

Ideal-Lume® Pro

The ideal viewing environment luminaire for professional video monitors.

Product Information Sheet

Model #P-ST120-GM65, 120 volt, 60 Hz

Color: Black

Size: L25.75" x W2.125" x H3.75"

Bulb: 6500K, 94 C.R.I., 12,000 hour (average), T12 fluorescent, 24" long, 20 Watt

Warranty: 1 year (limited) on fixture, 2 years on ballast

Other features:

Multi-purpose filter kit included for precise control of illumination

Fixture is custom made in the USA

On/off rocker switch

Heavy-duty electronic ballast for instant start, quiet, cool, energy-efficient operation

Clear, acrylic, wrap-around diffuser

6 ft. power cord with grounded plug

Mounting screws with drywall anchors included

UL listed

MSRP: \$269.95, plus S/H

Award winning viewing environment technology!

Reduce eye strain!

Promote accurate color perception!

Preserve maximum resolution and correct geometry!

Reveal nuances in hue and shading!

Eliminate glare and reflections!

Prolong the life of your monitor!

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. 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 TVs 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 fluorescent fixture, with a proper 'color temperature' bulb, placed behind the monitor, fulfills much of what is needed to achieve the SMPTE recommendations pertaining to ambient light in the room.

Observing a video monitor in a darkened room can cause eye strain in short order. 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 TV 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 (reducing the range of motion in the iris muscle), 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 the phosphors, thereby reducing the risk of 'screen burn-in' and preserving maximum sharpness and detail. This also preserves correct picture geometry on CRT displays and prolongs phosphor life.

The fluorescent bulb included in this product is manufactured in Canada for GretagMacbeth and features a patented mix of seven rare phosphors that performs unusually well. The 'Color Rendering Index' (CRI) is 94 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. Most types of light use a standard element heated to a reference temperature to measure CRI. Illuminants rated at 5000 Kelvins or higher are referenced to natural daylight at varying times of day. The color temperature of Ideal-Lume's bulb is 6500 Kelvins. 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 point's spectral graph of any fluorescent currently available. While the eye strain benefits will continue throughout the rated life of the bulb, color shift will start to occur near the bulb's rated half-life. This is true for all fluorescent lamps. When maintaining optimum color accuracy is a priority, the bulb should be replaced at about 6,000 hours of use.

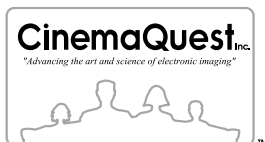
A light of this type, placed behind the monitor, provides more than enough light in most rooms for critical viewing. Illuminate the wall behind the display to produce an even glow surrounding the screen. The SMPTE ideal recommends that the wall behind the monitor be a matte, neutral color to further 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 backlighting for extended viewing should be less than 10% of the peak white output of the display device. The most spectrally accurate method for regulating backlight level is to paint the wall with the correct value (shade) of Munsell neutral gray. This is difficult to determine without a light meter and/or some experimentation. For a more practical method, **Ideal-Lume Pro's** output can be reduced in several precise steps by using the various filters included. Theatrical gels are not absolutely neutral, however. Where optimum color accuracy is required, follow the detailed sheet included with the filters. These filters fit over the bulb singly or in combination to provide several levels of light reduction. The clear tube retains the filter(s) chosen and simply slips over the bulb.

In the absence of a light meter, there is a simple way to determine when the light is producing the correct amount of illumination on the wall behind the set. Joe Kane Productions' 'Digital Video Essentials' DVD contains a still-frame reference pattern (Title 12, Chapter 16) labeled "Ambient Light Reference" that can be displayed on the screen to provide a visual comparison. Mr. Kane chaired the SMPTE Professional/Studio Monitor Working Group mentioned previously and produced this title to help consumers and technicians alike optimize their video displays and multi-channel audio systems. Another DVD including a test pattern of this type is: Ovation Software's 'Avia Guide to Home Theater'. Both of these DVD titles are available from our online store.

Available accessories:

'Digital Video Essentials' HD DVD Combo Disc	\$29.99
<u>Avia Guide to Home Theater</u> DVD:	\$37.50
Replacement lamps:	\$23.95
Replacement filter kits:	\$39.95
Radio frequency (RF) remote-controlled on/off switch:	\$30.00
Munsell Neutral Value Scale (a 31-step fan deck of reference, matte, gray samples):	\$55.00



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