

# How to Select an L.E.D. Message Display!



1. **Exterior L.E.D. displays**- are designed to withstand weather conditions and are visible in direct sunlight. Exterior L.E.D. displays are 10 to 100 times brighter than interior signs.

2. **Viewing Distance**- A rule of thumb in the sign industry is that for every inch of character height, the maximum viewing distance increases by 50 feet. For instance, a 2" character can be read from a maximum of 100 feet and a 14" character can be read from a maximum of 700 feet.

3. **Character Sizes:**

- > 20" Freeway
- 10" – 20" Highway
- 8" – 14" Surface Streets
- <8" Slow or Stopped Traffic/Kiosk/Pedestrian

4. **Characters per Line**- The numbers of characters on a line is determined by the number of pixels across the sign. Assume an 80 column sign will display 13 characters ( $80/6 = 13.3$ ).

5. **How many lines, how many characters per line?** – As you plan your sign requirements, write down the message that you intend to display on your sign. Count the characters that you expect to display on each line. This will help you to decide on the number of characters per line that will best suit your application. Don't forget that you can scroll the information, so you don't have to get everything on one line or in one frame.

6. **Monochrome or Full Color**- For simple informational signs, monochrome is usually sufficient. Red is the most common color. Green and amber are considered softer colors and may be more appropriate for some environments. Blue or green, although more expensive, can be used where a logo or school color is being matched. Full color is for applications where you are trying to get the attention of the viewer or where detailed images, animations or videos are being displayed.

7. **Graphics vs. Text**- Text only applications can be accomplished with signs with as little one line of text. Graphics require more height to accurately display logos and animations. Graphics look best when sign is at least 24 pixels high.

Message Type	Minimum	Typical
Text	8 x 64	16 x 96
Graphics	24 x 64	32 x 96
Animations	16 x 64	32 x 96
Photo	80 x 128	96 x 144
Video	96 x 128	144 x 160

## Frequently asked questions about led message centers:

1. **What's an led?**- An led is a semiconductor device that emits light when a current is passed through it. LED technology is capable of producing red, green, blue, amber, and other light colors. LED's are highly reliable and consume very little power.

2. **What's a pixel?**- A pixel is a point of light on an LED sign. Pixels on outdoor signs usually consist of multiple LED's. Full color (RGB) pixels are made up of a combination of red, green, and blue LED's. Your eye blends the 3 colors together to form all the colors.

3. **What's a matrix?**- An LED sign is made up of a matrix of pixels. The matrix is the number of pixels high by the numbers of pixels wide. For example, a 16 x 80 matrix means that the LED sign has 16 pixels per column vertically and 80 pixels per row horizontally.

4. **How often do I have to change the bulbs?**- You don't. There are no bulbs. LED's are semiconductor devices like microprocessors. Bulbs burn out because they have filaments. The filaments break due to the vibration from traffic and due to changes in temperature. LED's have no filaments and therefore are not subject to that failure mode.

5. **Is it difficult to program the sign?**- Not at all. Anybody that can operate a simple computer program (such as a word processor) will have no problem sending messages to the sign.

6. **How do I install this sign?**- Usually, a local sign company installs the display, and it is crucial that they are UL Certified with the ability to install the sign and controls correctly.