



VISIBILITY OF LED CLOCK DISPLAYS

Visibility of LED (Light Emitting Diode) clock displays and the distances that they can be seen is a very subjective matter. In addition, other factors associated with the specific installation must be considered. In particular the viewer's eyesight, digit size, ambient light and digit color are the most important. We offer this discussion as a guide for helping estimate the LED digit size that may be required for a particular application.

Masterclock offers clock displays with digit sizes ranging from .6"–1.5cm to 8"- 20cm in size. All clocks use diffused LED digits, which appear as (7 segment) lighted bars. The .6"–1.5cm, 2.3" –5.8cm, 4"–10cm, and 7" –18cm clocks are available with red, amber, green, or blue LEDs.

Typically (to most people) the red LED displays are the most visible however under lower light conditions the amber and green can be more pleasing and less distracting to the eye.

A guide, when deciding which size clock is best, is 1" of LED for every 50 feet of viewing distance. Therefore, a .6"–1.5cm display could be considered for distance up 30'–9m, a 2.3" –5.8cm display for distances of 100'–30m, etc.

Consider however, that at these distances, a person would have to stop and concentrate to see the displays. If the user needs to know the time by simply glancing at the clock, the distance to size ratio should be cut (at least) in half. Therefore, if a person were to glance at a clock from 50-15m feet away, he would need a 2.3"–5.8cm display, at 100'-30m he would need a 4"–10cm display and so forth. These distance estimates will be severely compromised by ambient light conditions and digit color. If the application is critical we suggest that you experiment with printed digits, or better, a sample display, and verify which size is adequate for your application.

Digit Size	Maximum Viewing Distance	Typical Viewing Distance
.6"-1.5cm	30'-9m	15'-5m
2.3-5.8cm	100'-30m	50'-15m
4"-10cm	200'-60m	100'-30m
7"-18cm	350'-100m	175'-50m