Transparent LED Film LAT140

Bring New Life to Transparent Space

|		
Superb Transparency	Self Adhesive	Easy Expandability
Curved Format Supported	Enhanced Brightness	Product Reliability

A NATURAL BLEND WITH SPACE

ON

OFF

Superb Transparency

The LG Transparent LED film, which is a metal mesh type connecting each pixel with a thin metal mesh line, reflects the object behind the product even after the product is attached and turned off. This offers a wide-open view while blending into existing interior design smoothly and delivers various information effectively by attracting the attention of passersby.
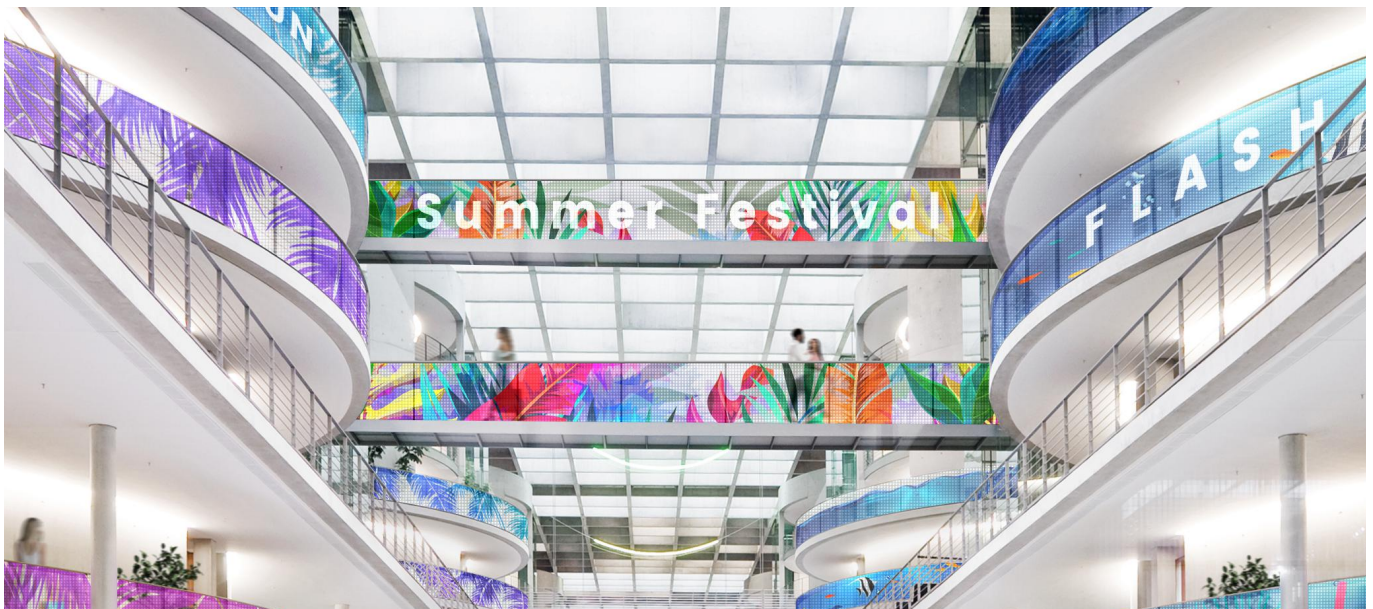

Fitting in with Flats and Curves

The LG Transparent LED film supports curvatures up to 1,100R convex and concave for curved glass or window applications, and offers even surface by applying the OCR (Optically Clear Resin) bonding method. This allows a wide range of venues to be redesigned with the LAT series as a landmark.
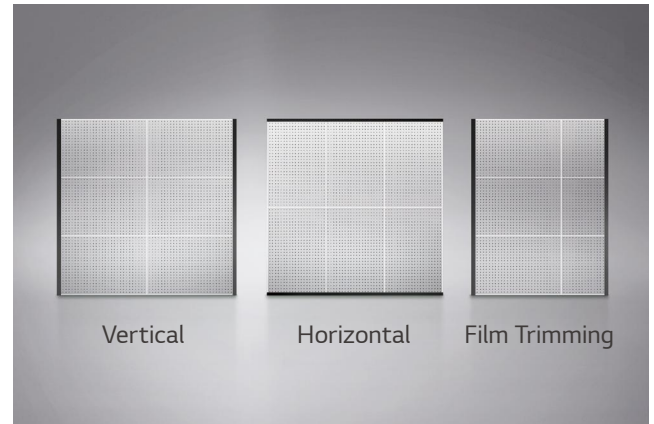
What is R?

1.1 m
1.1 m   1.1 m

1,100R

EASY SPACE INNOVATION

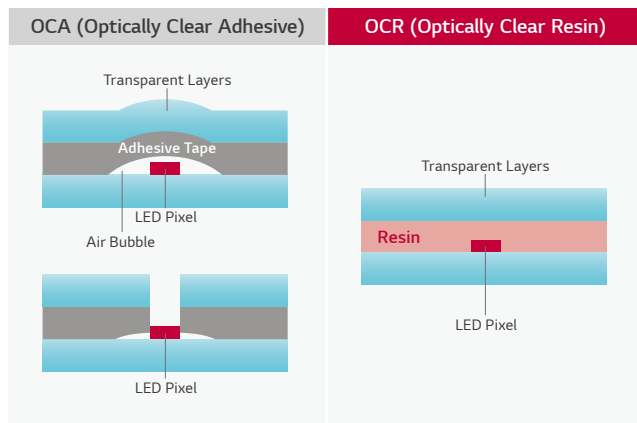Vertical   Horizontal   Film Trimming
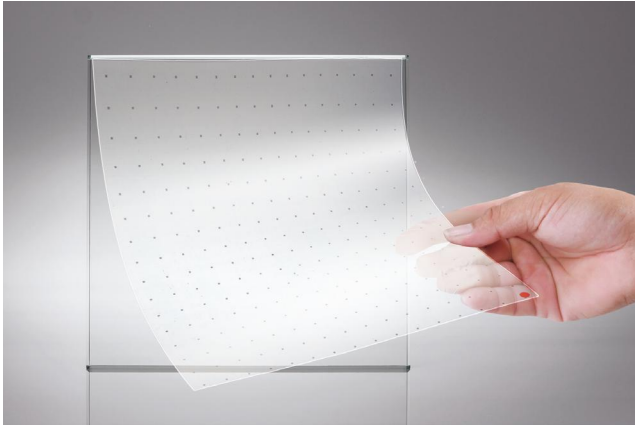
Self-adhesive Film

The LG Transparent LED film is self-adhesive, so it can be easily attached to the surfaces of existing window glass without the need for any complicated construction.

Outstanding Expandability and Flexibility

The size and layout of the film can be customized to fit into the installation area. It can be expanded by adding more films in a vertical or horizontal way, or cut in parallel with the bezel to meet size requirements.
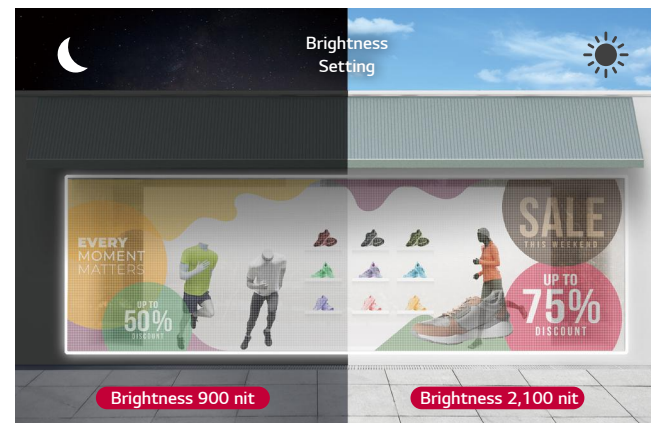
RELIABLE PRODUCT QUALITY & EYE CATCHING CONTENT DISPLAY

OCA (Optically Clear Adhesive)   OCR (Optically Clear Resin)

Transparent Layers

Adhesive Tape

LED Pixel

Air Bubble

LED Pixel

Transparent Layers

Resin

LED Pixel

Brightness Setting

Brightness 900 nit   Brightness 2,100 nit

OCR (Optically Clear Resin) Direct Bonding

The LG Transparent LED film, which applied the OCR bonding method, protects LED pixels stably by fully filling the gap between transparent layers. Compared to OCA (Optically Clear Adhesive) method, which usually perforates the upper layer above each LED pixel to prevent uneven surface and scattered reflection, the LED film fully embraces and protects the pixels resulting in improved durability and flat surface*.

Enhanced Brightness and Control

The LED film with smaller pixel pitch, 14mm, and advanced brightness of up to 2,100nit(cd/m²)* attracts the attention of passersby while displaying a wide range of colors. Also, by using Control Manager solution, you can adjust and set brightness by timeline to deliver messages with optimal brightness.

* This is based on the internal comparison test between OCR and OCA with perforations of the upper transparent layer under the condition of -10˚~ 45˚ temperature and 0 ~ 30% humidity.

* The examined brightness may differ from testing environments including a photometer.

SMART LED SIGNAGE

webOS Smart Platform with Open API

LG webOS is a web-centric platform, making it easier for SIs and developers to build web-based solutions according to various environments. By supporting open API and compatibility with HTML, CSS, and JavaScript, you can save time and labor costs.
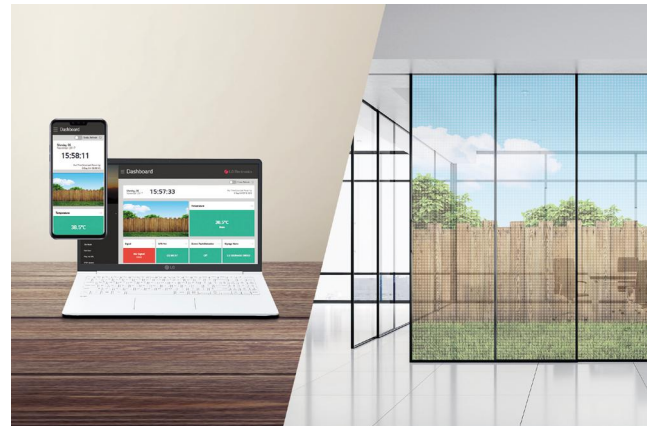
Control Manager

Through the Control Manager, available on internet-connected devices, you can set, control contents and monitor the status of multiple displays in different locations in real time. Especially for Transparent LED film installed on large area, the Control Manager helps you to play and check contents in easier way.


Real-time 365 Care Service

The maintenance gets easier and faster with an optional service Signage365Care*, a cloud service solution provided by LG service. It remotely manages status of displays in clients' workplaces for fault diagnosis and remote-control services, enabling the stable operation of a client's business.

* The availability of "Signage365Care" service can differ by region, so please contact the LG sales representative in your region for further details.

COMPONENTS & SYSTEM CONNECTION

Components
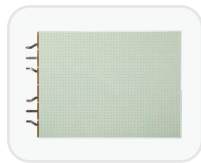
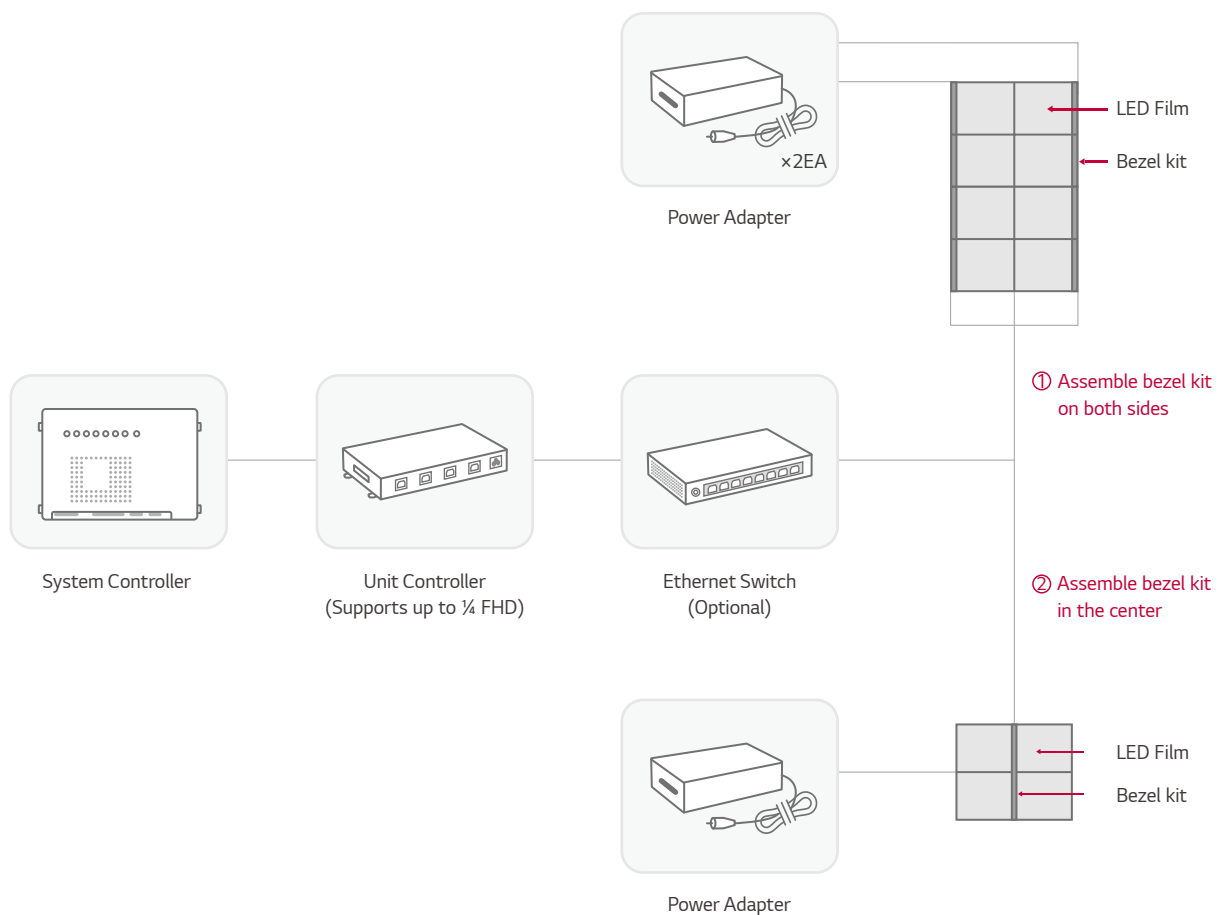| 1. LED Film | 2. Bezel Kit | 3. Power Adapter | 4. Unit Controller | 5. System Controller |

* The required amount of components vary depending on the screen size.

System Connection

×2EA

Power Adapter

LED Film

Bezel kit

System Controller

Unit Controller
(Supports up to ¼ FHD)

Ethernet Switch
(Optional)

① Assemble bezel kit
on both sides

② Assemble bezel kit
in the center

Power Adapter

LED Film

Bezel kit

* The actual system structure may be subject to change from the above example.

PRODUCT INFORMATION
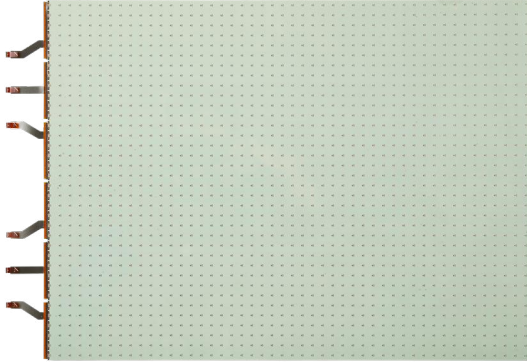
LAT140

Pixel Pitch	14 mm
LED Type	3 in 1 SMD
Brightness	2,100 cd/m² (Typ.)
Transmittance	53%
Curvature (concave and convex)	1,100R

DIMENSION
(unit: mm)

Transparent LED Film Panel

655

492

Bezel Kit

1st Bezel

69.4

87.5

217.3

187.2

492

25

51.4

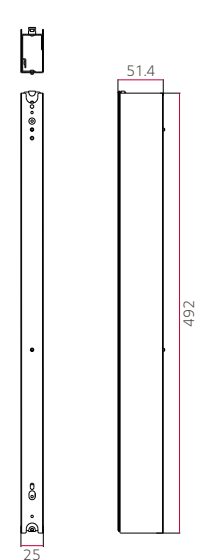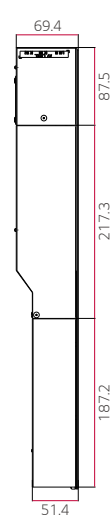### Common Bezel

51.4

492

25
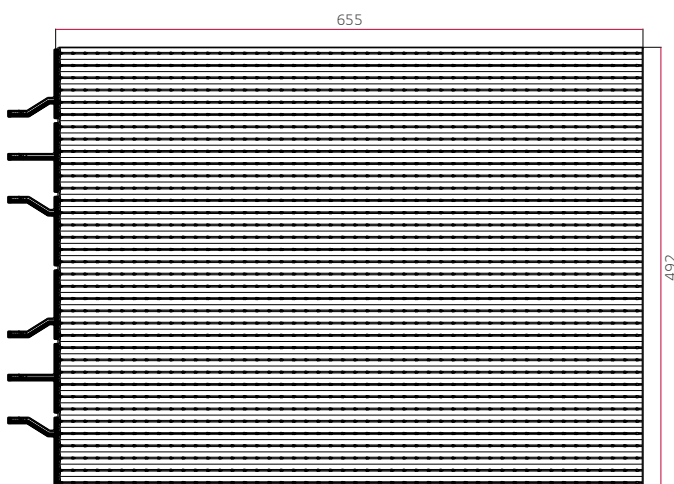
* Dimensions & Jack Panels may differ from the above image, so please contact LG sales team to verify before ordering.

HDMI
HIGH-DEFINITION MULTIMEDIA INTERFACE

LG | Business Solutions

COLOR TRANSPARENT
LED FILM LAT240DT1

Seamlessly Color your Space and Brand

※ Actual on-site appearance may differ from the above simulated scene.

A New Level of Renovation with See-through View

LG Color Transparent LED Film is a revolution in display technology. It is a transparent LED film that can be pasted to existing glass surface, thanks to its special self-adhesive material. Its superb transparency endows the glass surface or window to which it is attached with a mystical beauty full of vivid color. Renovate your ordinary store or building with this revolutionary material that interacts seamlessly with the surrounding environment.

※ Actual on-site appearance may differ from the above simulated scene.

LG COLOR
TRANSPARENT LED FILM
KEY FEATURES

High Transparency

ON

OFF

High transparency (73%*) allows glass to remain visible even after attaching the film, with no adverse effects on the original design. When the LED is ON, the film effectively displays content and information as digital signage, while also providing a see-through view with superb transparency. When the LED is OFF, the film is unnoticeable, blending into the glass completely.

5% 20% 35% 50% 70%
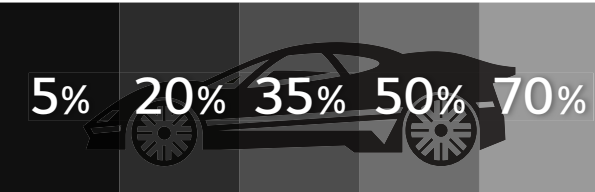
* 73% transparency is similar to that of a car's tinted front window.

Full Color Expression

LG Color Transparent LED film delivers a surprisingly wide range of colors using a 24 mm pitch, while still maintaining a high transparency. Applications are not confined to delivering simple brand logos or pictograms, but can be extended to display an entire video or pictures in which various colors combinations are possible.


Easy Space Innovation

Self-adhesive Film

The transparent LED film is self-adhesive, so it can be easily attached to the surfaces of existing window glass wihout the need for any complicated construction.
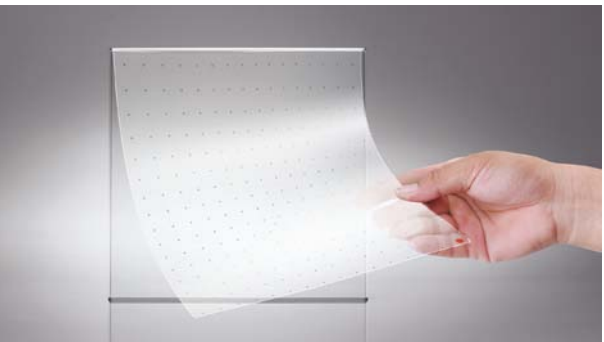
Superb Expandability and Flexibility

The size and layout of the film can be customized to fit in to the installation area. It can be expanded by adding more films in a vertical or horizontal way, or cut in parallel with the bezel to meet size requirements.

Vertical   Horizontal   Film Trimming*
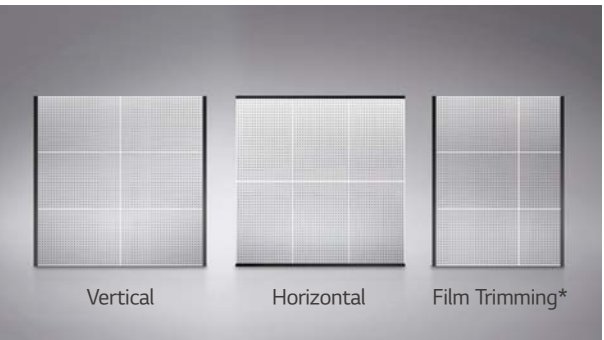
* The film must be cut in parallel with the the bezel by 1 pixel.

Curved Format Supported

The transparent LED film supports curvatures up to 1,100R concave for curved glass or window applications. This allows a wider range of venues to be redesigned as a landmark.

What is R?

1.1 m
1.1 m   1.1 m

1,100R
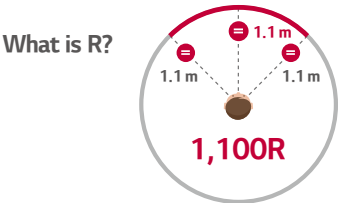
CONFIGURATION

Components

| 1. LED Film | 2. Bezel Kit | 3. Power | 4. Unit Controller | 5. System Controller |

* The required amount of components vary depending on the screen size.

System Connection

System Controller
(Supports up to FHD)

Unit Controller
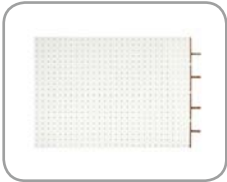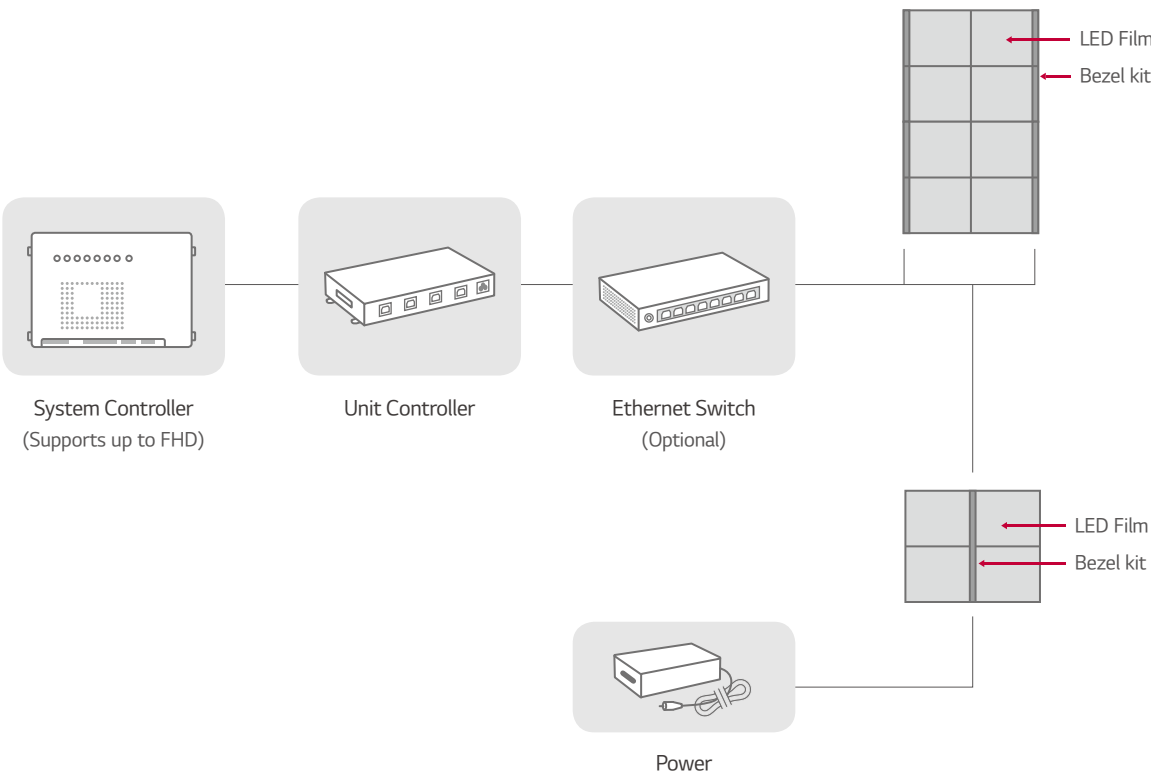
Ethernet Switch
(Optional)

LED Film
Bezel kit

LED Film
Bezel kit

Power

SPECIFICATION

LED Film

	LAT240DT1
Pitch	24 mm
LED Type	R, G, B 3in1 Color Package (SMD1818)
Resolution	28 x 20
Pixels per Panel	560
Pixel Density [point/m^2]	1,736
Brightness	>1,000 cd/m^2
Contrast Ratio	≥ 100,000:1
Luminance Uniformity	≥ 70%
Viewing Angle (H x V)	120 x 120
Life Time (Brightness 50%)	50,000 Hrs
Daily Usage	24 Hrs / 7 Days
Adhesion (After Installation)	50,000 Hrs
Transmittance	73%
Operating Temperature	0℃ ~ 45℃ (Indoor Glass Installation Only)
Curved Installation	1,100R (Concave)
Film Trimming	Yes (Parallel to the Bezel Side Only)
Color Processing	130/120/110 Level (R, G, B)
Colors	1,716,000 Colors
Color Chromaticity	Cx: 0.28±0.03, Cy: 0.28±0.03
Dimension (W x H x D)	668 x 480 x 2.0 mm (with Front & Back Protection Film)
Weight	0.73 kg
Power Consumption	37 W (Transparent Panel and Bezel Kit, @ film 1ea) 150 W (Transparent Panel and Bezel Kit, @ film 2×2)

1st Bezel Kit

	ACC-LATB2
Dimension (W x H x D)	479.5 × 24 × 53 mm
Weight	0.45 kg

Common Bezel Kit

	ACC-LATB3
Dimension (W x H x D)	479.5 × 24 × 28 mm
Weight	0.26 kg

Power (Bezel Kit & LED Film)

	ACC-LATP1
Dimension (W x H x D)	183 × 86 × 28 mm
Weight	0.769 kg
Input	100~240V, 50~60Hz
Output	19.5V/10.8A (210W)
Color	White
DC Output Cable	14AWG, 1.5m

Unit Controller

	LCLG012U
Resolution	Up to FHD (4 Unit Controllers Needed for FHD)
Interface	LVDS in with I2C, RJ45 × 4ea
Maximum Transmission Length	100 m
Dimension (W x H x D)	273 × 186.8 × 37 mm
Weight	1.5 kg
Power Consumption	20 W
Accessories	Power Cord, LVDS MCX Cable, ESG, Regulation Book

System Controller

	LCLG002
Video	3,840 x 2,160 @30Hz
Input	HDMI, DP, DVI-D, RS232C, RJ45 (w/o LED Indicator), IR Receiver (for Installation), USB 3.0
Output	LVDS, DP, RS232C, RJ45 (w/o LED Indicator)
Dimension (W x H x D)	273 × 186.8 × 37 mm
Weight (Head)	1.6 kg
Temperature Sensor	O
Light Sensor	O
Source Selection	HDMI, DVI-D, DP
TPC	Yes
Power Consumption	17 W
CMS S/W	Yes
Accessories	Power Cord, HDMI Cable, IR Sensor, 4P Phone-to-RS232C Gender

※ Specification is subject to changes without prior notice for product improvement