



The Perfect Blend of Technology & Craftsmanship

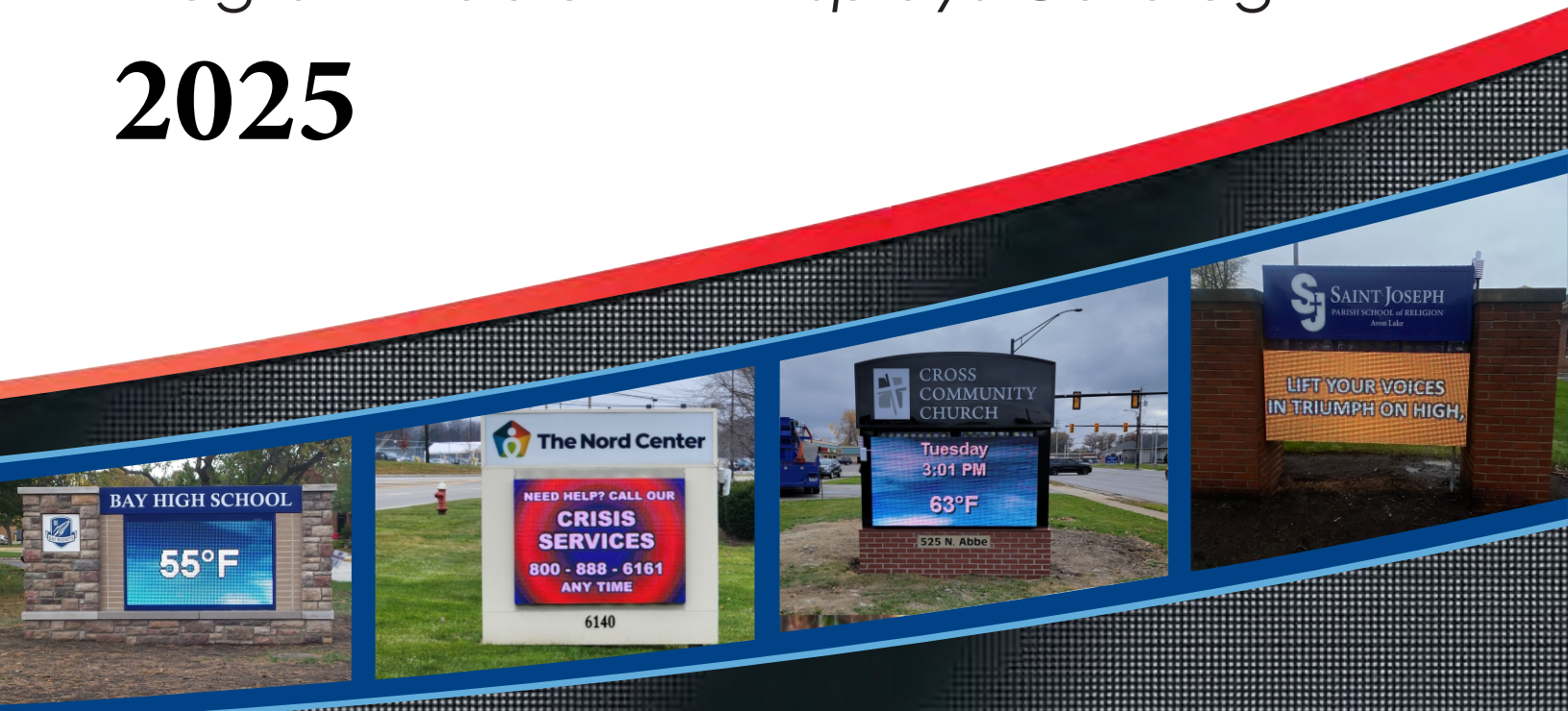
SINCE 1954

# IMPRESS VISION

## Electronic Message Centers

*Programmable LED Displays Catalog*

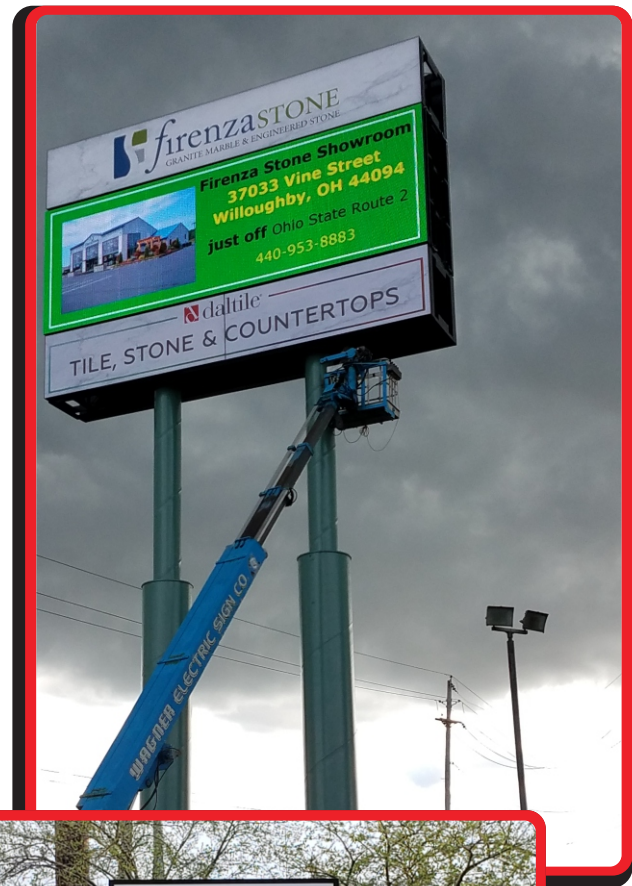
# 2025



# IMPRESS VISION

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Outdoor 16mm Full Color Display



Outdoor 16mm Full Color Display



Outdoor 16mm Full Color Display



## Sales & Marketing

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## {Building world class signs since 1954}

Wagner Electric Sign Co., has been a family-owned company specializing in creative and innovative signage, for over 50 years, and we continue to be an industry leader in the 21st century. From grandfather, to father, to sons, three generations have continued to hone their skills and expertise in communication design and customer service, building breathtaking signs and strong customer relationships.

From a simple LED messaging board to the creation of a full canopy marquee, Wagner Electric Sign Co. focuses the abilities of the design, fabricating and production teams to ensure each project gets the individual attention it deserves. We understand that you cannot sell anything to anyone unless you have their attention – and that is exactly what our signs are designed to do.

Along with each project's unique creative needs, Wagner Electric Sign Co., clearly understands the many different community regulations and permits specific to each job. Coordination of the site surveys, permit documentation, fabrication and installation schedules can present a slippery slope, but our teams work together to create a seamless transition from idea to fabrication to final product.

### **How do we do it? The 3 C's.** *Clear and Constant Communications.*

•  
**Client meeting** – listen and learn: what is their concept, what are their ideas, what are their expectations.

•  
**Design team** – what is the best way for us to make these ideas a reality.

•  
**Client sign-off on design** – using our expertise, we can advise what is possible and what would work best for their needs.

•  
**Project manager** – meet all community regulations and get the necessary permits.

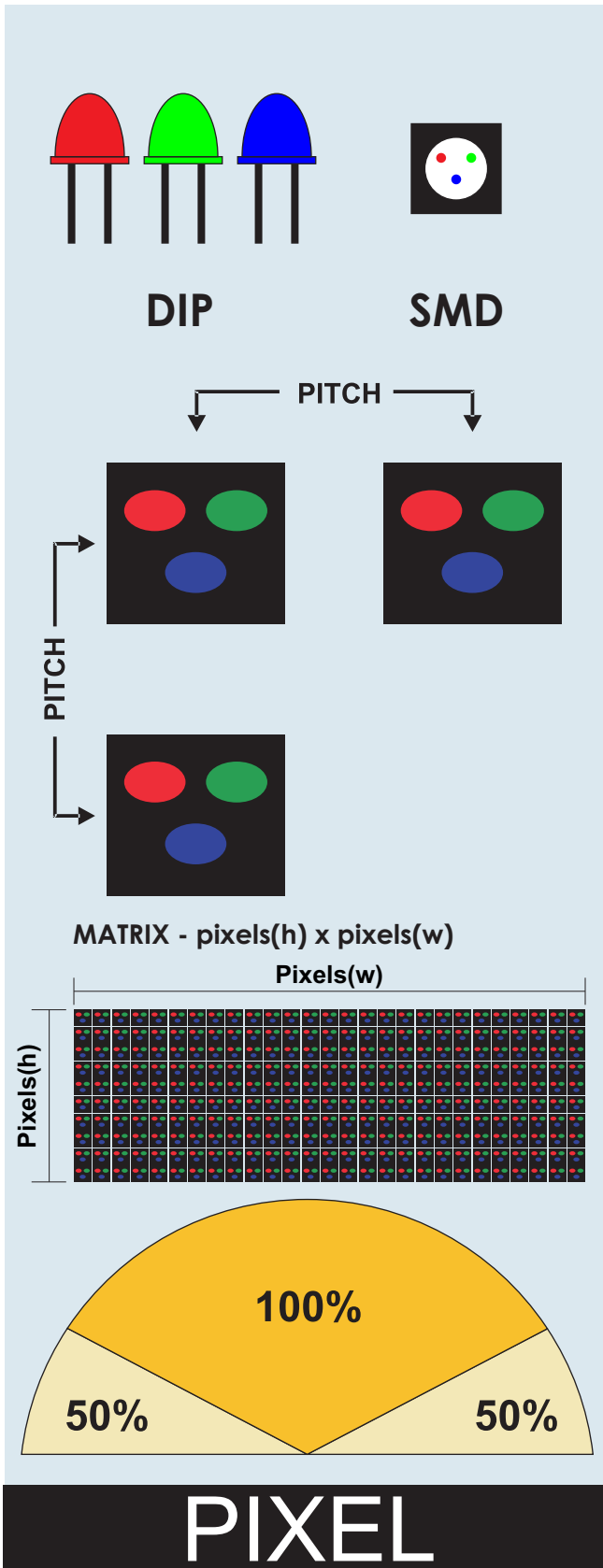
•  
**Fabrication** – understand the client's expectations as depicted in the designs and blueprints.

•  
**Installation** – paying close attention ensuring the success of the finished product.

•  
**Technical support** – available after the project is complete.



### LED IOI



#### **LED (Light Emitting Diode):**

An electronic semiconductor device that emits light when an electric current passes through it. They are considerably more efficient than incandescent bulbs, and rarely burn out. LEDs are used in many applications such as flat-screen video displays, and increasingly as general sources of light

#### **DIP vs. SMD**

These acronyms describe the type of LED. DIP stands for **D**ual **I**n-line **P**ackage while SMD designates that the LED is a **S**urface **M**ount **D**iode. Other than the physical mounting differences of these types of LEDs, there is also a difference in how the pixels are made. DIP LEDs require 3 separate LEDs (red, green, and blue) to make a pixel. SMD LEDs have all three colors in one package and each SMD LED is one pixel.

#### **Pixel:**

The smallest image-forming unit of a video display. In our units, pixels are made up of one red, one green, and one blue LED. A pixel is the grouping of these LEDs. In a DIP display, there are 3 physical LEDs. In a SMD display, all 3 LEDs are inside a single surface mount package. This allows for much higher resolution displays.

#### **Pitch:**

The distance between two adjacent pixels. One of the determining factors in character size and display size; i.e. 20mm.

#### **Matrix:**

The number of pixels that make up the height and the width of a display; i.e. 64 x128.

#### **Viewing Angle:**

The angle which the light output of an LED is perceived at 100% brightness; outside of this angle the visibility is reduced by half.

#### **Brightness (NITS):**

The light output per square meter.

## Resolution

Resolution is a combination of pitch and pixel matrix that defines the quality of an image or video

When determining the resolution of an LED sign the viewing distance and height of the sign (as well as other variables) will determine the pitch and matrix that will work best for you.

## Optimal Viewing

Viewing Distance (feet)	Recommended min. Text Height (inch)	Recommended min. Pitch (mm)	Approx. Viewing Time @ 30 mph (sec)	Approx. Viewing Time @ 55 mph (sec)
30	1	4	1.0	0.5
60	2	4/6	1.5	1.0
90	3	6	2.0	1.0
120	4	6/8	3.0	1.5
150	5	8	3.5	2.0
180	6	8/10	4.5	2.5
210	7	10	5.0	2.5
240	8	10	5.5	3.0
300	10	10	7.0	4.0
360	12	16	8.5	4.5
420	14	16	9.5	5.5
480	16	16	11.0	6.0

\*\*\*All data is an approximation

Although these distances are a general approximation of optimal viewing distance, many factors can affect the appearance of the display including sunlight, weather, display age, along with other natural obstructions.

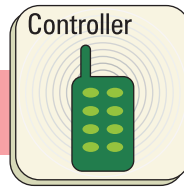
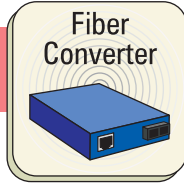
It's probably obvious at this point that the lower the pixel pitch, the higher the resolution and the clearer the display will be.

Any sizes smaller than 10mm all fall within the 30ft. viewing distance outlined in the chart above.

Resolution comparison at a distance of 30' - 90'

\*\*\* This diagram is a representation for the effects of pitch and resolution. It is an artistic rendering for the purpose of example only

**Communication  
Options Key**



## Sign Connection Options

**Communication with Ethernet:**

**Max Distance – 300 ft**

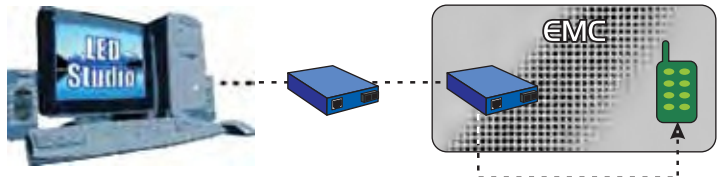
Standard hard-wired connection using CAT 5 cable.



**Communication with Fiber Optic:**

**Max Distance – 1500 ft**

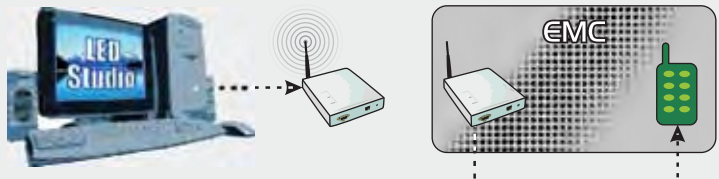
Hard-Wired connection for controlling signs over great distances or areas with high EMF interference.



**Communication with Wireless Ethernet:**

**Max Distance – 0.5 miles**

LINE OF SIGHT  
Wireless option for connecting to high-bandwidth displays.

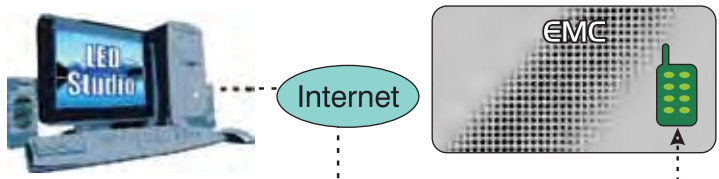


**Communication with a Network:**

Networked (DSL, FIOS, SATCOM):

**Max Distance – Unlimited**

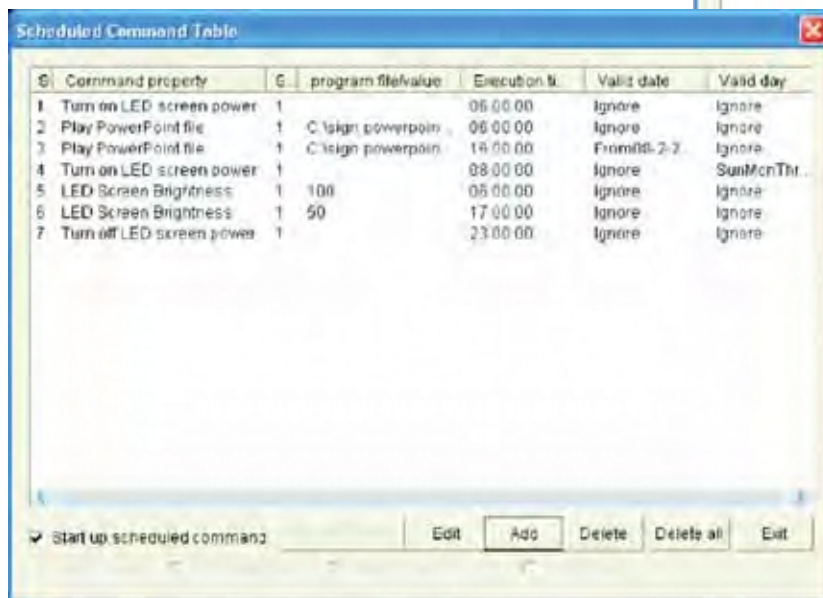
Used for connecting with displays anywhere in the world. Requires Internet connection.



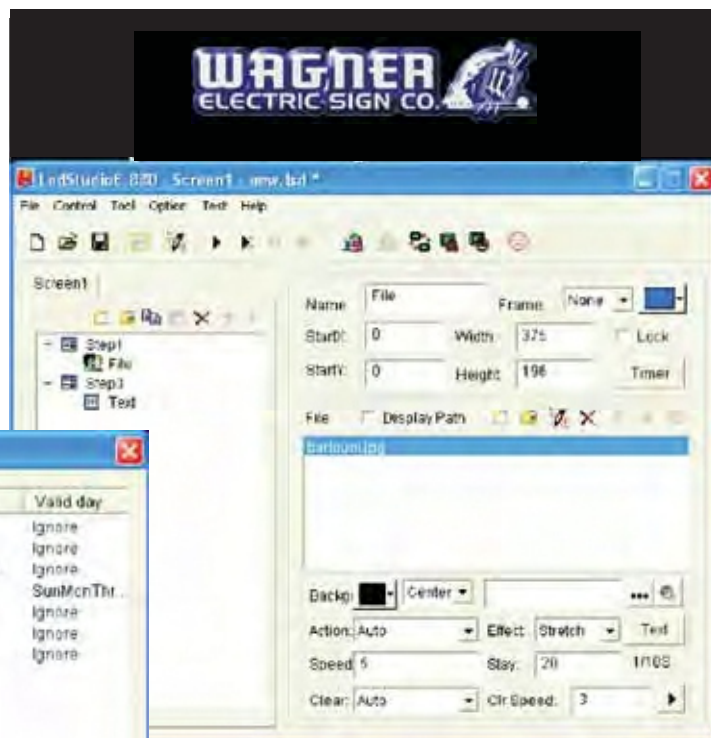
*Colors are not exact and are for visual purposes only*

## Key Features

- Can easily design with Microsoft Office & PowerPoint
- Split screen capability
- Adjust brightness & color on the fly
- Easy to use scheduling software
- Remote access for real-time editing
- Compatibility with almost all picture and video files



S	Command property	G	program file/value	Execution ti.	Valid date	Valid day
1	Turn on LED screen power	1		06:00:00	ignore	ignore
2	Play PowerPoint file	1	C:\sign\powerpoint	06:00:00	ignore	ignore
3	Play PowerPoint file	1	C:\sign\powerpoint	14:00:00	From: 10-2-2	ignore
4	Turn on LED screen power	1		08:00:00	ignore	SunMonThr...
5	LED Screen Brightness	1	100	06:00:00	ignore	ignore
6	LED Screen Brightness	1	50	17:00:00	ignore	ignore
7	Turn off LED screen power	1		23:00:00	ignore	ignore



Compatibility with Microsoft Office makes creating and sending messages to a sign quick and easy. PowerPoint is a powerful tool for creating custom animated messages with images and word art.

Scheduling is made easy with the built-in schedule table. Here you can schedule dates and times for specific messages as well as changing brightness of the LEDs for day and night use and turning the LED screen on or off.

Remote access allows users to send new files to a controlling computer as well as update the schedule. It also allows real-time display of the controlling computer to view or change the message that is currently playing.

LED Studio can play any type of picture file (.bmp, .jpeg, .gif, .png, .etc.) and any type of video (.avi, .mpeg, .wmv, .etc.). Other file types that are playable with LED Studio include .txt, .exe, .swf, and .html.

LED Studio has the ability to split the screen into multiple sections. This allows you to put a static image or company logo on one part of the screen while the other part displays dynamic text animations or the time and temperature.

Brightness and color contrast can be changed on the fly through the setup options in LED Studio. Test patterns are built in to check the brightness and contrast of the sign.



## {Quality from start to finish}

Here at Wagner Electric Sign Co., we have advanced equipment to ensure the excellent quality of our products. Through many years of development we have held a leading position domestically; we lead in aspects such as on-the-spot management, quality control, technical development of mechanisms and audits recording management and personnel appraisal systems within the LED industry.

### **The Reliability Test for Semi-finished Products**

Before sealing semi-finished modules, and after the quality check inspection, more than 48 hours aging is completed in a high temperature environment for all of our products.

### **The Waterproof Test**

During the rainy season, your outdoor LED displays are subject to intense atmospheric conditions from pouring rain to intense humidity. We perform a high-pressure water spray test on all of our products to ensure your display is waterproof and protected from the elements.

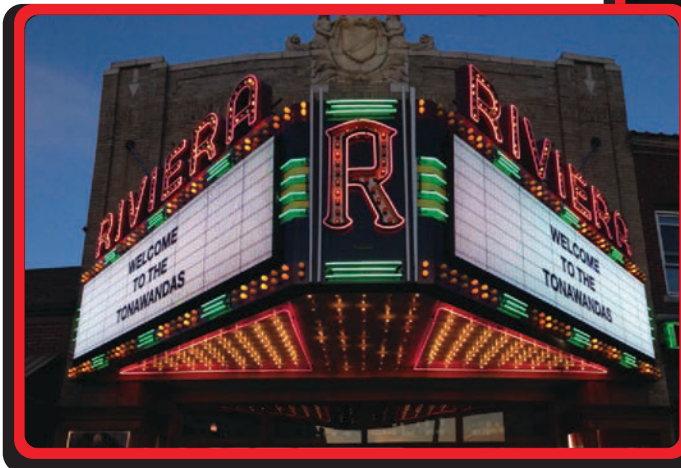
### **The Reliability Test for Finished Products**

When assembling the finished modules within the LED cabinets and simulation on-the-spot whole panel assembly, we continue aging for 48 hours; during which, if no defects are found, the finished product can be moved forward to sign integration and installation.

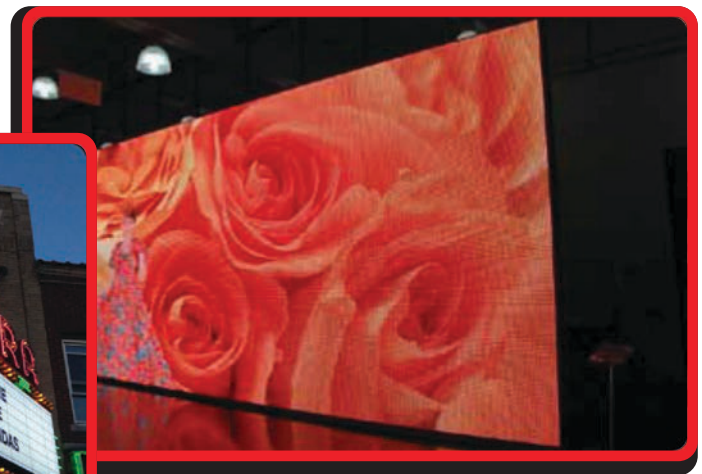
### **The Anti-Corrosion Test**

In order to ensure the reliability of anti-corrosion on the LED display cabinets, we preform salt-stream tests on all of our product lines during their production and before final delivery.

**5 year**  
limited warranty



Outdoor Full Color Display



Indoor Run-in-Test Equipment

## Features

- **Sealed water tight LED modules**  
By creating a water tight sign we ensure that your investment will be protected from moisture and unpredictable weather. This keeps your sign running smoothly, and for years to come.
- **True and vibrant color**  
Our display panels are among the few in the industry with a high level of consistency and uniformity of color. Our displays absorb extra LED reflected light as well as removing dark and overlapping shadows. Able to create as many as 256 million colors your palette is limited only by your imagination.
- **Sturdy construction**  
Built from high quality extruded aluminum. Each cabinet is precision cut and welded to enhance strength. We finish it off with a black powder coated finish to resist corrosion from the elements and time.
- **Easy to maintain**  
All displays can be configured for either front or rear service. Making maintenance quick and easy. We have specialists on call if you run into any problems.
- **Efficient and low energy use**  
Our LED's provide higher brightness combined with less energy usage.
- **Industry leading warranty**  
Five year limited warranty with each display will have you confident that you made a safe and valuable investment.

## Installation Profile



Module



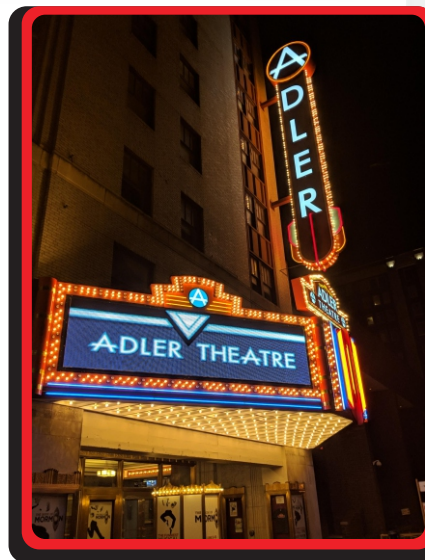
Case Body



Quick & Simple  
Installation Framework



Outdoor 16mm Full Color Display



Outdoor 16mm Full Color Display

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Module



Case Body



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Installation Framework



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limited warranty

# About LED Displays

## Specifications

Specifications	General Specifications for currently available models
Available Sizes/Pixel Pitch	Indoor: 4, 5, 6, & 10mm SMD Outdoor: 4, 5, 6, 8, & 10mm SMD, 10mm & 16mm DIP
Pixel Composition	1 Red, 1 Green, 1 Blue
Display Colors	Up to 291 Trillion
Brightness	≥ 8000cd/m <sup>2</sup> up to 10250cd/m <sup>2</sup> outdoor DIP - 1200nit Indoor SMD
Viewing Angle	Horizontal: ≥ 160° ; Vertical: ≥ 90° outdoor DIP - 120°/120° Indoor SMD
Frames Per Second	≥ 60fps
Refresh Frequency	≥ 400Hz/Sec
Brightness Adjustment	Automatic or Manual
Control Method	Controlled by PC, synchronized to display
Video Input	VGA mapped / NTSC / PAL
Communication Cable	Transmit distance between PC and screen: >100m Fiber Optics. < 100m CAT5/6
Lifespan	≥ 100,000 hours
Max. Power Consumption	≤ 1100w/m <sup>2</sup> s, Average power is 60% of Max. power
Net Weight/sqm	Approx. 85kg
Input Voltage	AC220V/50Hz ±10% or AC110V/60Hz ± 10%
Operating Environment	-20°C to +60°C Humidity: 10% RH to 90% RH
Operating System	Windows 7/10 , in - phase or asynchronous
Intelligent Control	Automatic power on/off and remote power on/off function
Video Display Function	Synchronized display of text, graphics, pictures, signs, flashes, and any signal from TV, VCD, DVD, Camera, and scanner and so on, support PAL, NTSC.



## Billboards are going Digital!

- Expose your brand to the masses
- Generate thousands of views each day
- Customize ad campaigns for brand recall and results
- Change ads as often as any campaign requires

## ImpressionVision 2X Series

Pitch	Matrix	Dimensions	Net Weight (w/o AC)	Est. Shipping Weight	Face Peak Power
16mm	208 x 720	13.6' x 47.2' (4160 mm x 14400 mm)	8,400 lbs	10,920 lbs	<50 kw
	192 x 640	13.85' x 46.16'	8,400 lbs	10,920 lbs	<41 kw

