple and fashionable, with an elegant feature showcasing the brand's charm.
- 4、 The transmittance can reach 55%~96%, which is transparent and does not affect the lighting and view.
- 5、 Modular design of glass display, easy to install, module can be quickly assembled to be a large screen.
- 6、 Adopting highly integrated design of Mini LED, it is more energy-efficient and power-saving than traditional screens.

# Window glass LED display

## | Performance characteristics

- Transparent glass wire, Integrated Mini LED.
- Single module with a maximum length of 2.4m, frameless design and poleless splicing are leading the industry.
- Modular design, easy and fast installation, modules can be quickly to be a large display.
- On both front and back side are tempered glass, firm and durable, with a transparency rate up to 95% and a brightness of  $\geq 2000\text{cd/m}^2$ , which does not affect lighting and visibility.



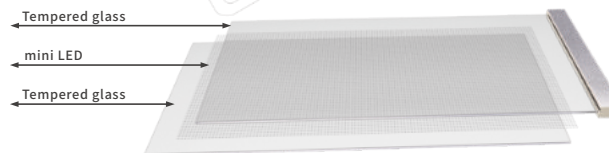
## Frameless design and poleless splicing

Single module with a maximum length of 2.4m, industry-leading, frameless design and poleless splicing.



## Tempered glass on front and back, sturdy and durable

On both front and back side are tempered glass, firm and durable, waterproof and anti-collision. Window glass LED display can use as glass partition.



## High transparency, with minimal impact on natural lighting after installation

The transparency can reach 95%, and the brightness  $\geq 2000\text{cd/m}^2$  does not affect lighting and view.



## Intelligent control, independent playback system

Intelligent control, independent playback system, using local area network to get high security.



## Modular design for easy installation

Modular design, simple and fast installation, perfectly integrated with various curtain windows and partition structures, can get good uniform and elegant effect.







(Customized Arc) Glass LED display



## Application scenarios

### Application scene of display windows

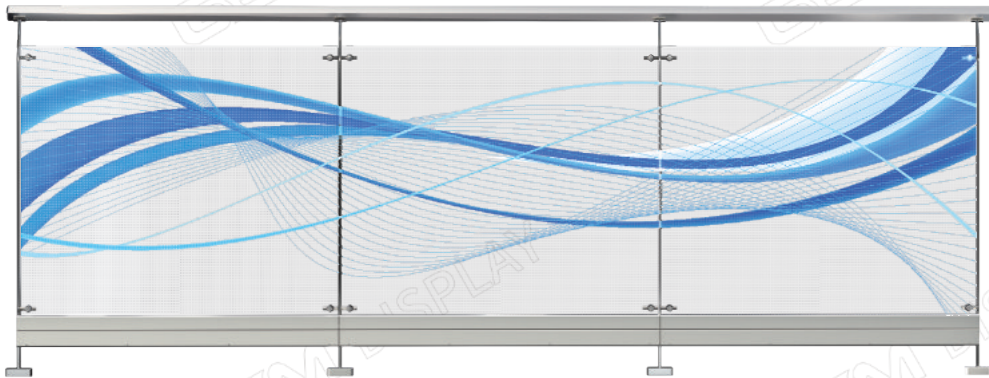
Window glass LED display can perfectly integrated into various display windows and partition structures. Whether it is traditional glass display windows or modern open partitions, Window glass LED display can be combined each other, perfectly. The screen almost perfectly integrates into the wall, becoming a part of the wall, can get good uniform and elegant effect.



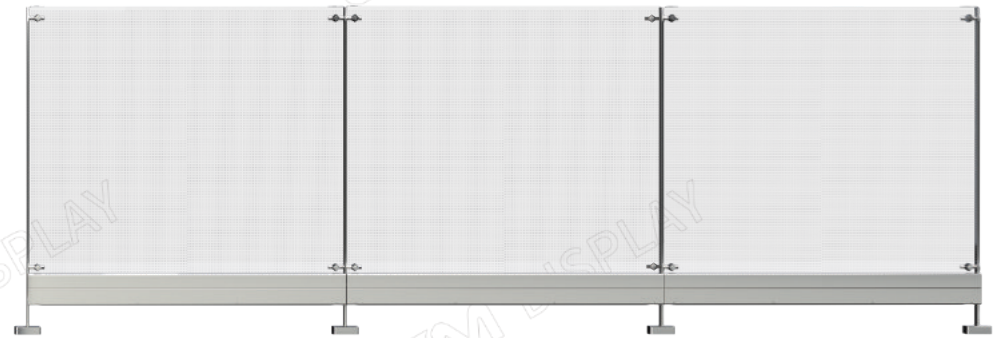
# Fence glass LED display

## | Performance characteristics

- Crystal clear, Display in one full glass.
- Safe low-voltage, DC5V~DC24V.
- Model A and Model B are optional, with the option to install guardrails for higher safety performance.
- On both front and back side are tempered glass, firm and durable, waterproof and anti-collision.
- Perfectly integrated into the fence structure after installation, with no exposed wires on the front, in the feature of elegant and simple.
- The transparency can reach 70%~95%, without affecting lighting and visibility, and can replace general fences.



A Model (optional guardrail)



B Model

# Main Advantages

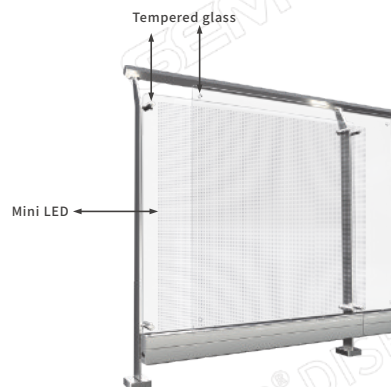
## High transparency, does not affect lighting and visibility.

The transparency can reach 70%~95%, and after installation, it basically does not affect lighting and visibility.



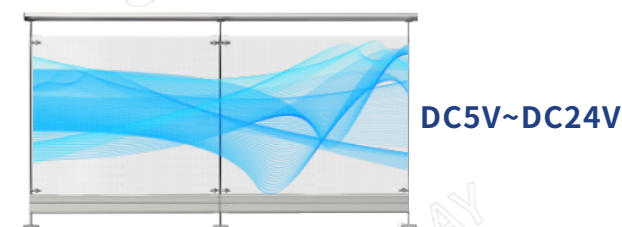
## Tempered glass on front and back, sturdy and durable

On both front and back side are tempered glass, firm and durable, waterproof and anti-collision. Window glass LED display can use as glass partition.



## Safe low-voltage, DC5V~DC24V

Adopting highly integrated design of Mini LED, it is more energy-saving if compared to traditional LED display.



## Intelligent control, independent playback system

Intelligent control, independent playback system, using local area network to get high security.



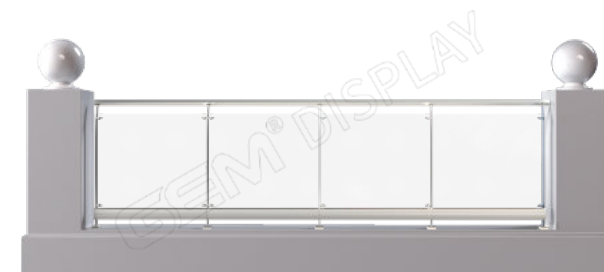
## Integrated design, easy installation

Integrated structural design, no need for complex installation steps, convenient and fast.



## Hidden wiring design, beautiful and elegant

Perfectly integrated into the fence structure after installation, with no exposed wires on the front, in the feature of elegant and simple.

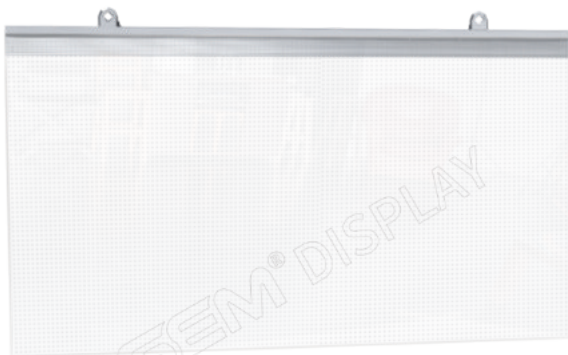




# Hanging guide glass LED display

## | Performance characteristics

- High transparency and high brightness, all glass display.
- Modular design, plug and play.
- Easy to install, directly lifted to any hook structure.
- The transparency can reach 55%~96%, without affecting lighting and visibility.



# Product Parameters

Product Model	GB3.9		GB5	GB7.5	GB10		GB10.4		GB15.6	GB31.2	GB40
Product Type	49"	Fence	Window	Window	Fence	Window	Fence	Window	Window	Window	Window
Pixel Pitch (H/V mm)	3.9	3.9	5	7.5	10	10	10.4	10.4	15.6	31.2	40
LED Configuration	Mini LED 1313					Mini LED 2121					
Pixel Density (dot/m <sup>2</sup> )	65536	65536	40000	17689	10000	10000	9216	9216	4096	1024	625
Transparency	55%	55%	55%	75%	80%	80%	80%	80%	88%	92%	96%
Frame Rate	50-60Hz			60Hz							
Cabinet Size W×H(mm)	1080×610	1080x810	1000x2000	1000x2400	1000×1000	1000x2000	1000x1000	1000x2400	1000×2000	1000×2000	1000×2000
Cabinet Resolution W×H(dot)	276 ×156	276x207	200x400	132x316	100×100	100×200	96x96	96x230	64x128	32x64	25x50
Cabinet Weight (kg/m <sup>2</sup> )	30-50										
IP Rating ( front/back)	INDOOR–IP30 or OUTDOOR-IP65										
Brightness(CD/m <sup>2</sup> )	1000-4000								1000-2000	600-1000	
Viewing Angle (H/V)	145°/145°										
Viewing Distance ( m )	4	4	5	8	10	10	10	10	15	30	40
Max.Power Consumption (w/m <sup>2</sup> )	800								400		
Ave.Power Consumption(w/m <sup>2</sup> )	230		180						160	100	50
Environment	INDOOR ( Optional outdoor standard )										
Control Mode	Special system for LED dispaly ( 4G+5G、APP、WIFI、LAN control )										
Support Input	HDMI、DVI、DP、SDI										
Operation Power	AC100~240V,50/60Hz										
Operating Temperature	0℃~50℃(work),'-20℃~60℃(store)										
Operating Humidity	10%-90%RH										
Operating Life	>50,000 hour										

Remarks: The parameters of above product are for reference only. The final parameter may vary depending on the specific situation of the projects (the product shall be subject to the data sheet of final contract)







## GS Soft Film LED Display Series

Soft Flexible Film LED Display is a unique and creative transparent flexible display developed by GEM. Soft as the wind, developed from a variety of high-tech and expandable materials.

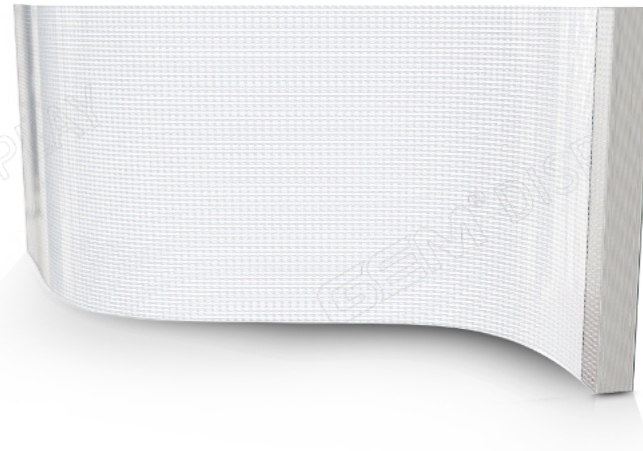
The installation of Soft Flexible Film LED Display does not require additional loading-bearing structures. Simply pasting them onto glass can instantly transform the glass into a screen without affecting the lighting function of the original glass. Flexible LED display have ultra-high flexibility and can be pasted onto various curved glass surfaces. They are suitable for various application scenarios, such as glass windows, glass curtain walls, glass partitions, glass guardrails, space decoration, creative signs, and commercial exhibition halls.



# Soft Flexible Film LED Display

## | Performance characteristics

- Lightweight, high brightness, and easy maintenance.
- Brightness above 1000-2500cd/m<sup>2</sup>.
- Soft film material, can be cut freely, bent or rolled.
- Flame retardant and UV resistant material, safer and less prone to aging.
- The transparency can reach 55%~90%, with almost no impact on lighting and line of sight.
- It is the most flexible transparent display among GEM product line.
- Adopting highly integration and integrated design of Mini LED , more energy-saving if compared to traditional screens.



# Main Advantages

## High transparency, without affecting lighting and visibility

The maximum transparency can reach 55%~90%, and after installation, it basically does not affect lighting and visibility.



## Ultra thin and lightweight

Lightweight by approximately 5kg/m<sup>2</sup>, The thickness is only 3mm, and there is no need to add a load-bearing structure when installed on the glass.



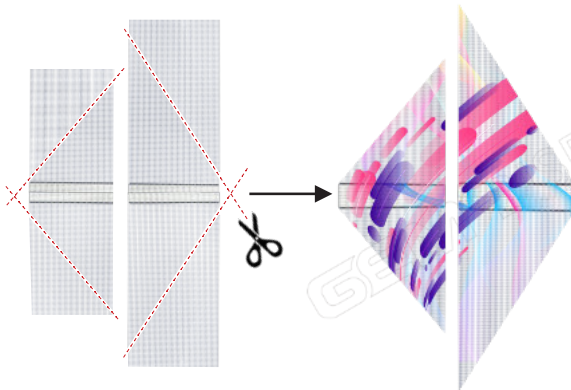
## Crystal and soft, bendable and roll-able.

Combining LED lamp with soft film to get freely bending and shaping.



## Freely cutting and flexibly shaping.

Tailor freely to adapt to various shapes, with great flexibility.



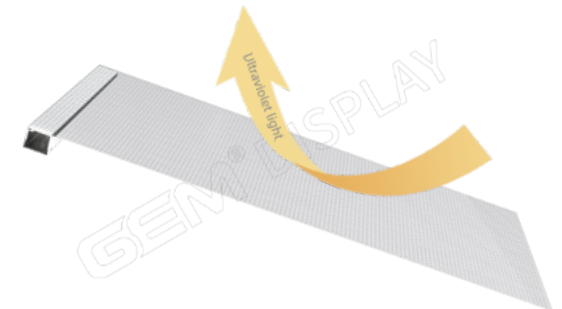
## Tailored and lightweight

Easy to install, simply stick it onto the glass without changing the original structure of the glass.



## Flame retardant and UV resistant materials, safer!

It can effectively flame retardant, prevent accidents, and effectively Resist from ultraviolet rays.



## Application scenarios

### Application Scenarios of Indoor Display

Soft Flexible Film LED Display, with their excellent flexibility characteristics, can easily fit onto various indoor glass curtain walls, including those with complex curved designs. This unique performance endows Soft Flexible Film LED Display with great adaptability and application flexibility.





# Product Parameters

Product Model	GS3.9	GS5		GS5.9	GS6		GS7.8	GS8	GS10		GS10.4	GS15.6	GS20.8
Pixel Pitch (H/V mm)	3.9	5		5.9	6		7.8	8	10	10	10.4	15.6	20.8
LED Configuration	Mini LED 1313							Mini LED 2121					
Pixel Density (dot/m²)	65536	40000		28224	27556	27556	16384	15625	10000	10000	9216	4096	2304
Transparency	55%	60%		65%	65%	65%	75%	75%	80%	80%	82%	88%	90%
Frame Rate	30-60Hz	60Hz											
Module Size W×H(mm)	1000×250	1000×240		1000×250	1000×240	1000×342.5	1000×250	1000×240	1000×240	1000×342.5	1000×250	1000×250	1000×250
Module Resolution W×H(dot)	256×64	200×48		168×42	166×40	166×57	128×32	125×30	100×24	100×34	96×24	64×16	48×12
Cabinet Size W×H(mm)	1000×500	1000×480		1000×500	1000×480	1000×685	1000×500	1000×480	1000×480	1000×685	1000×500	1000×500	1000×500
Cabinet Resolution W×H(dot)	256×128	200×96		168×84	166×80	166×114	128×64	125×60	100×48	100×68	96×48	64×32	48×24
Cabinet Weight (kg/m²)	5-7												
IP Rating ( front/back)	INDOOR-IP30												
Brightness(CD/m²)	1000-2500												
Viewing Angle (H/V)	145°/145°												
Viewing Distance ( m)	5	5		6	6	6	8	8	10	10	10	15	20
Max.Power Consumption (w/m²)	800												
Ave.Power Consumption(w/m²)	260												
Environment	INDOOR												
Control Mode	Special system for LED dispaly (4G+5G、APP、WIFI、LAN control)												
Support Input	HDMI、DVI、DP、SDI												
Operation Power	AC100~240V,50/60Hz												
Operating Temperature	0°C~40°C(work);'-20°C~60°C(store)												
Operating Humidity	10%-90%RH												
Operating Life	>50,000 hour												

Remarks:The parameters of above product are for reference only.The final parameter may vary depending on the specific situation of the projects (the product shall be subject to the data sheet of final contract)





## GSP Adhesive LED Display Series

Adhesive Film LED Display is a film mounted on high brightness LED display launched by GEM. It creatively breaks through tradition by using bare chip technology on high transparency printed circuit boards, combining a highly transparent optical lens substrate with a highly transparent display with a thickness of at least 5mm.

Different from traditional display screens, it has good ductility and plasticity, and can be bent to meet diverse needs. At the same time, it has the characteristics of high brightness and high transparency, presenting a clear and natural perfect visual effect. Easy to install and easy to use with just one adhesive, it can be used on glass display windows in shopping mall, glass curtain walls, and other scenarios, bringing infinite possibilities.

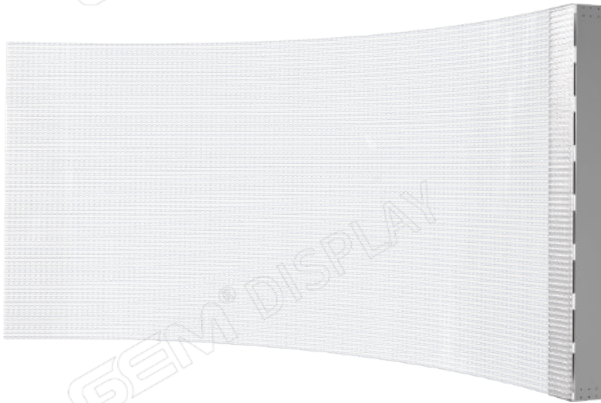
The overall use of integrated modules for driving IC chips and display chips makes maintenance convenient and fast. If a single component is damaged, it can be flexibly replaced to avoid the hassle of replacing large parts and ensure operational efficiency.



# Adhesive Film LED Display

## | Performance characteristics

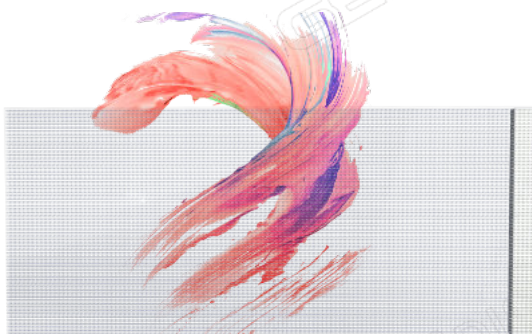
- Lightweight, high brightness, and easy to maintain.
- Flexible shaping ultra-thin and high transparency single lamp maintenance.
- transparency can reach 30%~80%, with almost no impact on lighting and line of sight.
- Adopting non-linear point by point correction technology to get clearer and more layered text.
- Brightness above 1000-5000cd/m<sup>2</sup>, Under direct sunlight outdoor, the images are still clear.
- Working 24/7, realistic colors, high refresh rate, dust-proof, anti-static, and good heat dissipation effect.



# Main Advantages

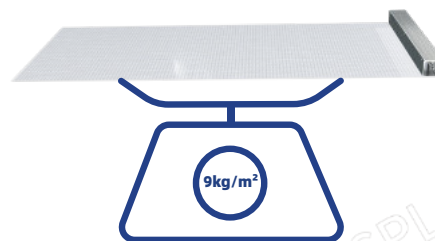
## High transparency, without affecting lighting and visibility

The maximum transparency can reach 80%, and after installation, it basically does not affect lighting and visibility.



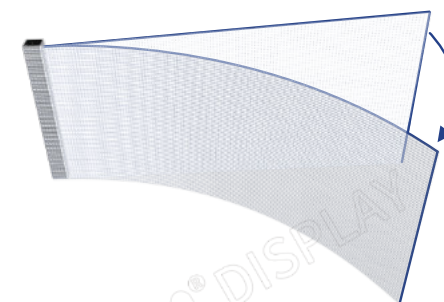
## Ultra thin and lightweight

Lightweight by approximately 9kg/m<sup>2</sup>. The thickness is only 5mm, and there is no need to add a load-bearing structure when installed on the glass.



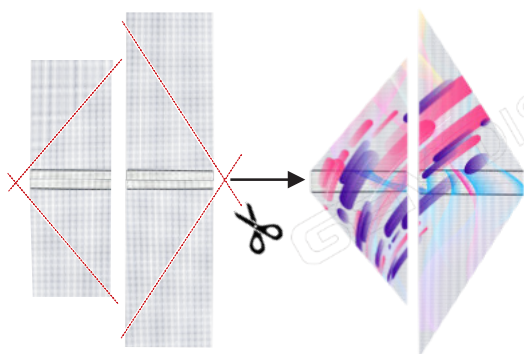
## Good ductility and plasticity

It can be bendable and flexible to meet all kinds of demands, and can be adhesive to curved glass curtain walls.



## Freely cutting and flexibly shaping.

Tailor freely to adapt to various shapes, with great flexibility.



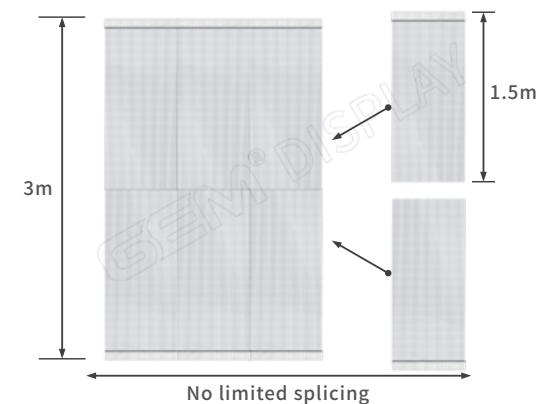
## Tailored and lightweight

Easy to install, simply stick it onto the glass without changing the original structure of the glass.



## Rod-less splicing to get stunning display effect.

The maximum length of a single module is 1.5m, with no pole in the middle, and can be spliced up to a height of 3m.





## Application scenarios

### || The scenes of Adhesive Film LED Display

The application of Adhesive Film LED Display in stage design is becoming increasingly widespread. By utilizing the flexibility and splicing of Adhesive Film LED Display, various shapes and sizes of stage backgrounds, props, and decorations can be created. Through programming control, a variety of dynamic effects and different shapes can be presented, bringing stronger visual impact to the audience.





## Product Parameters

Product Model	GSP3.7	GSP5.9	GSP7.8	GSP10	GSP15.6
Pixel Pitch (H/V mm)	3.7	5.9	7.8	10	15.6
LED Configuration	Mini LED 1313		Mini LED 2121		
Pixel Density (dot/m <sup>2</sup> )	70756	28224	16384	10000	4096
Transparency	30%	55%	70%	75%	80%
Frame Rate	60Hz				
Module Size W×H(mm)	1000x120	1000x41.7	1000×62.5	1000×50	1000×62.5
Module Resolution W×H(dot)	266x32	168×7	128×8	100×5	64×4
Cabinet Size W×H(mm)	1000x480	1000×500	1000×500	1000×500	1000×500
Cabinet Resolution W×H(dot)	266x128	168x84	128×64	100×50	64×32
Cabinet Weight (kg/m <sup>2</sup> )	9-11				
IP Rating ( front/back)	INDOOR—IP30				
Brightness(CD/m <sup>2</sup> )	1000-5000				
Viewing Angle (H/V)	145°/145°				
Viewing Distance ( m)	4m	6m	8m	10m	15m
Max.Power Consumption (w/m <sup>2</sup> )	800				
Ave.Power Consumption(w/m <sup>2</sup> )	260				
Environment	INDOOR				
Control Mode	Special system for LED dispaly (4G+5G、APP、WIFI、LAN control)				
Support Input	HDMI、DVI、DP、SDI				
Operation Power	AC100~240V,50/60Hz				
Operating Temperature	0°C~50°C(work),'-20°C~60°C(store)				
Operating Humidity	10%-90%RH				
Operating Life	>50,000 hour				

Remarks:The parameters of above product are for reference only.The final parameter may vary depending on the specific situation of the projects (the product shall be subject to the data sheet of final contract)



GEM DISPLAY

GEM DISPLAY

GEM DISPLAY

GEM DISPLAY

GEM



## GM Transparent LED Display Series

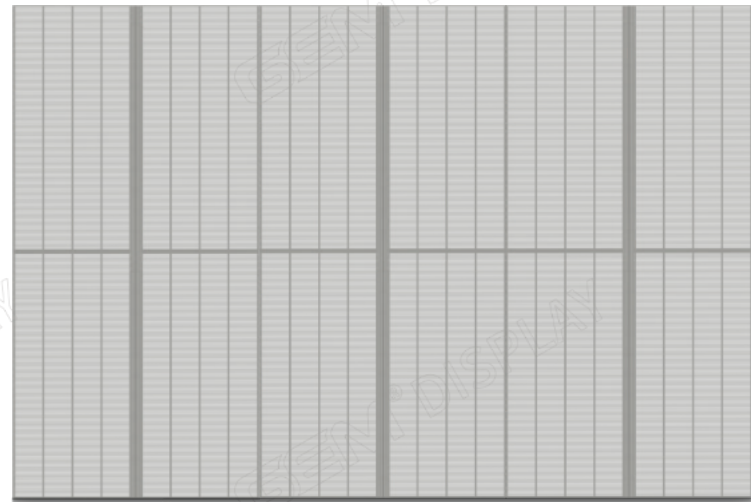
The GEM-GM series transparent LED display is a transparent and high brightness display launched by GEM, mainly used on curtain walls of existing building foundations. The overall design adopts modular design, with high flatness and a weight about 8kg per square meter. The structure is light and thin, and maintenance is convenient.

GM3.2 and 3.7 small pitch transparent displays can ensure a transparency of 40% ~ 45% while providing stable high-definition image effects. The brightness can reach over 5500cd/m<sup>2</sup>, with high brightness and wide viewing angle. The ideal lifespan is over 100000 hours, making it durable and efficient.

# Transparent LED display

## | Performance characteristics

- High brightness and transparent standard LED modules.
- Lightweight, high brightness, and easy to maintain.
- Hanging and fixed installation. single lamp maintenance, integrated disassembly and assembly.
- High transparency, wide visual range, reliable quality, convenient installation, and high refresh rate.
- The unique modular design advantages have gradually become the first choice for people to promote and advertise.
- Quick and simple installation design allows for quick disassembly and assembly of products, making it easy to customize for customers.

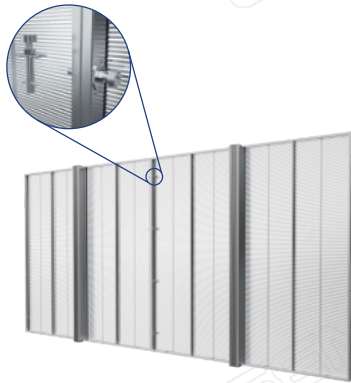




# Main Advantages

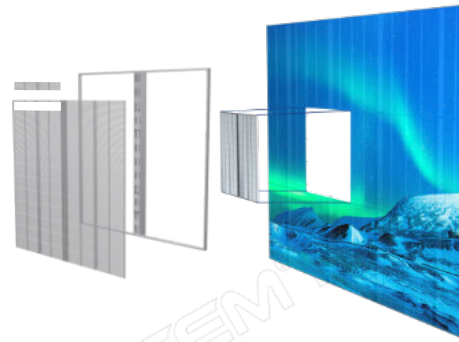
## Quick lock design for easy installation

Quick lock design, no need for complex installation process, can splice large screens in just a few seconds.



## Convenient maintenance

Modular design, lightweight structure, and convenient maintenance.



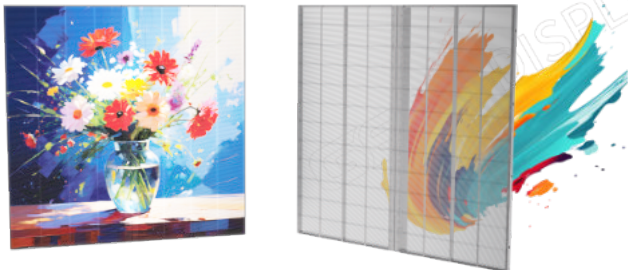
## Seamless splicing

Truly seamless splicing, without black lines, can quickly assemble any large screen.



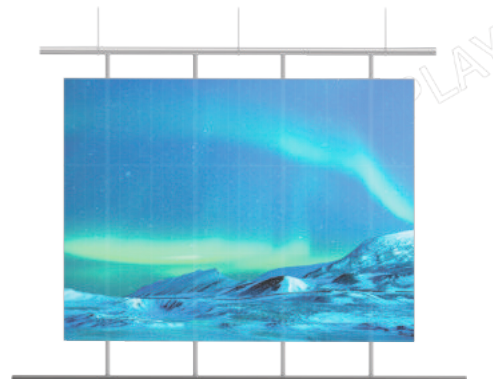
## High transparency, with minimal impact on natural lighting after installation

Transparent LED display with the smallest pitch P2.6mm, high-definition and delicate, while still maintaining transparency of  $\geq 40\%$ .



## Hanging installation and fixed installation are optional.

Multiple installation methods, convenient and fast.



## No need to install complex steel structures When indoor application.

It can be directly attached to the original keel structure of glass curtain wall for installation, saving space and installation costs.



# All-in-one machine Transparent LED Display

## | Performance characteristics

- Hanging type, optional for standing type.
- Lightweight, high brightness, easy to maintain. Colors can be freely customized and colorful.





# Product Parameters

Product Model	GM3.2	GM3.4	GM3.7	GM3.9-7.8	GM4-8	GM7.8	GM10.4	GM15.6	GM20.8	GM31.2
Pixel Pitch (H/V mm)	3.2	3.4	3.7	3.9-7.8	4-8	7.8	10.4	15.6	20.8	31.2
LED Configuration	SMD1415	SMD1415	SMD1415	SMD1921	SMD1921	SMD1921	SMD2727	SMD3535	SMD3535	SMD3535
Pixel Density (dot/m²)	92416	82944	69696	32768	30000	16384	9216	4096	2304	1024
Scan method	16 scan	16 scan	16 scan	7 scan	7 scan	4 scan	2-3 scan	Static	Static	Static
Transparency	35%	40%	50%	60%	62%	60%	70%	75%	80%	88%
Refresh Rate	1920-3840HZ									
Module Size W×H(mm)	500×125	500×83.3	500×83.3	500×125	500×125	500×125	500×125	500×125	500×125	500×125
Module Resolution W×H(dot)	152×38	144×24	132×22	128×16	125×15	64×16	48×12	32×8	24×6	16×4
Cabinet Size W×H(mm)	1000×1000	1000×1000	1000×1000	1000×1000	1000×1000	1000×1000	1000×1000	1000×1000	1000×1000	1000×1000
Cabinet Resolution W×H(dot)	304×304	288×288	264×264	256×128	250×120	128×128	96×96	64×64	48×48	32×32
Cabinet Weight (kg/m²)	8-12			8-25	8-10	8-10	8-25	8-25	8-10	8-25
IP Rating ( front/back)	INDOOR-IP30			INDOOR-IP30 or OUTDOOR-IP65	INDOOR-IP30		INDOOR-IP30 or OUTDOOR-IP65		INDOOR-IP30	INDOOR-IP30 or OUTDOOR-IP65
Brightness (CD/m²)	1000-5000							1000-2000		
Viewing Angle (H/V)	140°/140°									
Viewing Distance (m)	3	3	3	4	4	7	10	15	20	30
Gray level	12-16bit									
Max.Power Consumption(w/m²)	800								400	
Ave.Power Consumption(w/m²)	260								160	
Environment	INDOOR	INDOOR	INDOOR	INDOOR (Optional outdoor standard)	INDOOR	INDOOR	INDOOR (Optional outdoor standard)		INDOOR	INDOOR (Optional outdoor standard)
Control Mode	Special system for LED dispaly (4G+5G、APP、WIFI、LANcontrol)									
Support Input	HDMI、DVI、DP、SDI									
Operation Power	AC100~240V,50/60Hz									
Operating Temperature	0°C~50°C(work),'-20°C~60°C(store)									
Operating Humidity	10%-90%RH									
Operating Life	≥100,000 hours									

Remarks:The parameters of above product are for reference only.The final parameter may vary depending on the specific situation of the projects (the product shall be subject to the data sheet of final contract)







## Holographic Transparent LED Display

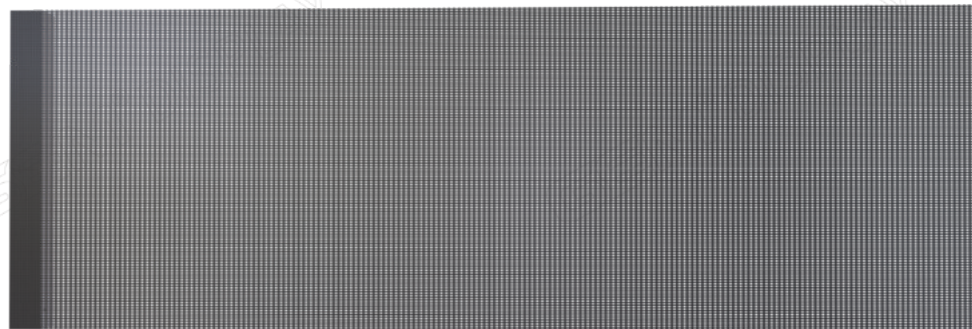
Holographic LED Transparent Screen independently developed by GEM is a new-generation transparent display product featuring: High Transparency Display, Quick and Easy Installation, Delicate Visual Effects. When adhered to glass surfaces, it becomes almost invisible without affecting natural lighting.

This product is widely used in glass curtain walls, shop window displays, building facades, exhibition halls, art installations, and cultural tourism stages, seamlessly blending architectural aesthetics with digital technology to create a new visual experience.

# Holographic Transparent LED Display

## | 性能特点

- With a transparency rate of up to 70%, it delivers an unobstructed visual experience, ensuring the spatial transparency and natural lighting effect.
- Adopting the characteristics of high transparency, the displayed images seem to float in the air, offering a much better three-dimensional effect.
- It can be easily bent to adapt to various arcs; It can be freely cut to fit various complex scenes with irregular shapes.
- It significantly enhances the smoothness of color transitions, ensuring that the image quality remains clear and delicate while retaining more layers, thus preventing the loss of details and the appearance of stair-step artifacts.
- Using seamless splicing technology, the screen can be spliced to any size, presenting a complete and unified large display with no seams or black borders.
- The vertical splicing height can reach up to 4 meters with no center rod, and the horizontal expansion is virtually unlimited, making it easy to achieve ultra-large screen displays.

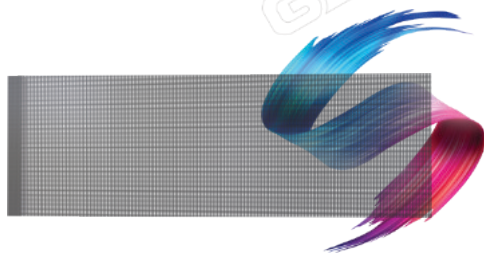




# Main Advantages

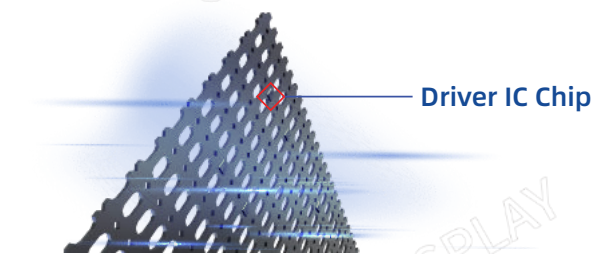
## Featuring a high open area ratio and high transparency.

The maximum transparency can reach 70% ,after installed on the glass, it basically does not affect lighting and visibility.



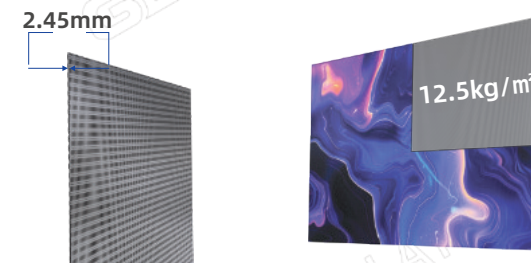
## LED lamp-driver separation

The design separates the LEDs from the driver ICs, reducing heat concentration and enhancing heat dissipation for better overall performance.



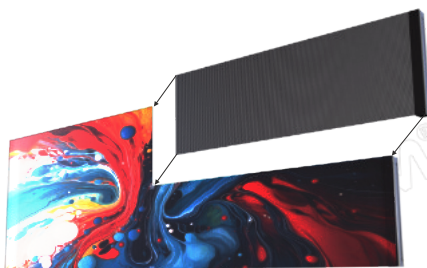
## The screen body is thin and lightweight, can adapt to various scenarios

Lightweight by approximately 12.5kg/m<sup>2</sup>, The thickness is only 2.45mm, and there is no need to add a load-bearing structure when installed on the glass.



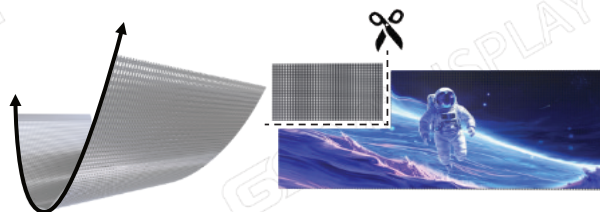
## Easy and fast installation

There is no need complicated installation steps, it only takes a few seconds to install and splice it onto the glass.



## Bendable and cuttable

It can be easily bent to adapt to various arcs; It can be freely cut to fit various complex scenes with irregular shapes.



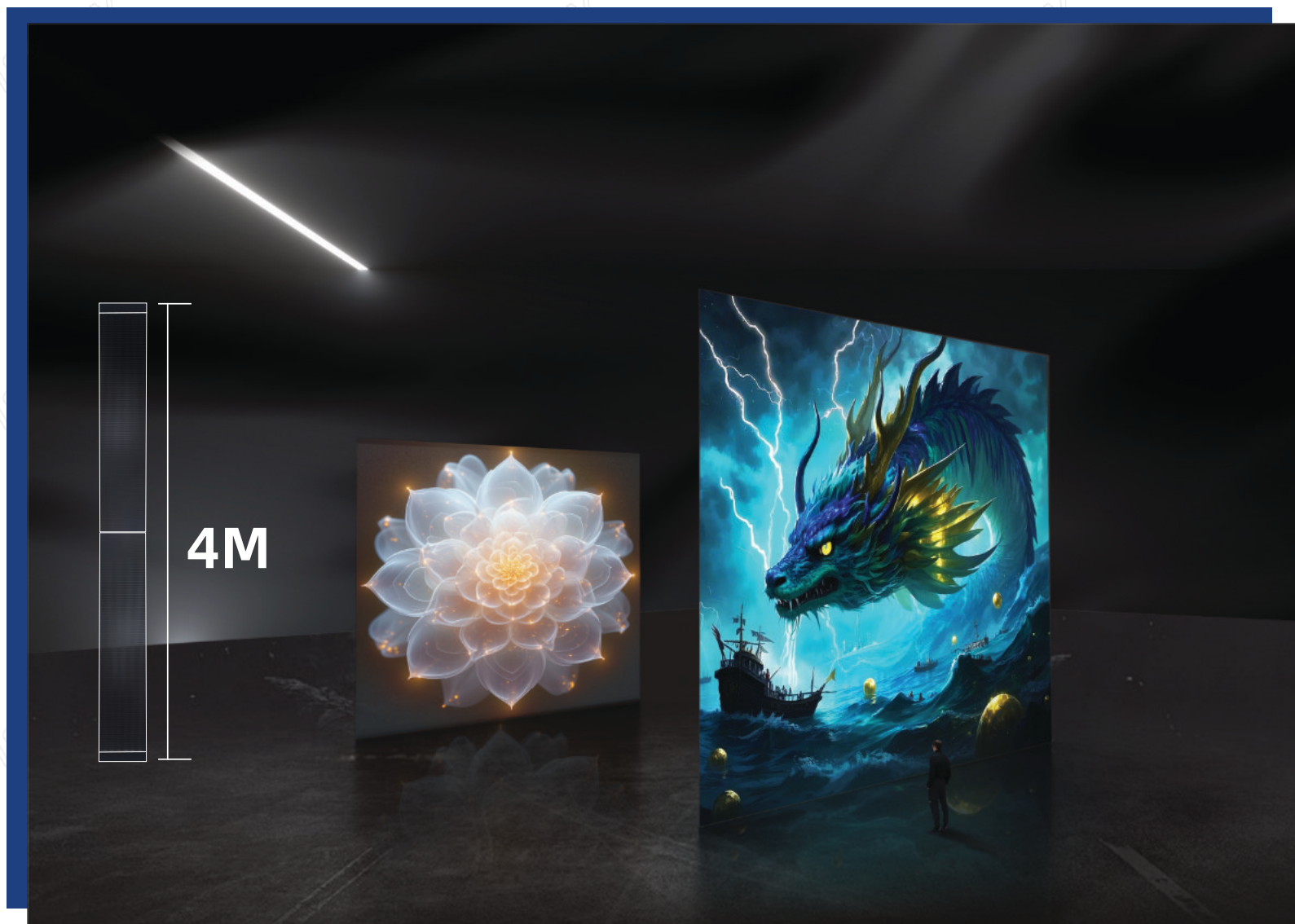
## 16Bit gray level

It significantly enhances the smoothness of color transitions, ensuring that the image quality remains clear and delicate while retaining more layers, thus preventing the loss of details and the appearance of stair-step artifacts.



## || Main Advantages

Using seamless splicing technology, the screen can be spliced to any size, presenting a complete and unified large display with no seams or black borders. The vertical splicing height can reach up to 4 meters with no center rod, and the horizontal expansion is virtually unlimited, making it easy to achieve ultra-large screen displays.



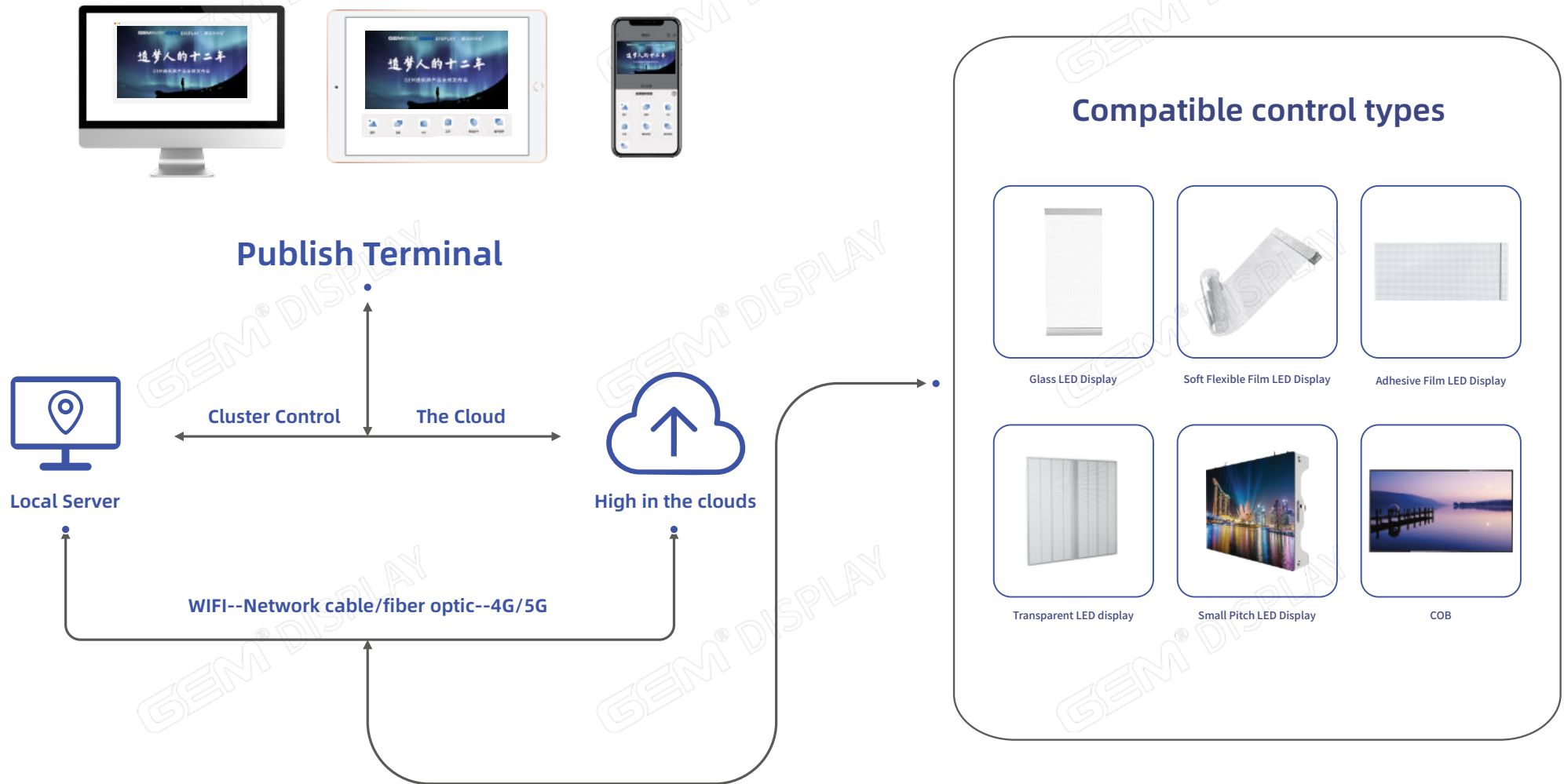


# Product Parameters

Product Model	GEM-G02.5	GEM-G03.9	GEM-G06.25	GEM-G010
Pixel Pitch (H/V mm)	2.5	3.9	6.25	10
LED Configuration	SMD 1415	SMD 1921		
Pixel Density (dot/m <sup>2</sup> )	160000	65536	25600	10000
Transparency	≥55%	≥60%	≥70%	≥80%
Frame Rate	1920-3840Hz	7680Hz	3840Hz	3840Hz
Cabinet Size WxH(mm)	192x200/400/600	500x500/1000/1500/2000		
Cabinet Resolution WxH(dot)	160x500/1000/1500	128x128/256/384/512	80x80/160/240/320	50x50/100/150/200
Module Size WxH(mm)	160x500/1000/1500	250x500/1000/1500/2000		
Module Resolution WxH(dot)	64x200/400/600	64x128/256/384/512	40x80/160/240/320	25x50/100/150/200
Cabinet Weight (kg/m <sup>2</sup> )	7~7.5			
IP Rating ( front/back)	IP42			
Brightness(CD/m <sup>2</sup> )	≥4000			
Viewing Angle (H/V)	140°/140°			
Viewing Distance ( m)	3	4	6	10
Max.Power Consumption (w/m <sup>2</sup> )	800	800	400~600	400~600
Ave.Power Consumption(w/m <sup>2</sup> )	240	240	120~240	120~240
Gray level	8~16bit			
Environment	INDOOR			
Control Mode	Special system for LED display ( 4G+5G、APP、WIFI、LAN control )			
Support Input	HDMI、DVI、DP、SDI			
Operation Power	AC100~240V,50/60Hz			
Operating Temperature	0°C~50°C(work),'-20°C~60°C(store)			
Operating Humidity	35%-85%(work),10%-90%(store)			
Operating Life	>50,000 hour			

Remarks:The parameters of above product are for reference only.The final parameter may vary depending on the specific situation of the projects (the product shall be subject to the data sheet of final contract)

# Publishing system of Transparent LED Display





## Safe and intelligent control system

- 1、 In the process of network transmission, if any file or data is modified, the display will go black.
- 2、 If the local file of the terminal display is modified, it will be detected immediately and the screen will go black.
- 3、 As long as data or file abnormal are detected, regardless of restarting the software and hardware, the display is required to be black until the abnormal are recovered.
- 4、 The approval procedure for the program release is required.
- 5、 It is necessary to send instructions regularly to make the display black, which can be operated individually or in batches.
- 6、 If the advertisement schedule is full, the program that cannot be played will be indicated in advance.
- 7、 Customers are able to know what is remaining time for the playlist of the day and what time to play.
- 8、 Industry categories can be customized. Advertisements in the same industry need to be played at intervals, and existing sub list functions need to be used for continuous playback.
- 9、 Between the computer and the server, the operation computer needs to be connected to improve the security. If there is no connection, you can only log in and view, and no operation can be performed.



## Features of publishing system of transparent LED Display

- 1、 Cloud architecture. Cloud publishing system can be managed by any phones, tablet PC, PC, and other networked devices.
- 2、 Disaster tolerance. Normal working of LED Display will not be affected by the breakdown of the publishing system.
- 3、 Cluster deployment, easy to scale horizontally.
- 4、 No need the installation of the client separately. Easy access permission is available anytime, anywhere.
- 5、 Support Mainstream multimedia formats such as picture, video and audio.
- 6、 Support Multi-level user management and match easily.
- 7、 Support Software sharing.
- 8、 Any networked device is able to control it anytime, anywhere.
- 9、 It will update and do statistics automatically.
- 10、 Multi screen playback is available.
- 11、 Remote control.







## Case show

The products under the GEM brand, with their outstanding performance and wide application scenarios, have shone through multiple fields such as advertising media, commercial displays, corporate promotion, cultural tourism and so on. The product has shown remarkable results in practical applications in various fields, not only meeting the diverse needs of customers, but also obtaining widespread praise and trust of both inside and outside the industry.



## Special shapes transparent LED Display at military museum

Theoretical transparency:  $\geq 67\%$

Pixel pitch: 5x7.8mm

Product model: GEM-GM5A

Brightness:  $\geq 2000(\text{nits})$





## Hanging Transparent LED Display at Museum of China's top court

Theoretical transparency:  $\geq 82\%$

Pixel pitch: 10x10 mm

Product model: GEM-GM10

Brightness:  $\geq 5500$ (nits)





## Shenzhen Metro MTR Fence Glass LED Display

The fence transparent glass LED display at Shenzhen Metro Youth Palace Station has come on stage with glittering appearance, leading technology all over the world and being a major highlight of the station. This newly installed fence transparent glass LED display has a transparency rate about 80%, which does not affect the visibility and enhances the overall image of the station. It also brings passengers with a more diverse visual experience and more revenue from subway commercial advertising.



Shenzhen Metro | Fence glass LED display



MTR Fence Glass LED Display



## Shenzhen IBC Building

The Shenzhen Luohu Shuibei Jewelry Headquarters Building (IBC) is not only a comprehensive building with multiple functions, but also an important platform for promoting the development of the jewelry industry and promoting economic and cultural exchanges. The project uses GEM-GM3.9-7.8 with a transparency rate about 70%. The combination of transparent screens and commercial spaces creates a beautiful shopping environment.



## Tianmen Mountain Fox Immortal Theater

The stage is located in the entire canyon from the entrance of Tianmen Mountain Scenic Area to the top of Tianmen Mountain, with a team of over 500 actors. GEM uses multiple customized irregular screens to create stunning art effects at outdoor stage, including screen model GEM-GSP3.7, GEM-GB5, GEM-P6.25, GEM-P6A; The implementation of this project will not only greatly enhance the popularity and attractiveness of Tianmen Mountain Scenic Area, but also bring an unprecedented artistic feast to tourists.





The combination of GEM-GSP adhesive film LED Display and retro architectural bangs house creates a stunning stage effect, immersing the audience in the scene and creating a strong sense of plot immersion, making the audience feel as if they are immersed in the plot of a fox fairy story.



Tianmen Mountain Fox Immortal Theater

## Harbin Ice and Snow World

On the grand opening of Harbin Ice and Snow World, a unique large-scale stage fantasy show - "The King's Chariot" makes a stunning debut. This performance adopts GEM DISPLAY's XR extended reality LED display stage solution, delicately integrating cutting-edge tech and ice-snow art, and gradually unveiling an extraordinary immersive visual feast for tourists, fully promoting the ice-snow cultural tourism industry to make great strides towards a new experience height.







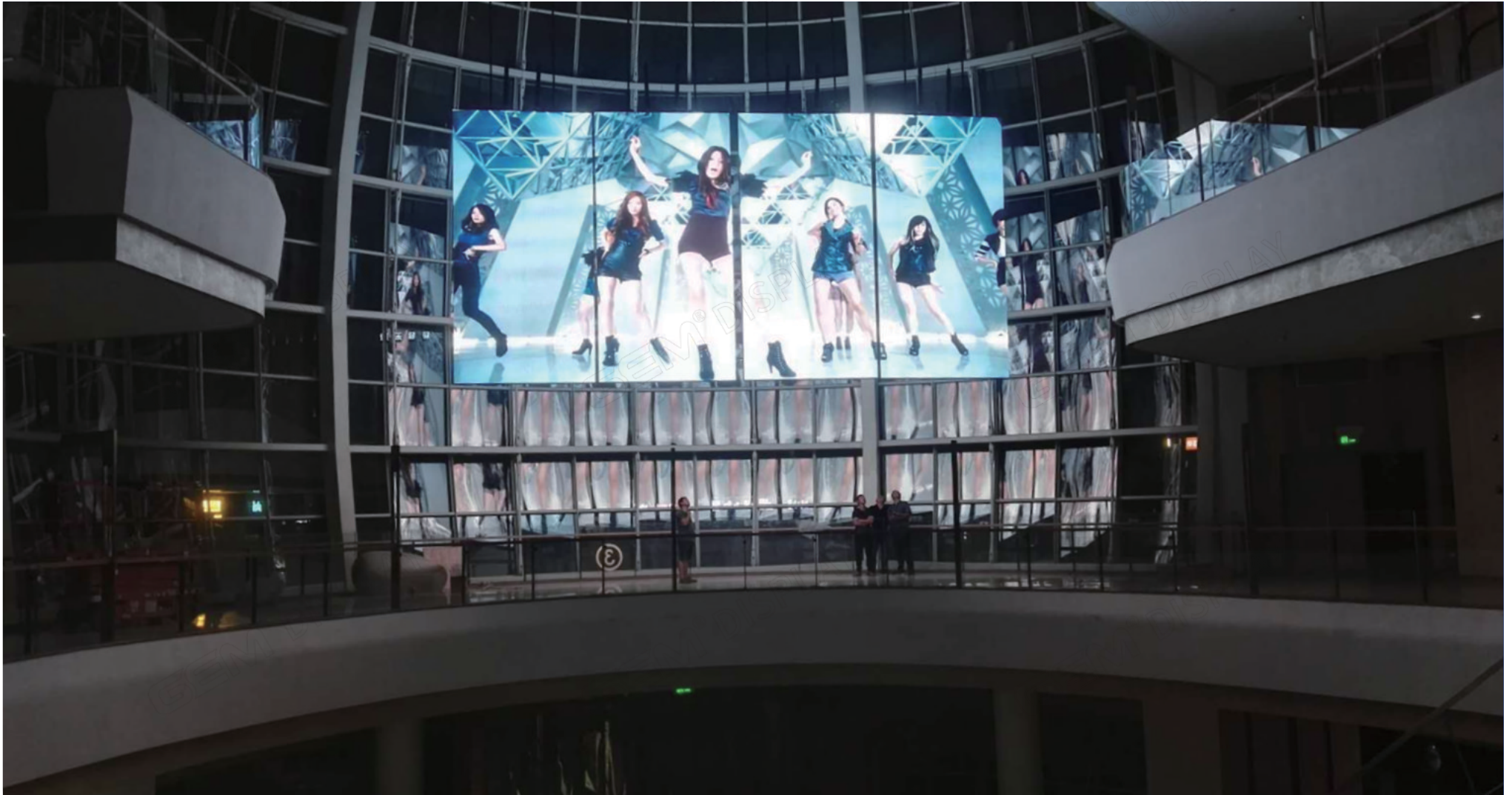
## XR Extended Reality LED Display Performing Stage Solution

The XR extended reality LED display performing stage solution created by GEM DISPLAY breaks through the limitations of traditional stages. Moreover, with its unparalleled visual effects and unprecedented immersive experience, it opens the door to a fantasy world for the audience.

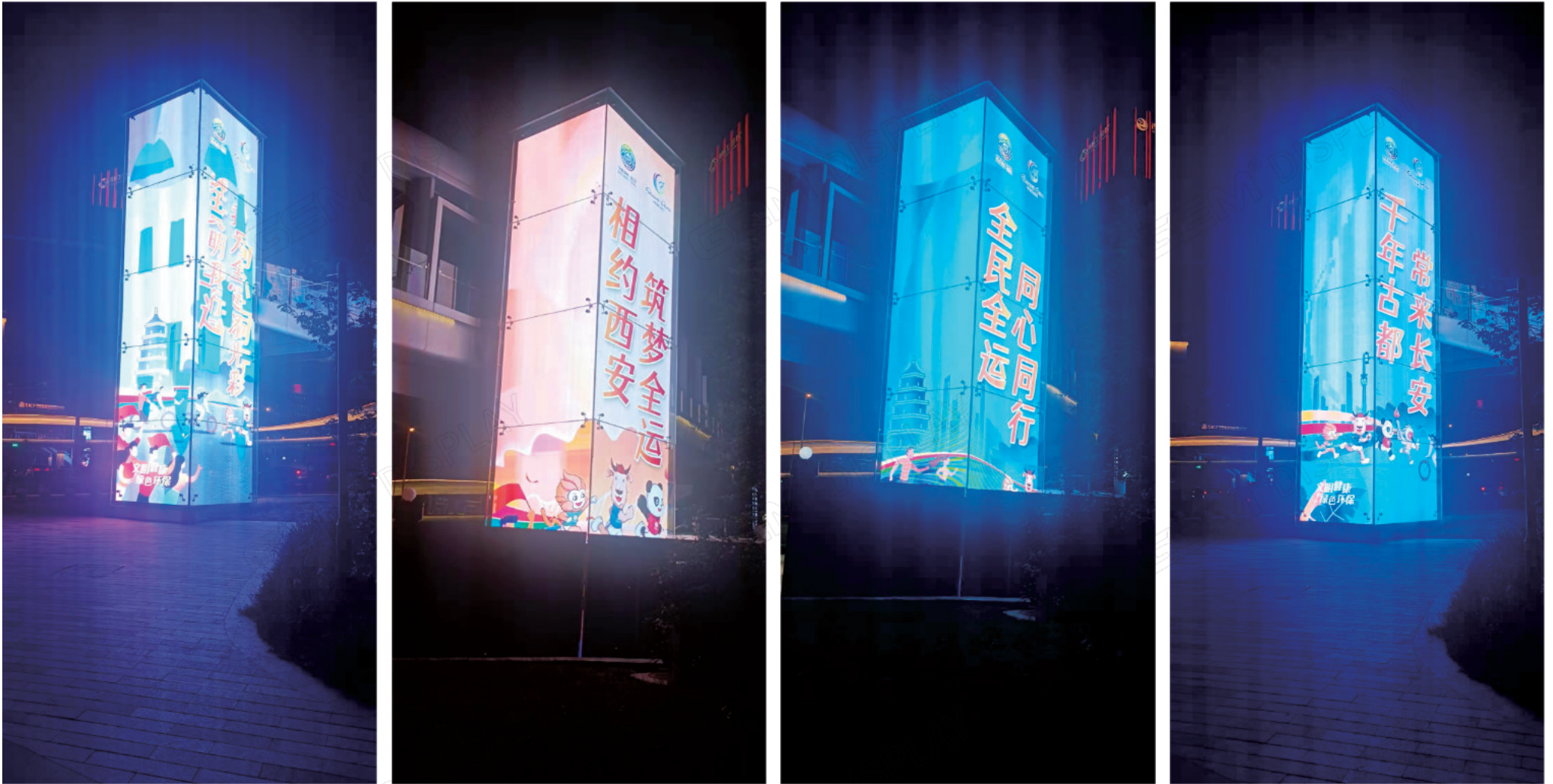


## Hangzhou Xixi Yintai City

The first Yintai brand shopping center in Xihu District, Hangzhou - Hangzhou Xixi Yintai City has officially made a stunning debut. The project uses GEM-3.1A, with a transparency rate about 52%, clear and delicate images, green and energy-saving, bringing a more enjoyable shopping experience for the mall.







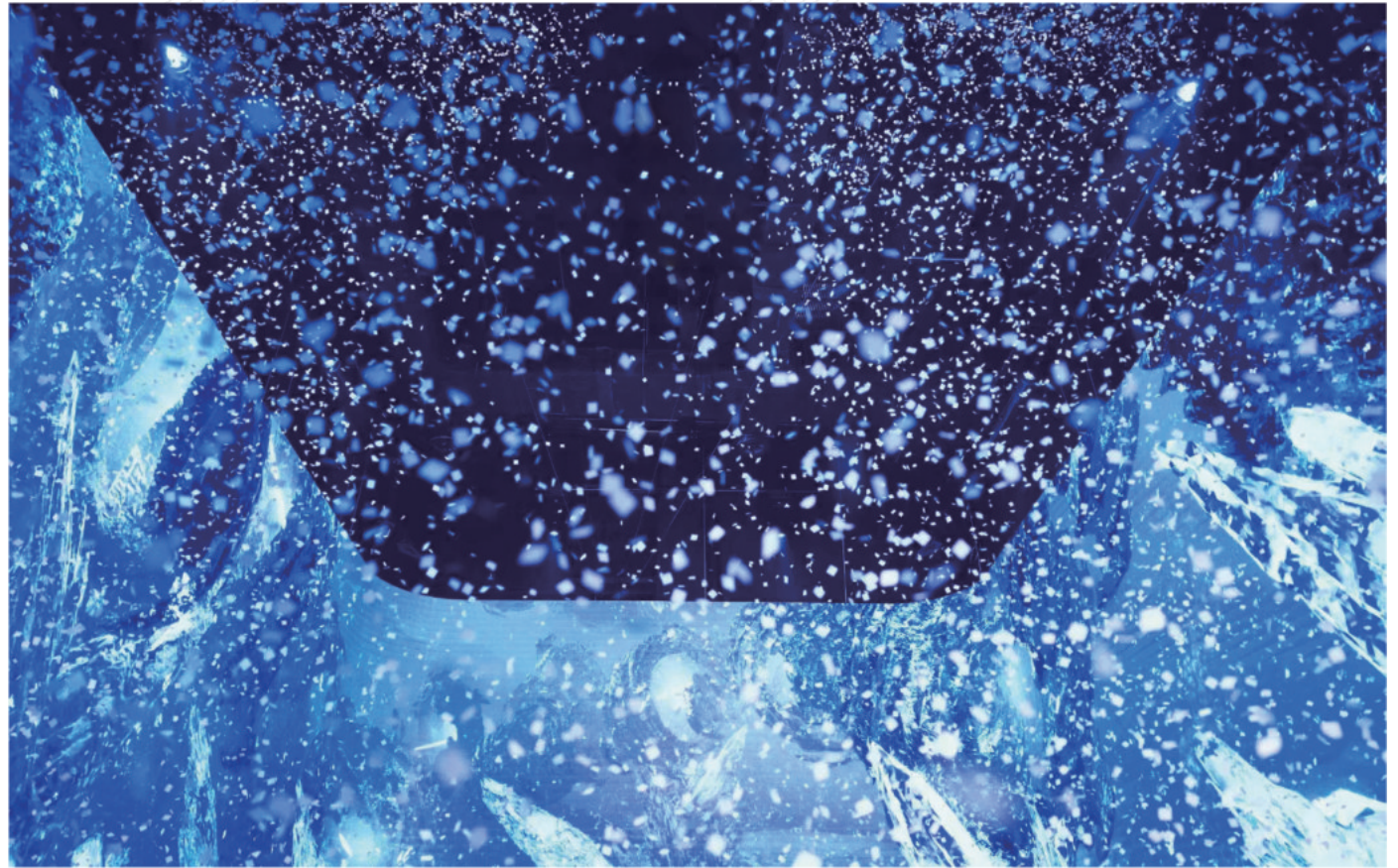
## Xi'an Yanxiang Square

Xi'an Yanxiang Square is a comprehensive project that integrates commercial and office buildings created by Qujiang Cultural and Commercial Group. The project uses GM-GM4-8 with a transparency rate about 52%. The combination of transparent screens and elevators is a major highlight of the square.



## Wuhan Digital Mountain and Sea Classic

The first immersive digital entertainment IP in the country with the theme of "Chinese Mythology System" aims to present the mythological stories, geographical knowledge, folk legends, and other content from "Shan Hai Jing" to the public in a new way through modern technologies such as digitization and virtualization. The project mainly uses indoor small pitch LED display GEM-P3, which has clear and delicate colors, high contrast, and a perfect combination of technology and culture, bringing a stunning experience to the audience.







| Wuhan Digital Mountain and Sea Classic





## A shopping mall in the UK

This project uses GEM-GM3.9-7.8, with a transparency rate about 55%, high brightness and transparency, and beautiful and fashionable appearance.



## Shanghai North Bund Pudong Development Bank Headquarters

The headquarters of Shanghai North Bund Pudong Development Bank has adopted GEM-GM22A with a transparency rate about 90%, which is transparent and cool, helping to create a new promotional business card.



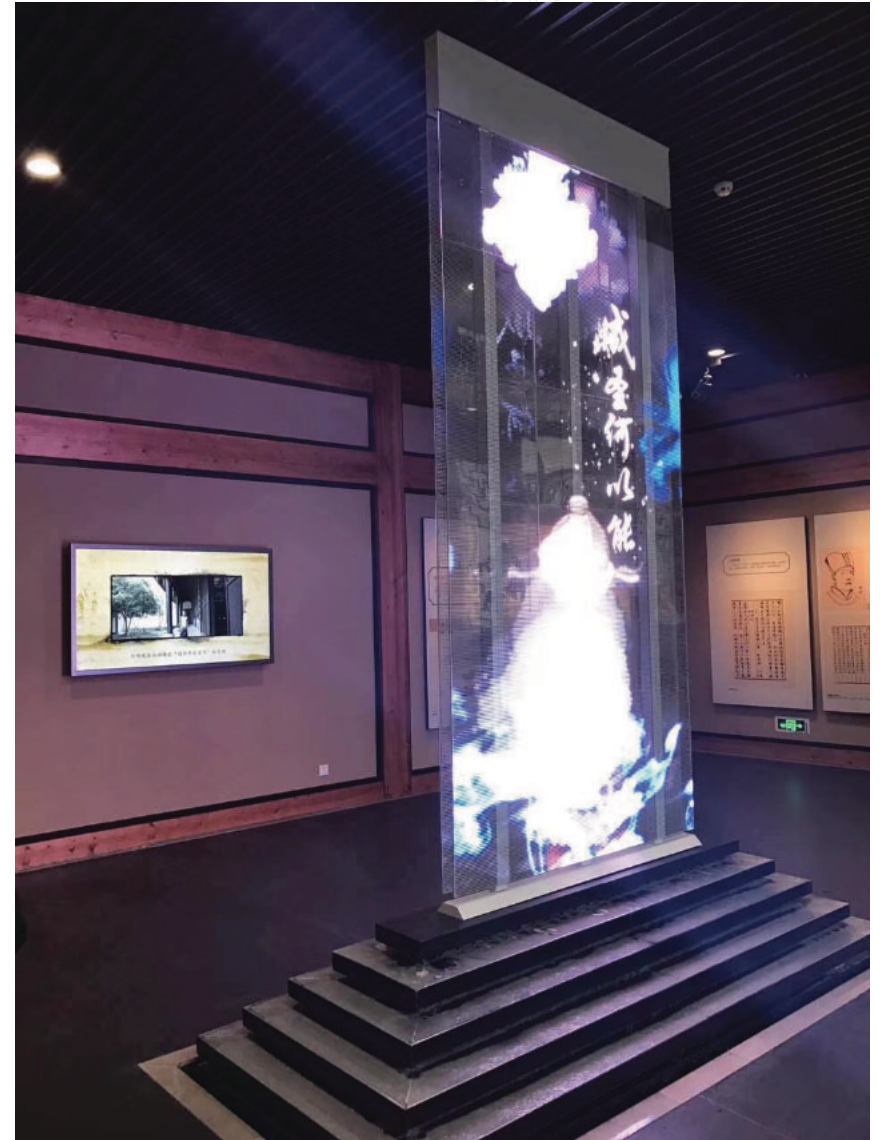
## Landmark of a building in Victoria Harbour, Hong Kong

This project is located in the core area of Victoria Harbour in Hong Kong, using GEM-GM40A with a transparency rate about 90%, high protection level, clear display effect, and greatly improving the night view effect of Victoria Harbour.



## Guizhou Wangyangming Memorial Hall

The museum contains national level cultural relics with a long history. The project uses a customized double-sided transparent LED Display GEM-GM3.9-7.8, with a transparency rate about 70%, which more comprehensively showcases Wang Yangming's life and cultural thoughts.



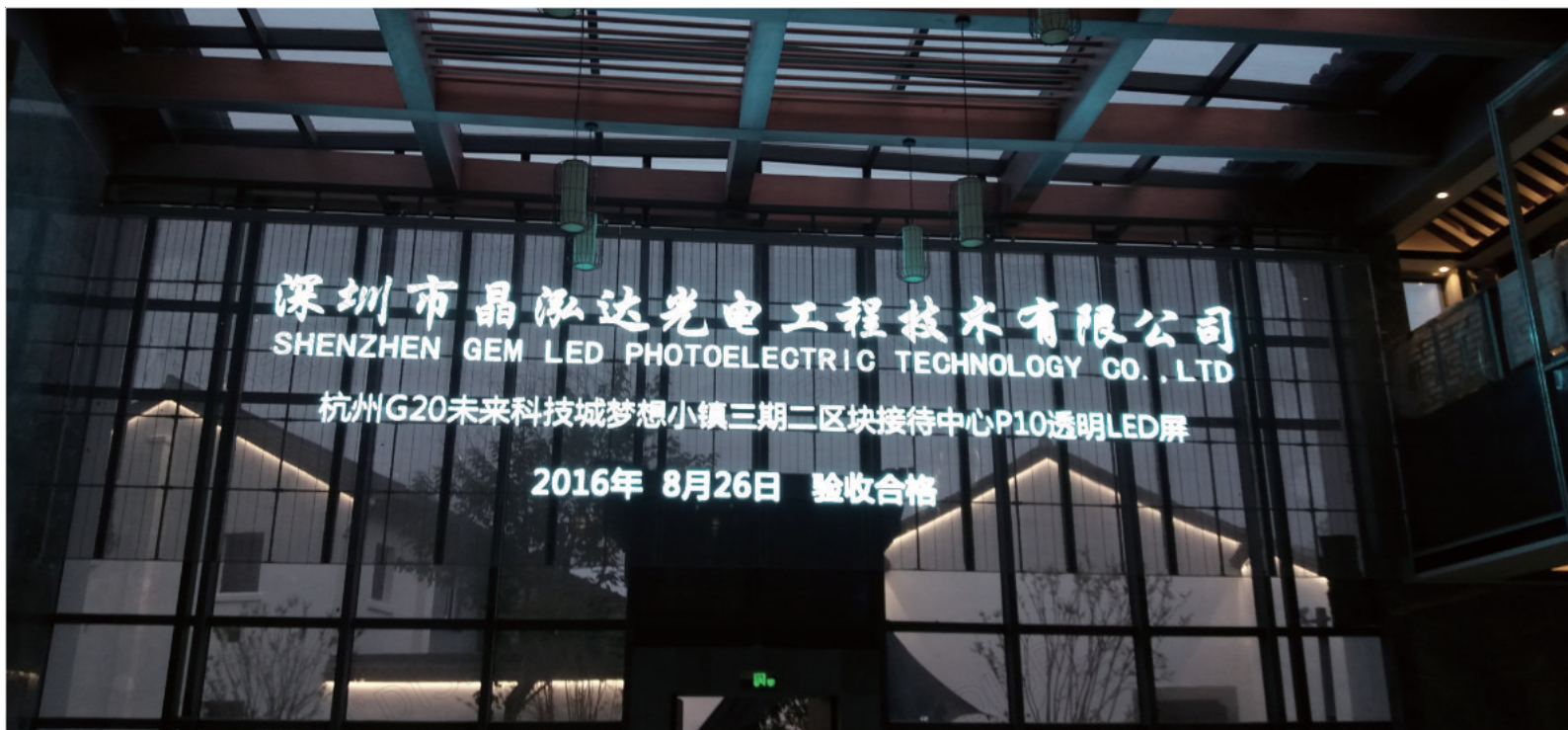




## Shanghai Qiantan Xinde Cultural Center

As a landmark large-scale cultural complex project in Qiantan, the Xinde Cultural Center in Qiantan includes a multi story office building, a commercial shopping center, a large comprehensive cultural and performance center, and a boutique hotel. GEM-GM10.4 was used, with a transparency rate about 85%, high brightness, green and energy-saving, and delicate display effects, helping the Xinde Cultural Center in Qiantan to become a new landmark building in Shanghai.





## Dream Town

The Dream Town is located in Hangzhou, Zhejiang Province. It is one of the first characteristic towns in Zhejiang Province, a national Internet innovation and entrepreneurship highland, and the core area of the future science and technology city. The project uses GEM-GM10, with a transparency rate about 82%.





## Shanghai North Bund Magnolia Plaza

Shanghai Magnolia Plaza is located along the North Bund along the river, with a superior location and high pedestrian flow. It has won the annual "Magnolia" award for construction projects in Shanghai. The project uses GEM-GM10 and has a transparency rate about 82%.



## Huizhou Kaisa Square

This one-stop commercial plaza integrates shopping, leisure and dining, and is an excellent place for citizens to relax and entertain. This project uses GEM-GM4-8, with transparency about 60% and a clear and delicate display effect.



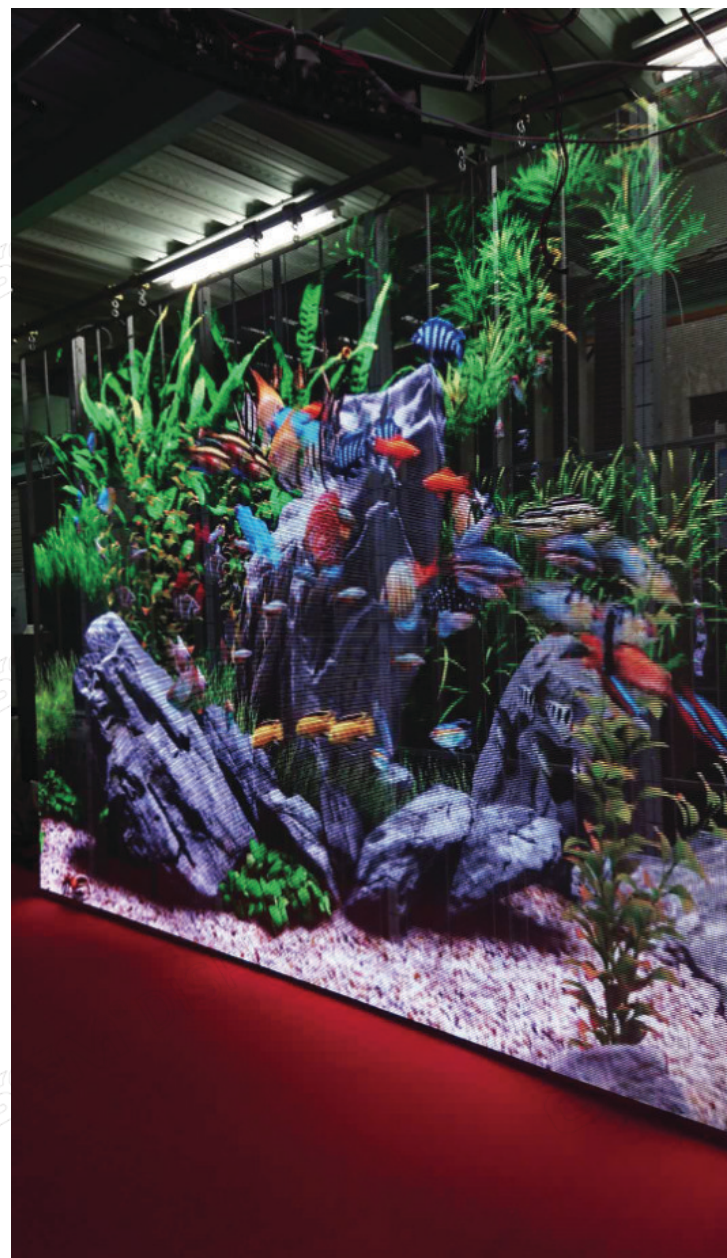
## A place in Japan

Theoretical transparency:  $\geq 75\%$

Pixel pitch: 10.4x10.4mm

Product model: GEM-GM10.4

Brightness:  $\geq 5500$ (nits)



## A place in Japan

Theoretical transparency:  $\geq 60\%$

Pixel pitch: 3.9x7.8mm

Product model: GEM-GM10.4

Brightness:  $\geq 5500$ (nits)



# LEADING BRAND OF FULL RANGE SERIES TRANSPARENT LED DISPLAY



**SHENZHEN GEM LED PHOTOELECTRIC TECHNOLOGY CO. ,LTD**

Tel: (+86) + 755-2923 5798

Email:sale13@gemled-tech.com

Website: [www.gemled-tech.com](http://www.gemled-tech.com)

Address: 602, Block D, Weihuada Industrial Park, NO.5, Lirong Road, Dalang Street, Longhua  
District, Shenzhen China



- Due to printing and shooting reasons, there may be slight differences between the product in this book and the actual products. Please refer to the actual products.
- GEM Optoelectronics reserves the rights to change this book at any time. If some parameters are changed, no further notice will be given. If you need to obtain the latest information, please contact us.