

Ideal-Lume® Pro

The ideal viewing environment luminaire for professional video monitors.

Product Information Sheet

Model #LY-7WLED-D65, 120 volt, 50/60 Hz (international users may require a step-down voltage converter)

Color: Black

Size: L23.5" x W1" x H1.5"

Lamp: 36 custom LED array, CIE D65 spectrum, CCT 6500K, 97 CRI., 50,000 hour (approximate), 7 Watts

Warranty: 5 years (limited) on fixture and included electric dimmer (please contact our office for help)

Other features:

- Extruded aluminum fixture body

- Plug-in, electric, LED compatible dimmer, for variable control of illumination (150 Watt capacity, 60Hz only)

- Custom LED chips, CIE D65 spectral power distribution (well within CIE recommended spectrum radius tolerance of 0.015 and ISO chromaticity tolerance of 0.005 x/y)

- Custom fixture designed in the USA

- Side-mounted, on/off rocker switch

- Linkable, using optional 1 meter cables (will interconnect for longer runs), up to 200 Watts total (up to 28 fixtures)

- Integral electronic, dimmable power supply, for instant start, quiet, low heat, energy-efficient operation

- White, wrap-around diffuser lens

- Two meter power cord with grounded plug, grounded plug adapter included

- Mounting kit with 3M adhesive hook and loop sections, screws and drywall anchors, nylon zip ties, adhesive zip tie anchors, adhesive cord management clips, alcohol cleaning swabs, snap-on metal cabinet mounting clips

- ETL safety certified

- MSRP: \$249.95

Award winning professional video viewing environment technology!

Rigid fixture more portable, sturdy, and durable than LED strips!

Reduce eye strain in dark viewing conditions!

Promote accurate color perception!

Reveal nuances in hue and shading!

Eliminate glare and reflections!

Color correct for all color television standards!

In the mid 1980's the Society of Motion Picture and Television Engineers (SMPTE) conducted human factors research to identify optimum standards for the viewing conditions in professional monitor environments. Their work addressed issues applicable to all forms of electronic displays. These findings, as set forth in their 'Recommended Practices Document #166: Critical Viewing Conditions For Evaluation Of Color Television Pictures', should be applied to any critical monitor viewing environment. A subsequent publication revising this document into a formal standard has made a few minor changes for modern high definition video monitors. See: SMPTE ST 2080-3:2017: *Reference Viewing Environment for Evaluation of HDTV Images*. SMPTE's work focused not just on helping the viewer see the picture correctly but also on making the viewing experience comfortable over a long period of time, minimizing eye strain as an example.

All video monitors require a darkened room for critical viewing due to their inherent limitations in light output and/or the desire for optimum contrast ratio and color saturation. The color, point of origin, and intensity of light in a viewing environment all affect the quality of image obtainable from any monitor, as well as the amount of viewer fatigue experienced. A small ambient light source, with a proper 'white point' lamp, placed behind the monitor, fulfills much of what is needed to achieve the SMPTE recommendations pertaining to ambient light in the room.

Viewing a monitor in a darkened room can cause eye strain in as little as 30 minutes. This is primarily due to the

iris opening and closing dramatically as scenes change from dark to light on the screen. For a vivid demonstration of how frequently light levels change throughout a typical program, turn your back to a monitor in a darkened room and notice how much the light changes in the room, both in intensity and frequency. Providing a small amount of light behind the set 'biases' the iris and moderates human vision's adaptive mechanisms, resulting in more relaxed viewing. Glare and reflections are then dramatically reduced, by eliminating any light source from striking the front of the set. Colors appear richer and blacks darker. Contrast and brightness controls can be turned down. Doing this will prevent over-saturation of phosphors on plasma displays, thereby reducing the risk of 'screen burn-in' and preserving maximum sharpness and detail. Phosphor life will also be extended for plasma panels.

The custom LEDs used in this product perform exceptionally well. The 'Color Rendering Index' (CRI) is 97 out of 100. CRI is the measurement of a light's ability to render pigments recognizable according to a prescribed standard. Put another way, it's the ability of a light source to illuminate colors in a predictable balance. Illuminants rated at 5000K or higher are referenced to natural daylight at varying times of day. The correlated color temperature of **Ideal-Lume Pro's** LEDs is CCT 6500K. This color of white light is the same as that displayed on a correctly calibrated video monitor. Another more comprehensive and exacting method of measuring an illuminant's color performance, is called its 'Spectral Power Distribution' (SPD). **Ideal-Lume Pro's** SPD curve comes closest to matching the CIE D65 spectral graph for average mid-day daylight simulation.

A light of this type, placed behind the monitor, provides more than enough light in most rooms for critical viewing. Illuminate the wall behind the display to produce an even glow surrounding the screen. The SMPTE ideal recommends that the wall behind the monitor be a matte, neutral color to further preserve correct color perception. Colors classified as neutral by the Munsell Color Order System, range from black to white through the gray scale. SMPTE suggests Munsell's 'nearly-neutrals' can be used elsewhere in the viewing environment but not within the field of view while observing the monitor. The lighter wall colors in most rooms invariably reflect so much light that most users of **Ideal-Lume Pro** require some amount of light reduction.

SMPTE's research discovered that the optimum level of bias lighting for extended viewing should be 10% of the peak white output of the display device. The recently revised SMPTE standard for HDTV and ITU recommendations for mastering high dynamic range (HDR) programs specify a 5 nits (candelas per square meter) ambient surround illumination level (+/- 0.05). **Ideal-Lume Pro's** output can be reduced incrementally by using the included electric dimmer.

In the absence of a light meter, there is a simple way to determine when the light is producing the correct 10% amount of illumination on the wall behind the set. Joe Kane Productions' '*Digital Video Essentials*' optical disc program series all contain a still-frame reference pattern labeled "Ambient Light Reference" that can be displayed on the screen to provide a visual comparison. Mr. Kane chaired the SMPTE Professional Monitor Working Group mentioned previously and produced this title to help consumers and technicians alike optimize their video display systems. Another program including a test pattern of this type is the '*Spears & Munsil HD Benchmark 2*' Blu-ray Disc. These titles are available from our online store. An equivalent test pattern available from professional test signal generators is a 30% digital luminance level window.

Available accessories:

One meter linking cables (can be interconnected for longer runs):	\$4.95
Ideal-Lume Pro LED (extra fixture)	\$199.95
Munsell 10-Step Neutral Value Scale (fan deck of reference color samples, from black to white):	\$65.00
Automated on/off switching devices- see our online store	

Copyright © 2018, CinemaQuest, Inc.