topic

LED Signage

LED Signage are seamless, bezel free, LED panels that vary in pixel pitch configurations and adapt to practically any indoor or outdoor environment.

01 The Basics Explained

The LED Signage Pixel

A LED Signage pixel is the smallest element of a picture creating a single point of color.

There are two types of LED Signage pixel configurations.

TRUE Pixel Configuration

A True Pixel can use discrete lamp based LEDs utilizing (1) red, (1) green, and (1) blue in a cluster or a single SMD LED that contains all three chips in a single package.

VIRTUAL Pixel Configuration

Virtual pixels are made up of discrete lamp based diodes and utilize a second red in the cluster. This provides the ability to create virtual pixels between the physical pixels by addressing the virtual clusters separately. This happens so quickly the human eye simply sees an additional point of color.

TRUE Pixels Provide

True Pixels provide a clearer picture and better color reproduction vs the same stated virtual resolution

True Pixels provide better contrast due to more black space

True Pixels are easier to calibrate

True Pixels provide better color reproduction over time

Virtual technology can be a budget option vs a higher True Pixel pitch technology

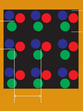
Diodes on a virtual display are evenly spaced and there are more of them.

This can require a longer viewing distance for the resolution offered and may result in a lower contrast.

Pixel Pitch

Pixel Pitch is the distance from the center of a pixel to the center of the adjacent pixel both horizontally and vertically.

The smaller the pixel pitch the clearer the image.



Represents (1) pixel

Represents (1) SMD chip or (1) pixel

02 The Parts

The LED Signage Module

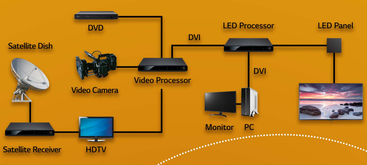
The module is the smallest replaceable section of the face on a LED Signage display.

SMD (Surface Mount Device) that has one each RGB diodes

The module is a printed circuit board with SMDs mounted on it

Individual modules mount to a single cabinet, which also contains power supplies, data distribution

The Display is comprised of multiple cabinets connected to form a seamless surface for a clear image.



The Controller

Using software the controller configures the display, connects to the input signal for pass through, and receives diagnostics from the display for reporting and alerts.

03 Viewing Distance

Viewing Distance Rule of Thumb

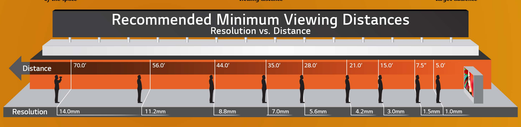
5' back for every 1mm of pixel pitch.
This is a rule of thumb because everyone's eyes react differently. Also, consider the angle when hanging the display in the air.

Keep in Mind

The maximum size of the space

The minimum viewing distance

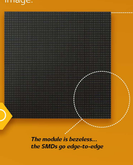
The distance to the target audience



04 Special Features

Seamless Design

LED Signage do not have bezels creating a seamless image.



The module is bezeless... the SMDs go edge-to-edge

Configurations

Versitile mounting systems can configure outside the 16x9 constraints.

Rectangular

Step up or down

Open in the middle

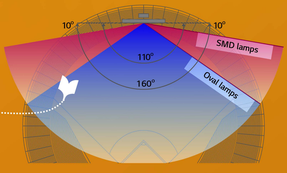
Corner

Color

Color calibration can be done to the pixel level for a more consistent image.

Off-Axis Viewing

Off-Axis viewing is point to half brightness and image degradation.



05 Placement Opportunities

Design Rooms

Museums and Galleries

Control Rooms

Boardrooms

Broadcast

Hospitality

06 ROI

24/7 Operation

Easy to Install

Commercial Grade Warranties

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LG Business Solutions