

# IDEAL-LUME® LED INSTALLATION TIPS



## OBJECTIVE:

Understanding the goal and fundamental principles of TV viewing environment lighting will guide the user in achieving the best mounting location and amount of illumination. The Society of Motion Picture and Television Engineers (SMPTE) and the International Organization for Standardization (ISO) recommendation that the level of ambient illumination should be substantially lower than the brightest white on the screen. For video monitors, SMPTE specifies less than 10%.

The International Telecommunications Union (ITU) has recommended ambient light level for video professionals mastering high dynamic range programs. They specify five "nits" (candelas per square meter), which requires a suitable light meter to measure.

Illumination should originate from behind the frontal plane of the screen and the light source should not directly shine in the eyes of the viewer. Typically, the illumination should be directed onto the wall or surrounding surfaces adjacent to and behind the display. Try to achieve an even light spread without hot spots or intense concentrations of light on the wall.

Surrounding surfaces should ideally be neutral in color, or as near neutral as possible, to preserve accurate color perception of the image on the screen. Neutral can be any shade of gray, or variety of shades from black to white. The standard reference for neutral used in professional display environments is from the Munsell Color Order System. Munsell Neutral Value Scale samples are available from our online store at: [http://cinemaquestinc.com/ideal\\_viewing.htm](http://cinemaquestinc.com/ideal_viewing.htm). These samples can be used to match paints, stains or fabrics.

## MOUNTING METHODS:

*Ideal-Lume* viewing environment luminaires can be placed on the floor or shelf behind the display, or laid on top of some older TVs behind a center channel speaker. Some experimentation is usually necessary to achieve the right level of illumination and even spread of the light on the wall behind the TV. There are so many display types in use today, plus variations in installations, that we are prevented from specifying exact mounting locations. Mounting the product in close proximity to interconnect cabling, or the display itself, will not cause electrical interference in the TV picture or speakers.

Self-adhesive hook and loop fastener strips are provided for attaching the fixture to the back of the TV cabinet or other smooth surface. The adhesive used is a special industrial grade that will withstand high temperatures. Use the alcohol swabs included to clean the surfaces where the strips will be attached. This will insure a long-lasting bond. **CAUTION may not stick reliably to some TV cabinets even after cleaning the surface.**

Special metal mounting clips, screws and drywall anchors are included if anchoring the fixture to the wall, or the cabinetry, is a preferred alternative. We do not recommend drilling holes in the back of the display. Most displays do not allow for this and drill bits or screws may contact vital components inside the cabinet.

Some older displays have screws along the cabinet back that can provide a method for suspending the fixture. Try backing out two widely-spaced screws a few turns. The ends of two long strings or wires can be wrapped around the screws a couple of turns. Re-tighten the screws to clamp the end of the string or wire in place. The free ends of the strings or wires can then be formed into a loop and tied at various points to vary the height of the loop. Slip the loops over the opposite ends of the fixture so that it hangs horizontally against the back of the display. Some TVs have ventilation holes that can serve as attachment points for this technique as well.

Square self-adhesive zip tie mounts are included. These can be used for ties or wires on a TV with a smooth back. They have a hole in their center for a screw, if that method is determined to be more secure.

Self-adhesive cord management clips are also included for keeping extra cord length out of view. They also include holes for screws if attaching them to surfaces that can be drilled.

Two fixtures can be interconnected with a special 1 meter cable available from our online store. One power cord with plug will be left over in this case. Additional connecting cords and fixtures can be ordered if more fixtures are desired for an installation.

A small adapter is also included that will allow two fixtures to be attached to each other end-to-end, for doubling the light output. One application for this method might be for very large TVs mounted in front of a dark wall. Up to twenty fixtures can be connected together using the adapters and/or interconnect cables.

Be sure to mount the fixtures in a manner which allows you to reach the power switch and adjust the included electrical dimmer after mounting. Contact us by phone or e-mail if you need additional advice: 303-740-7278 or [info@cinemaquestinc.com](mailto:info@cinemaquestinc.com).

## DIMMING THE LIGHT:

To adjust the amount of light on the wall, simply adjust the dimmer until the illumination is correct on the wall. Less than 10% of the brightest white on the TV screen is recommended. A precise method for judging this light level is to display a backlight level test pattern on the screen from one of the popular home theater setup discs on the market. These are available from our online store or may be available from a local library. Once the picture is adjusted for dark room viewing, the bias light level can be left as-is after adjusting the dimmer. Bias lighting does not vary with changing scene content throughout a program.

## SWITCHING THE LIGHT ON AND OFF:

Larger TVs may make it difficult to reach the power switch on the light. The product can be plugged into switched outlets on the back of some AV components, such as surround receivers. You may want to consider one of the remotely controlled on/off switch solutions presented on our web site and online store: <http://cinemaquestinc.com/x-10.htm>.