



* 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



Easy Installation

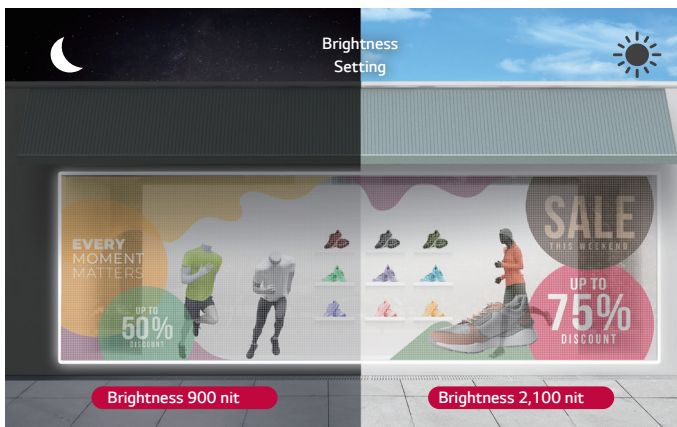
A NATURAL BLEND WITH SPACE



Superb Transparency

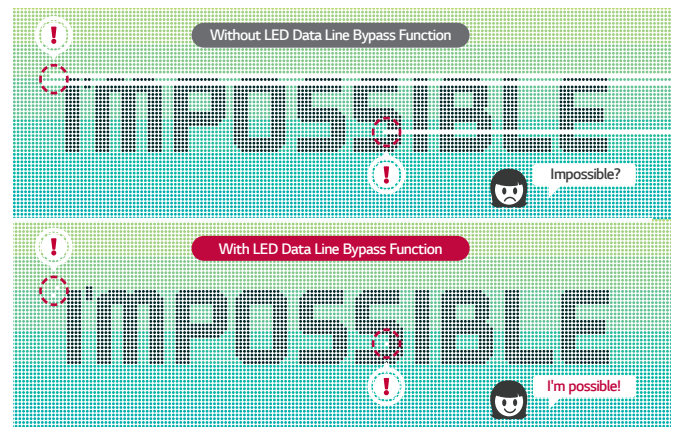
The LG Transparent Color LED Film, which connects each pixel with a thin metal mesh, allows a clear view of the objects behind the product. This maintains a wide-open view while blending smoothly into the existing interior design. Once turned on, the product delivers a stunning, attention-grabbing display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

EYE-CATCHING CONTENT DISPLAY



Enhanced Brightness and Control

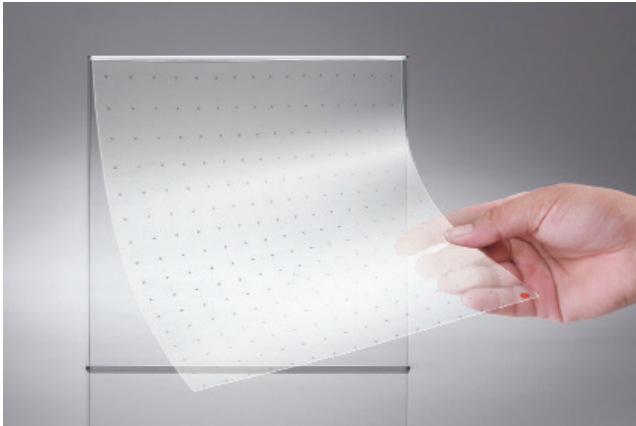
The LED film with smaller pixel pitch (14mm) than its predecessor, and advanced brightness of up to 2,100 nits attracts the attention of passersby while displaying a wide range of colors. Also, the Control Manager solution allows brightness to be set and adjusted by time-of-day to deliver messages with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



Data Lines with Bypass Function

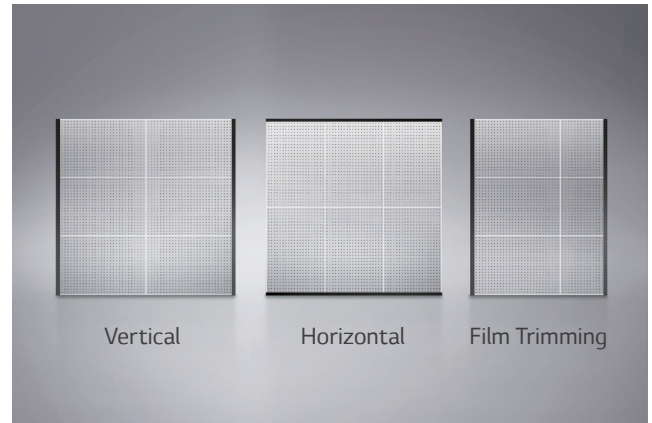
The 14mm transparent LED film consists of LED chips connected with additional bypass data lines. So even if an error occurs with an LED chip, the impact is reduced on the other chips placed in the same row. This new function helps you show text, images, and videos as clearly and reliably as possible.

EASY SPACE INNOVATION



Self-adhesive Film

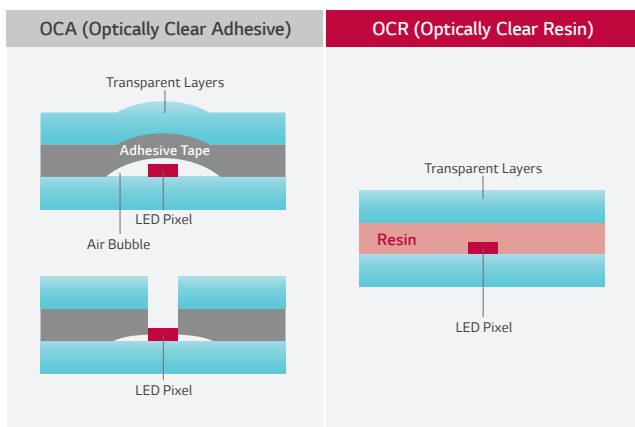
The LG Transparent Color LED film is self-adhesive, so it can be easily attached to the surfaces of existing window glass without the need for any complicated construction.



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.

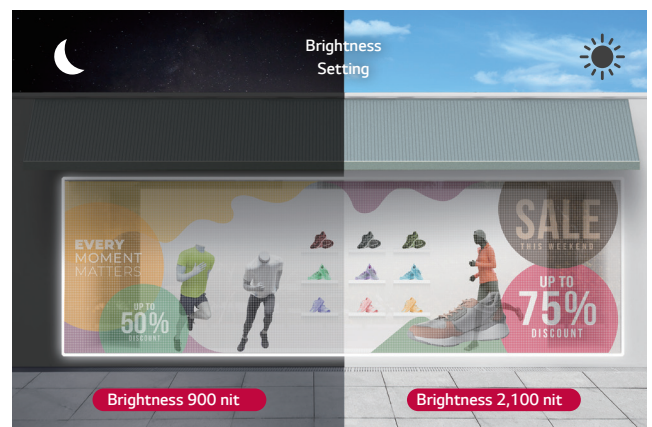
RELIABLE PRODUCT QUALITY & EYE CATCHING CONTENT DISPLAY



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° to 45° temperature and 0 to 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.

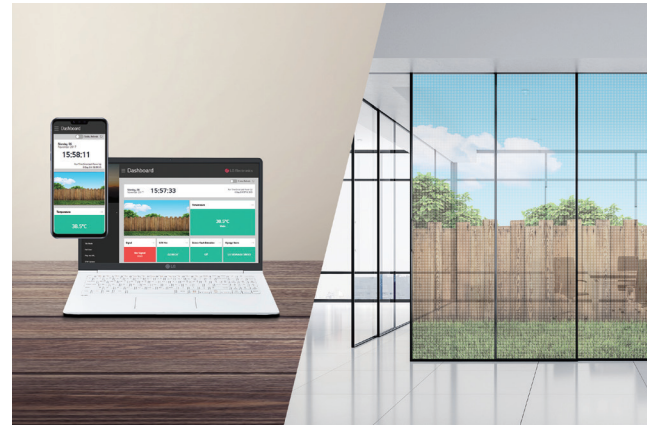
* The examined brightness may differ from testing environments including a photometer.

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

Components*



1. LED Film

2. Bezel Kit

3. Power Adapter

4-1. Unit Controller

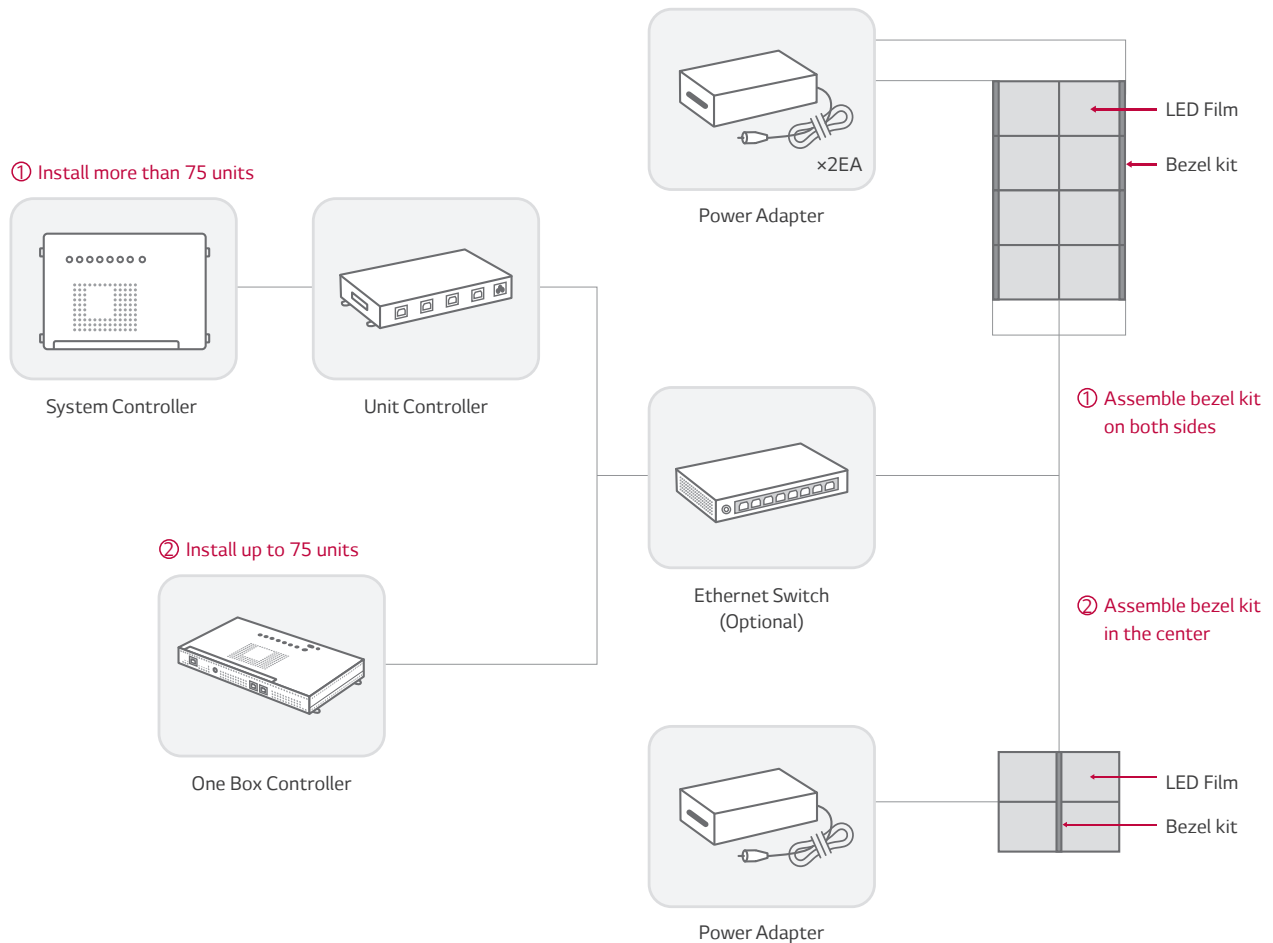
4-2. System Controller

5. One Box Controller**

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

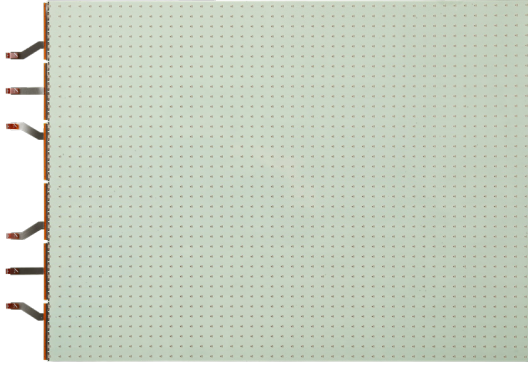
** One Box Controller can replace Unit Controller and System Controller for fewer than 75 sheets of film.

System Connection



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

PRODUCT INFORMATION

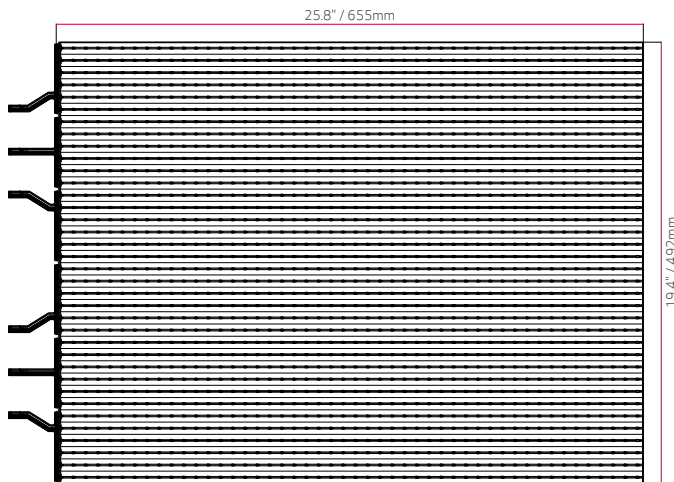


LAT140

Pixel Pitch	14 mm
LED Type	3 in 1 SMD
Brightness	2,100 nits/m ² (Typ.)
Transmittance	53%
Curvature (Concave and Convex)	2,000R

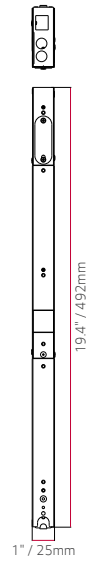
DIMENSIONS

Transparent Color LED Film Panel

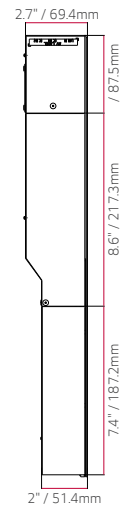
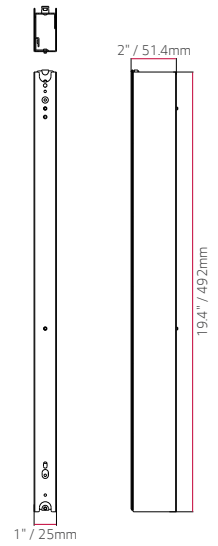


Bezel Kit

1st Bezel



Common Bezel



SPECIFICATIONS

LED FILM	MODEL		LAT140GT83
	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
		Connectivity	Digital (w/ HDCP)
	Comm. Port		RS-232C 3.5mm (x1 In, x1 Out)
			RJ-45 Yes (x1 In, x1 Out) (without LED indicator)
			IR Receiver (w/ Light Sensor) 3.5 mm (used for installation)
	USB3.0		Yes (x1)
	LVDS Out	Yes (x1)	
	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

SYSTEM + UNIT CONTROLLER		MODEL	CTAA-140G (SYSTEM + UNIT SINGLE BOX CONTROLLER)
Resolution			480 x 270
Maximum Transmission Length (CAT5E, CAT6)			100 m
Dimensions (W x H x D)			13.1 x 7.4 x 1.6 in 333 x 186.8 x 40.1 mm
Weight			4.0 lbs. / 1.82 kg
Video	Max. Input Resolution (HDMI)		1920 x 1080 @60Hz
Video Decoding			TBD
Connectivity	Digital (w/ HDCP)	HDMI In	Yes (x1)
		RS-232C In	3.5 mm (x1)
	Comm. Port	RS-232C Out	3.5 mm (x1)
		RJ-45 In	Yes (x1)
		IR Out	Yes (x2) (1EA to connect film with LED Indicator)
		IR Receiver w/ Light Sensor	3.5 mm (used for installation)
USB3.0			Yes (x1)
Temperature Sensor			Yes
Light Sensor			Yes
TPC (Temporal Peak Luminance Control)			Yes
Motion Eye Care			Yes
Power Consumption			30 W
webOS Version			3.0
CMS S/W			SuperSign CMS
Signage365care			Yes
Accessory			Power cord, IR+Bright Sensor (1.5m), 3.5mm-to-RS232C Adapter, ESG, Regulation book, Warranty Card