



* All images in this datasheet are for illustrative purposes only and may differ from the actual product.

Transparent Color LED Film LAT140

Bring New Life to Transparent Space



Superb Transparency



Self Adhesive



Easy Expandability



Enhanced Brightness



Product Reliability

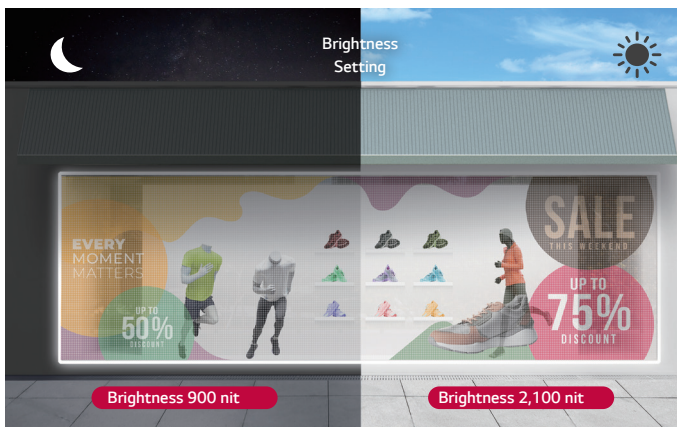
A NATURAL BLEND WITH SPACE



Superb Transparency

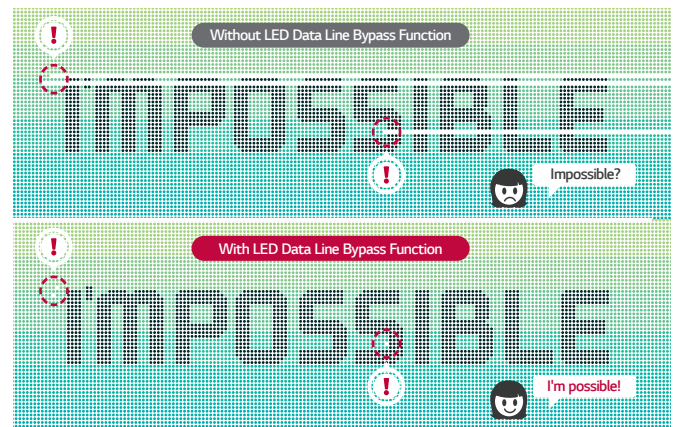
The LG Transparent Color LED Film, which connects each pixel with a thin metal mesh, allows a clear view of the objects behind the product. This maintains a wide-open view while blending smoothly into the existing interior design. Once turned on, the product delivers a stunning, attention-grabbing display across the entire surface where the film has been applied.

EYE-CATCHING CONTENT DISPLAY



Enhanced Brightness and Control

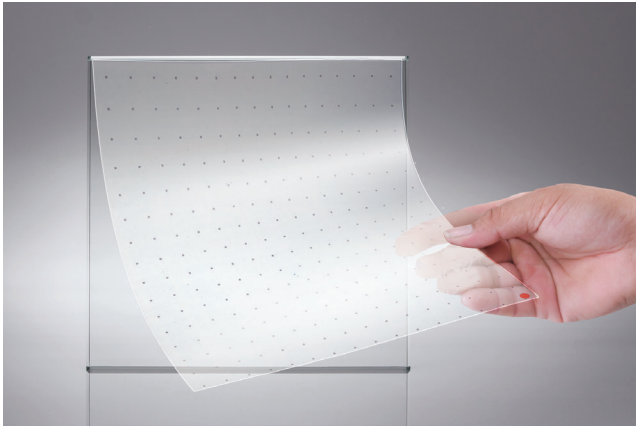
The LED film with smaller pixel pitch (14mm), and advanced brightness of up to 2,100 nits attracts the attention of passersby while displaying a wide range of colors. Also, the Control Manager solution allows brightness to be set and adjusted by time-of-day to deliver messages with optimal brightness.



Data Lines with Bypass Function

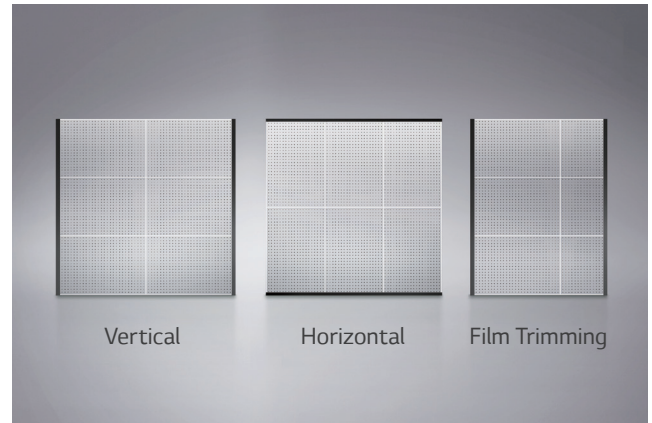
The 14mm transparent LED film consists of LED chips connected with additional bypass data lines. So even if an error occurs with an LED chip, the impact is reduced on the other chips placed in the same row. This new function helps you show text, images, and videos as clearly and reliably as possible.

EASY SPACE INNOVATION



Self-adhesive Film

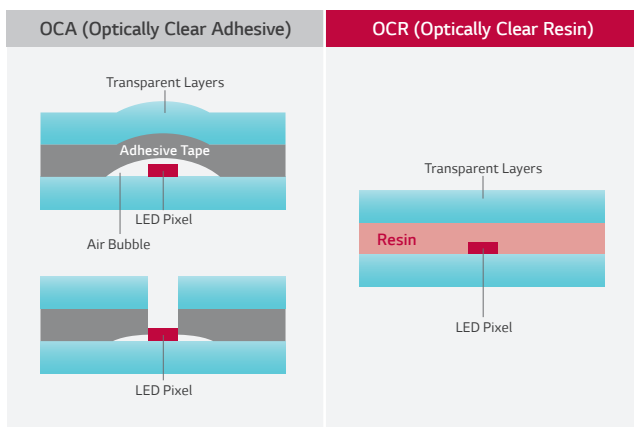
The LG Transparent Color LED film is self-adhesive, so it can be easily attached to the surfaces of existing window glass without the need for any complicated construction.



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-to-size in parallel with the bezel to meet installation requirements.

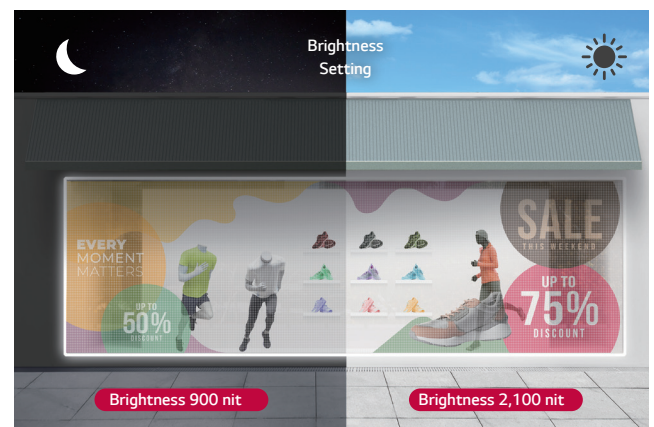
RELIABLE PRODUCT QUALITY & EYE CATCHING CONTENT DISPLAY



OCR (Optically Clear Resin) Direct Bonding

The LG Transparent Color LED film, which uses 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 LAT140 fully encases the pixels resulting in improved durability and flat surface*.

* 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.



Enhanced Brightness and Control

The transparent LAT140 has a small 14mm pixel pitch and 2100 nits per square meter brightness* that attract the attention of passersby while displaying a wide range of information. Also, LG's Control Manager allows you to adjust and set brightness based on time of day to deliver messages to your viewers without being too bright at night or washed out during the day.

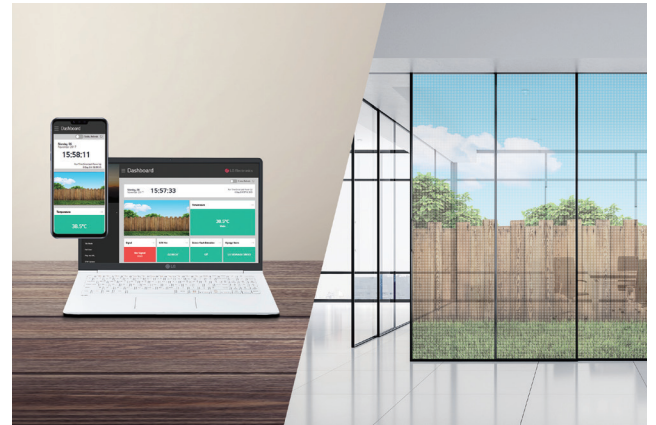
* The examined brightness may differ from testing environments including a photometer.

SMART LED SIGNAGE



webOS Smart Platform with Open API

LG webOS is a web-centric platform, making it easier for system integrators 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 effort creating awesome content.



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. This is especially useful for Transparent Color LED Film installed on a larger area, where Control Manager helps you to play and review contents more easily.



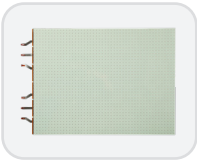
Real-time 365 Care Service

Maintenance gets easier and faster with an optional cloud service from LG we call Signage365Care*. This service remotely manages status of LG displays throughout client work locations monitoring fault diagnosis and remote-control services, enabling stable operation and smooth service of maintenance issues.

* 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

Component Types



1. LED Film



2. Bezel Kit



3. Power Adapter



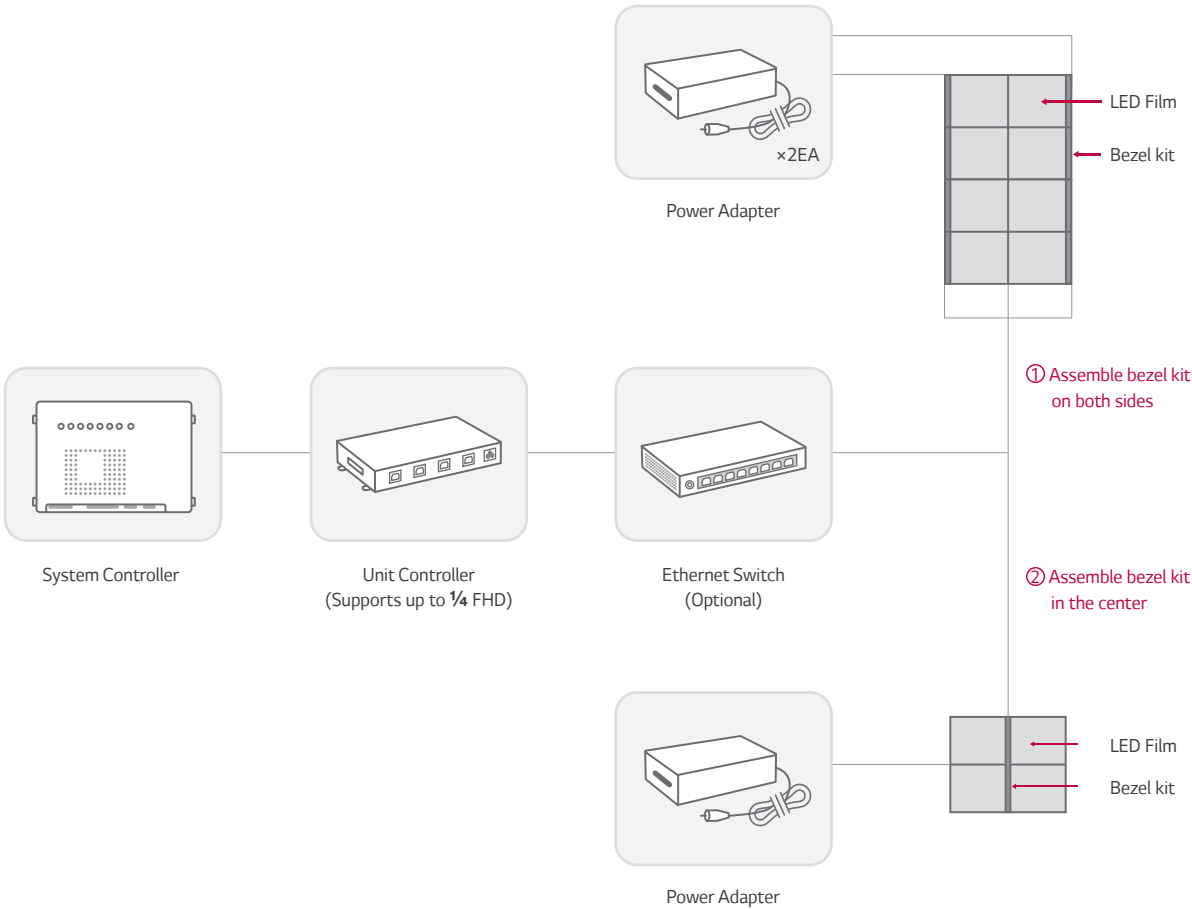
4. Unit Controller



5. System Controller

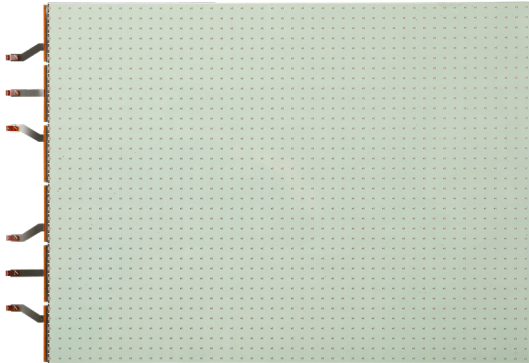
* The required amount of components vary depending on the screen size.

System Connection



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

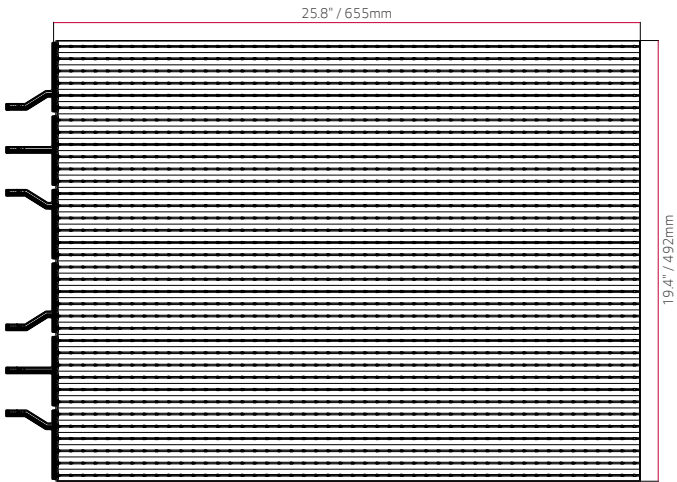
PRODUCT INFORMATION



LAT140	
Pixel Pitch	14 mm
LED Type	3 in 1 SMD
Brightness	2,100 nits/m ² (Typ.)
Transmittance	53%

DIMENSIONS

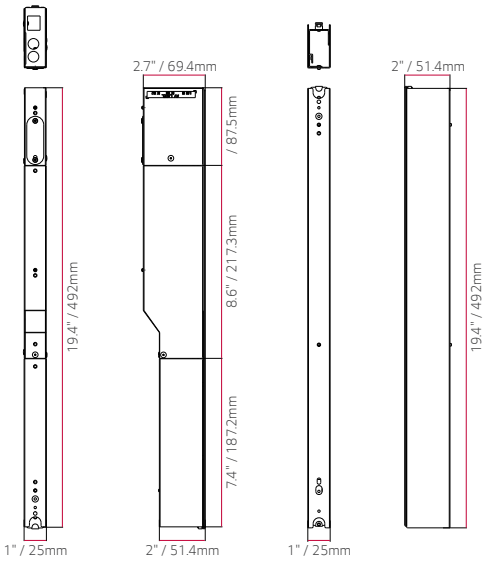
Transparent LED Film Panel



Bezel Kit

1st Bezel

Common Bezel



SPECIFICATIONS

LED FILM	MODEL		LAT140GT81	
	Pixel Pitch		13.68 mm	
	LED Type		RGB 3-in-1 Color Package (SMD2020)	
	Resolution		48 x 36	
	Pixels per Panel		1,728	
	Pixel Density		5102 pixels/m ²	
	Brightness (Typ)		2100 nits/m ² , 735 nits/pixel	
	Contrast Ratio		100,000:1	
	Luminance Uniformity		≥ 70%	
	Chromaticity Uniformity		$\Delta u'v' \leq 0.015$	
	Viewing Angle (H x V)		120° x 120°	
	Lifetime (Brightness 50%)		50,000 Hrs	
	Daily Usage		24 / 7	
	Warranty		2 Year Limited	
	Transparency		Typ 53%	
	Operating Temperature		32°F to 113°F / 0°C to 45°C	
	Film Trimming		Yes (Only cut parallel to bezel)	
	Color Processing		(9bit) 500/500/500 Level (RGB)	
	Colors		125 Million Colors	
	Color Chromaticity		Cx: 0.25±0.03, Cy: 0.34±0.03	
	Dimensions (W x H x D) (includes front & back protection film)		25.8 x 19.4 x 0.11 in / 655 x 492 x 2.7 mm	
Weight		2.2 lbs / 1 kg		
Power Consumption (Transparent panel 1EA + Common Bezel kit 2EA)		37 W		
FIRST BEZEL	MODEL		ACC-14LATB1	
	Interface		Input: RGMII / Output: Differential Serial	
	Dimensions (W x H x D)		2.7 x 19.4 x 0.98 in / 69.4 x 492 x 25 mm	
	Weight		0.88 lbs / 0.4 kg	
Power Consumption (Transparent panel + First & Common Bezel kits)		37 W		
COMMON BEZEL	MODEL		ACC-14LATB2	
	Interface		Input: Differential Serial / Output: Differential Serial	
	Dimensions (W x H x D)		2.0 x 19.4 x 0.98 in / 51.4 x 492 x 25 mm	
	Weight		0.66 lbs / 0.3 kg	
Power Consumption (Transparent panel + 2 Common Bezel kits)		37 W		
UNIT CONTROLLER	MODEL		LCLG140U	
	Resolution		960 x 540 (1/4 FHD)	
	Interface		Input: LVDS / Output: RJ45 x4EA	
	Maximum Transmission Length (CAT5E, CAT6)		100 m	
	Dimensions (W x H x D)		11.5 x 1.5 x 7.4 in / 293 x 37 x 188.7 mm	
	Weight		3.3 lbs / 1.5 kg	
	Temperature Sensor		Yes	
Power Consumption		20 W		
SYSTEM CONTROLLER	MODEL		LCLG002	
	Video		Max. Input Resolution: DP: 1920x1080@60Hz / HDMI: 1920x1080@60Hz / DVI-D: 1920x1080@60Hz	
	Interface	Digital (w/ HDCP)	HDMI	Input: 1EA
			DP	Input: 1EA / Output: 1EA
			DVI-D	Input: 1EA
		Comm. Port	RS-232C	Input: 1EA (3.5mm) / Output: 1EA (3.5mm)
			RJ-45	Input: 1EA (without LED indicator) / Output: 1EA (without LED indicator)
			IR Receiver (w/ Light Sensor)	1EA (3.5mm): Used for installation
	USB3.0		1EA	
	LVDS		Output: 1EA	
	Dimensions (W x H x D)		11.5 x 1.6 x 7.6 in / 293 x 40.1 x 193.3 mm	
	Weight (Head)		3.5 lbs / 1.6 kg	
	Temperature Sensor		Yes	
	Light Sensor		Yes	
	Source Selection		HDMI, DVI-D, DP	
	TPC (Temporal Peak luminance Control)		Yes	
	Motion Eye Care		Yes	
Power Consumption		17W		
LG CMS (optional paid software)		Yes		
LG Signage365care (optional paid service)		Yes		
ADAPTER	MODEL		ACC-LATP1	
	Dimensions (W x H x D)		7.2 x 3.4 x 1.1 in / 183 x 86 x 28 mm	
	Weight		1.7 lbs / 0.769 kg	
	Input		100 to 240 Vac, 50-60Hz	
	Output		19.5V/10.8A (210W)	
	Color		White	
	DC output cable		14AWG, 1.5m	
Type		L Type		

