

Frequently Asked Questions

Q: I want an LED Billboard, but I am not sure about the technology and what will be suitable for my needs?

A: How To Select Your LED Display.

Indoor or Outdoor?

Indoor Displays are to be used only for interior application and generally do not need to be as bright as an Outdoor system. If your application is for a window display, then an outdoor system should be considered. Outdoor Displays are designed to withstand outdoor weather conditions and are bright enough to be visible in any day light condition.

Viewing Distance:

There are a number of factors to take into consideration when you decide on what display will suit the viewers of your display; pitch, resolution, brightness, viewing angle and budget. It may be necessary to strike a good balance between the above factors to achieve the display that you want.

Pitch:

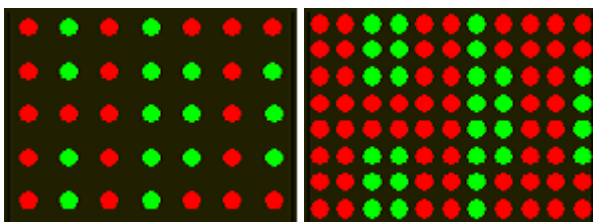
The distance from the centre of a pixel to the centre of the next pixel. Pitch influences the resolution of a LED display that shows images. A small pitch gives a higher resolution. A large pitch translates to larger text/character sizes.



Screen resolution:

The key to a quality image on a large-format video display is to buy the highest resolution you can afford.

A screen's resolution, is defined by its total number of vertical and horizontal pixels (dots that form the picture). See samples below:



10mm pitch results in a 8x11 matrix area matrix area.

16mm pitch results in a 5x7

Viewing angle

Viewing angle is one of the most confusing terms regarding LEDs. Most people assume that the viewing angle is the angle at which you can view an LED's light. In reality, viewing angle

is related to brightness. The LED industry defines viewing angle as the full angle at which brightness is half of the brightness from dead centre. More scientifically, if θ (angle theta) is the angle from off centre (0°) where the LED's brightness is half, then 2θ is defined as the full viewing angle, as represented by Figure 3 below. The entire yellow portion represents a 70° viewing angle, while the orange portion represents a 90° viewing angle.

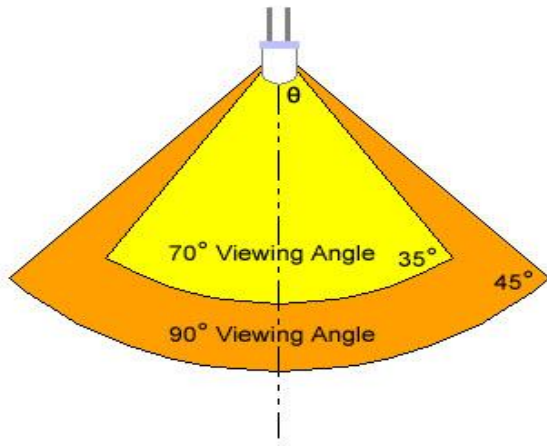


Figure 3: LED Viewing Angle. brightness based on a 70° viewing

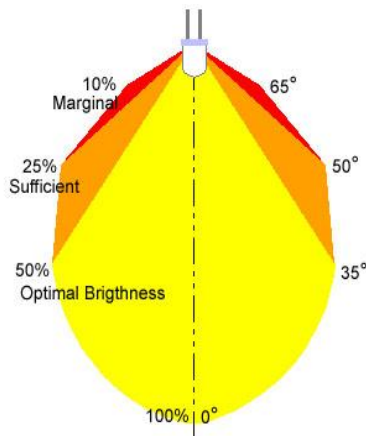


Figure 4: Example angle.

Figure 4 illustrates how brightness is influenced by a viewing angle of 70° . An LED with a brightness of 8,000 mcd (millicandela) viewed at 50° from off centre will be just as bright as an LED with a brightness of 2,000 mcd viewed head on. While an LED is not as bright when viewed at an angle beyond the stated viewing angle, there is still sufficient brightness to see the LED.

6mm or less best	indoor	close distance ok	outdoor	small size	Full video
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8mm excellent	indoor	close distance ok	outdoor	small size	Video, Text Animation
10mm very Good	indoor	best looking 40 ft. away	outdoor	small size	Video, Text Animation
12.0mm Good	Indoor/Outdoor		outdoor	small/medium size	Video, Text Animation
16mm very high	freeway	city traffic	pedestrian	stadium	concert video
20mm high	freeway	city traffic	pedestrian	stadium	concert video
25mm medium	freeway	city traffic	pedestrian	stadium	text, animation video
32mm low	freeway			stadium	text, graphic animation
38mm very low	freeway	text for city traffic	outdoor		text

LED displays are usually built by joining a number of cases together to make the display. Because of the different pitches the case size can vary therefore you will get different display sizes for different pitches. As an example say you have a requirement for a 6 (H) x 4 (V) metre display, using MVS-U16F1 16mm pitch the size of display would be 5.12 (H) x 3.84 (V) *case size 1024mm x 768mm*. Where as using MVS-U25F1 the size of the display would be 6 (H) x 4(V) *case size 1200mm x 8mm*.



A 6mm LED Case.

Now all you have to do is type in the Horizontal and vertical dimensions of your billboard, your will get the actual size and the square metres of your Billboard. Tip: type slightly greater measurements to get as close as possible to the size you require.