Power Practical | Blog - Bias Lighting: The Best Way to Enhance Your Screen Time | June 2021

Bias Lighting: The Best Way to Enhance Your Screen Time

There's nothing better than winding down and having a little screen time, especially after you've had a long day. Whether it's watching a show or movie, playing video games, or surfing the web, having this kind of down time hits the spot. That is, until you feel the need to look away from your screen every so often.

If you're searching for a way to get the best viewing experience for your eyes, then look no further! Bias lighting is a great solution that comes with a range of benefits and enhances the quality of your screen time so you can truly relax and unwind. We've outlined some basic information below about bias lighting, the advantages of having them around your devices, and where you can find the best kinds. Ready to learn more?

Image Link

What is Bias Lighting?

Bias lighting is a light source that's placed behind a TV or computer monitor to illuminate the immediate area behind and around the device without directly shining into the viewer's eyes. By balancing white TV accent lighting, bias lighting improves the contrast of your screen and reduces eye strain caused by fluctuations in the display brightness.

Benefits of Bias Lighting

1. Reduced Eye Strain

How do we see light? To answer this question, we need to dive into a little bit of anatomy 101.

The retina, a layer at the back of our eyes, contains two types of receptors that are responsible for our sense of vision: cones and rods. Cones are located right in the middle of the retina and perceive color. They work best in relatively bright light in comparison to rods, which function better in lower levels of light. Rods are stationed in the periphery of the retina and are sensitive as they play a part in controlling the amount of light that enters the eye. Depending on our environment, they signal our pupils to either dilate or constrict in order to increase or decrease the amount of ambient light.

When you stare at a screen in a dark setting, your eyes may begin to feel strained and fatigued. This happens for three reasons:

1. The cones experience sensory overload with a bright and concentrated light source (your TV or computer monitor) and any on-screen details
2. The rods become undersaturated from a lack of ambient lighting — so it's harder for them to make sense of your surroundings!
3. The pupil frequently dilates due to extreme changes of light on the screen

An easy solution for these problems is to leave the lights on as you look at your TV or monitor, but that would completely ruin the experience of a movie night with a glare on the screen. However, bias lighting is another simple — and quite frankly, more elegant — way to create ambient light and reduce eye strain. The best part: you'll be able to watch your screen longer without interruptions.

2. Better Screen Contrast

You might be thinking that adding light to the back of your TV or monitor is no different than keeping the room lights on as you look at your screen. However, adding bias lighting behind your device actually improves the quality of on-screen images and allows you to see more contrast; by illuminating the area behind your device, bias lighting makes black and gray on-screen colors appear darker and richer. To make things even better, this also gets rid of the annoying glare that never seems to leave you alone.

Image taken from Power Practical website

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3. Improved Color Perception

If you've ever been in a room that's only lit with red, blue, or green light, you may have noticed that all the surrounding objects seem to change into shades of the room light over time. As cool as this is, are the room objects really losing their original color?

Spoiler alert, they're not.

So, how does this all work? Well, first of all, cones can only perceive three basic colors: red, blue, and green. The reason we're able to see additional colors is because our brain interprets mixtures of the three colors and then returns other colors in between. However, all of this is relative.

You may experience similar color perception problems when you watch TV or use your computer. Since on-screen colors and brightness levels constantly change, your brain doesn't have solid color references. As a result, you could be seeing colors in a different shade than they actually appear. Adding an unchanging light source behind your device

allows your brain to use it as a reference so that you perceive sharper and accurate on-screen images.

Image Link (Taken from Power Practical website)

4. Optimal Temperature Options for Maximum Effect

Bias lighting comes in different color temperatures which are measured in the unit of absolute temperature, Kelvin (K). A lower Kelvin rating indicates warmer light with more red and orange tones. On the other hand, a higher Kelvin rating indicates cooler light with more blue tones. Today's standard color temperatures for white LED bulbs are 2700K (warm white) and 5000K (daylight).

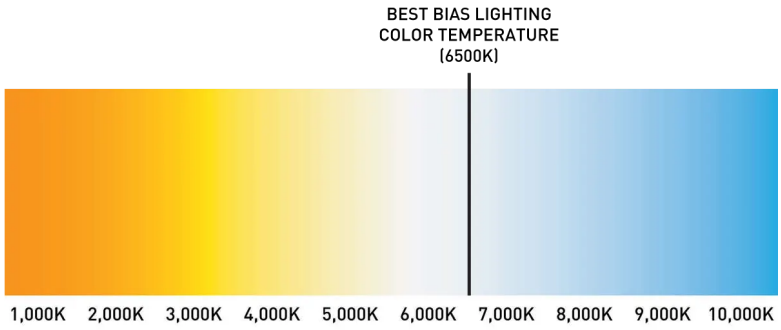

Image Link (Taken from Power Practical website)

When choosing a bias light for your TV or monitor, you should carefully consider which color temperature to get because they determine the white reference point for your brain; this will affect your color perception of on-screen elements. For example, if your bias light is too warm, say 2700K, then the screen colors will look muddy. If you choose a bias light that's much cooler, say 7000K or more, then the whites on your screen will look dull and gray.

In order to see the best results, you should match the color temperature of the bias light with the color temperature that your device's manufacturer uses to backlight the display.

Most TVs and monitors have a color temperature between 6000K and 6500K, so you should aim for one in that range to play it safe.

Why Choose Power Practical Bias Lighting?

Now that you know about the benefits of bias lighting and what it can do for you, it's time to pick the right lights that will enhance your viewing experience. With Power Practical bias lighting, you have a selection of high-quality lights to choose from:

- Luminoodle White Bias Lighting — Equipped with 6500K LEDs that provide up to 275 lumens of ambient light
- Luminoodle Color Bias Lighting — Equipped with 15 color options for customization
- Luminoodle Pro Bias Lighting — Equipped with true-white 6500K LEDs and color-changing LEDs (RGB+W) to switch things up

In addition, Power Practical bias lights provide convenience since they're powered by a USB port (which might already be on the back of your TV), install in under five minutes, turn on and off with your device, and come in four sizes to fit on any size screen!

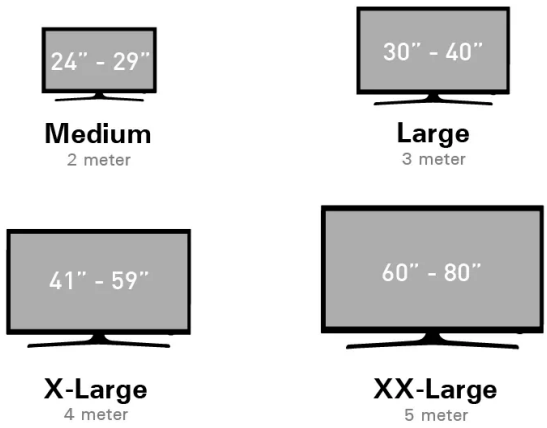

Image Link (Taken from Power Practical website)

To learn how to install Power Practical lights, you can watch this quick video here.

Regardless of the kind of bias lighting you get, you'll have the perfect lighting conditions to watch TV or view your monitor without straining your eyes. Now, it's time to kick back and truly relax!

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