

Expertise matters with LED video displays

As popularity of LED video has grown, so has the number of video display products. The amount of display options, technical language and costs involved can be overwhelming. It can leave buyers wondering how they know they're investing in a quality product. This is where the expertise of a company providing the video display can make a significant difference.

Understand where quality stands out

There are many factors important to the performance of a video display. The following touches on five items to be aware of when assessing the quality of a video display.

1. LED pixel pitch

To ensure an optimal viewing experience, it's helpful to understand how pixel pitch factors in. Pitch is the spacing between LEDs. It's this spacing which helps determine the overall resolution and minimum recommended viewing distance for the display.

The closer together the pixels are positioned or lower the pitch distance measurement is, the higher the display resolution. High resolution means as viewers get closer to the display, the crisper the content looks. Whereas, lower resolution maintains crisp images at great distance, but is not as clear up close.

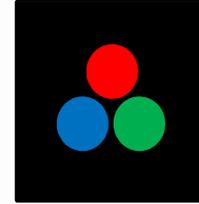
LED pixel pitch	Minimum viewing distance
16mm	50ft
12mm	40ft
10mm	32ft
8mm	26ft
6mm	20ft
4mm	13ft

Viewing distance isn't the only consideration. The intended use and type of content to be displayed should be factored into the discussion. If live video feeds or pre-recorded content will be used, a higher pixel pitch may be recommended to ensure it's all easily viewed with maximum clarity.

2. LED type: SMT vs DIP

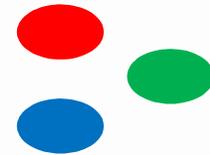
All LED pixels are built from a single red, blue, and green LED. The two main LED types found in most displays in the market are Surface Mount Technology (SMT) and Dual Inline Package (DIP). The correct type largely depends on how the display is to be used and whether it's indoors or out.

SMT: this type of LED is most often used in low pitch displays, i.e. 8mm, 6mm and 4mm, making it great for the indoors. Each pixel is made from a single component containing three (red, blue, green) LEDs. This all-in-one package allows individual pixels to be placed very close together, resulting in lower pitch. It also offers better color blending since the individual LEDs are placed so close to each other within the single component.



SMT LED PIXEL

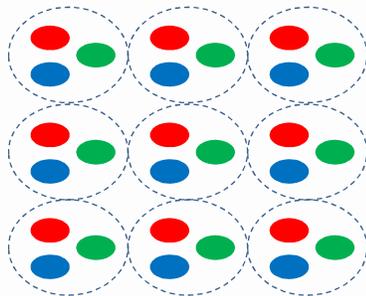
DIP: a DIP LED type is typically used in higher pitch displays, i.e. 10mm, 12mm and 16mm. Each pixel is made from an individual LED which leads to higher pitch. Additionally, individual LEDs are often larger. The result is greater brightness to the display, ideal for the outdoors. However, with each pixel spaced further apart colour blending can be challenging. When closer than the recommended minimum viewing distance it is possible to see the individual color components.



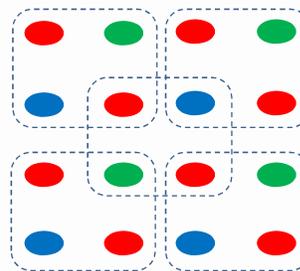
DIP LED PIXEL

3. Pixel configuration: virtual pixel vs true pixel

There are LED manufacturers who offer “virtual pixel” configuration on DIP displays. It's important to understand how that differs from a “true pixel” configuration.



True pixel configuration:
each pixel contains an
individual red, blue, and
green LED



Virtual pixel
configuration: each pixel
shares the blue and
green LEDs

In displays with true pixel configuration, each pixel contains an individual red, blue and green LED. The pixels aren't shared which means more individual LEDs are included. In contrast, in a virtual pixel configuration, each LED pixel shares individual LEDs. Often they share blue and green with a configuration around it. Virtual pixel allows the manufacturer to use fewer LEDs which may result in a lower overall cost. However, this lower cost comes at the risk of having fuzzier images, especially at a distance, as virtual pixel can have poor color blending and contrast because the individual LEDs are shared.

4. Content control and software

It's the content that really brings a video display to life. Captivating viewing experience, unlimited advertising spots, multiple sport versatility and crowd energizing entertainment ... the ways video can add to the excitement is endless. Look at what a company offers to help users incorporate wide ranges of content types, feeds, graphics and animations. From providing content control software to training users on how to maximize a displays potential, content control options are important to include.

5. After sale service

Interest in how the video performs shouldn't end at installation. To help ensure a display is always ready to entertain, look for a company who has designed the product in-house and can manufacture LED modules for years to come. Unexpected damage or module malfunctions can occur. Dealing with a company who can repair and service, well into the future, is very important. From including spare parts to providing local service or 24/7 phone support, the after sale service and warranty options often reflect a company willingness to stand behind the quality of their product.

Captivate fans for years to come

A LED video display is a significant investment, and a long-term one at that. Talk with companies who have history of video projects, great service reputation, in-house technical expertise and helpful self-funding ideas. Their value-added insights can provide greater confidence the investment is being made in a quality display that will dazzle fans for years to come.



About OES Scoreboards

OES Scoreboards has a long history of partnering with schools and facilities across North America to bring our pro sports experience to venues. We're renowned for our exceptional customer service, talented in-house engineers and expertise in providing high-quality, scalable, custom video displays, scoreboards & timing solutions for Pro sports venues, universities and colleges, K-12 schools and community centers. 1-877-652-5833 | sales@oes-inc.com | www.oes-scoreboards.com