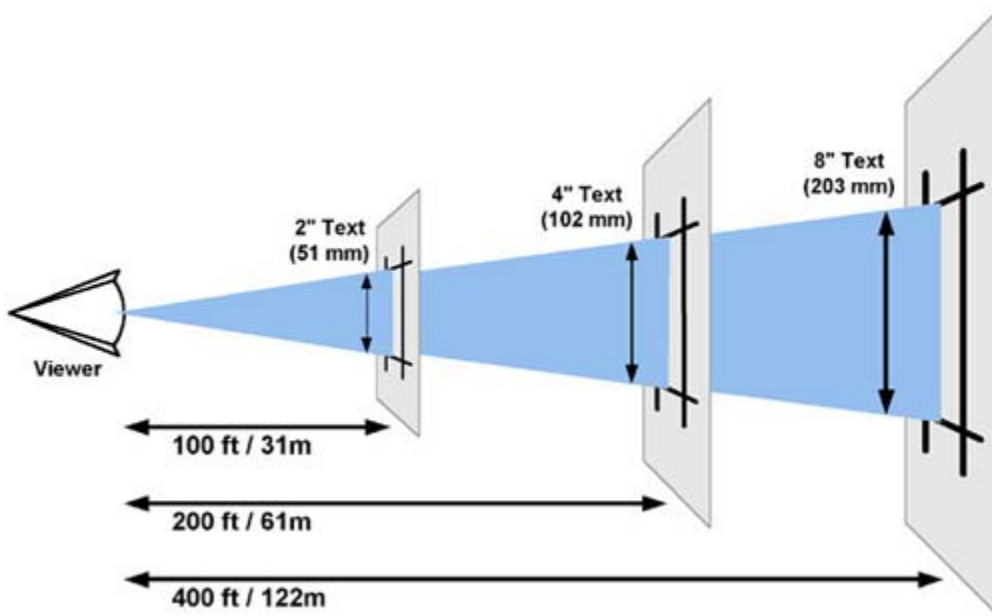


Viewing Distance and Time - http://www.grandwell.com/viewing_distance.php

Viewing distance is one of the most important factors needed to determine the correct size of most electronic signs.

As a general rule: **1 inch of text is viewable up to 50 feet away¹** or **25mm of text is viewable up to 15m away**. The following diagram illustrates at what distance and character size that a stationary audience will recognize and understand the content of an electronic sign.



However, if the target audience is moving, then another factor, time, is required. Based on Grandwell's experience and research, an average of **at least three to four seconds** is required for a moving audience to adequately recognize and comprehend six to eight grouping of content on an electronic sign². The following chart lists the maximum time an audience will have to view an electronic sign with specific characters size. For example, an audience will have three seconds or less to view electronic signs with four inches of text. If the electronic signs have too much content, than the reader will not have sufficient time to comprehend the entire content.

As a summary:

- 2 inch text works well in most foot traffic areas, such as for indoor applications.
- 4 to 6 inch text is ideal for 45mph or under traffic, such as outdoor church and school applications.
- 8 inch text or larger works is suited for most outdoor applications where traffic is 60mph or slower.

Character Size		Max. Viewing Distance		Max. Viewing Time (seconds) ³				
inch	mm	foot	meter	25mph / 40kph	35mph / 56kph	45mph / 72kph	55mph / 89kph	65mph / 104kph
2	51	100	31	2.7	1.9	1.5	1.2	1.0
4	102	200	61	5.5	3.9	3.0	2.5	2.1
5	127	250	76	6.8	4.9	3.8	3.1	2.6
6	152	300	91	8.2	5.8	4.5	3.7	3.1
8	203	400	122	10.9	7.8	6.1	5.0	4.2
9	229	450	137	12.3	8.8	6.8	5.6	4.7
10	254	500	152	13.6	9.7	7.6	6.2	5.2
12	305	600	183	16.4	11.7	9.1	7.4	6.3
16	406	800	244	21.8	15.6	12.1	9.9	8.4
20	508	1,000	305	27.3	19.5	15.2	12.4	10.5
24	610	1,200	366	32.7	23.4	18.2	14.9	12.6
36	914	1,800	549	49.1	35.1	27.3	22.3	18.9
48	1,200	2,400	732	65.5	46.8	36.4	29.8	25.2
60	1,542	3,000	914	81.8	58.4	45.5	37.2	31.5

Note:

1. LEDs emit light allowing the content to be visible further away than the same content on standard reflective surfaces.
2. Other factors, such as content size, traffic, distractions, weather, lighting conditions, etc. will affect the time required.
3. The values listed in the chart does not take into consideration the minimum required visibility distance (MRVD).
4. The information provided should not be taken as the definitive source on electronic sign visibility and viewing distance.