

# CV600

## Digital LED Light Meter

### ***Introduction***

Lighting has a huge impact in the end product whether it be an indie film, a photo, or a blockbuster movie. Figuring out how to correct the lighting can be hard especially if you don't have the right tools. With the current trends in lighting and color always changing, cinematographers will need the proper tools to keep up. Fortunately, spectrometers and color and exposure meters exist to help with figuring out how to handle and manipulate lighting and color in a scene.

### ***Current Trends***

The Cinematography School at the New York Film Academy regularly chats with filmmakers and gathered up information for a report on the current trends in cinema. Trends include more aerial footage, subdued lighting, subdued color, an increase in handheld shots, and a boom in shallow depth of field. When looking at spectrometers and color/exposure meters, the lighting and color trends will have an impact. According to the report, "particularly over the past year, it seems to be a strong contemporary trend for cinematographers to pare down lighting rigs and keep things simple and soft, with as few lighting sources as possible (and often a heavy reliance on using solely natural and 'golden hour' lighting)."<sup>[1]</sup> This trend may be due to the need to soften harsh edges, which are more prominently displayed

with ultra HD. In conjunction with more subdued lighting is a trend for more subdued color as well. In film as well as advertising, there is an increased use of subdued color with regards to desaturation and muted color design.

Another trend that will impact lighting is the increasingly popular goal of getting the film look. According to a subscription-based resource for downloading stock footage, VideoBlocks, filmmakers are seeking a look of natural realism and believability. To get this type of look, filmmakers would have to use lighting techniques such as "fewer high-power key lights and a lot more gentle diffusion positioned in ways to mimic the temperature and direction of existing ambient light". According to VideoBlocks, "instead of lighting for the script, more and more filmmakers are lighting for the

1. Zeke. "Contemporary Trends in Cinema: 2015 Report." New York Film Academy. N.p., 22 Sept. 2015. Web.

actual sun—and the windows it shines through—aiming not to modify or interrupt the existing light present on location, but to enhance its natural characteristics.”<sup>[2]</sup>

Filmmakers are also moving towards using more LED lighting. “With its economy of power and portability, LED lighting is for many the next generation of digital lighting”<sup>[2]</sup>. In addition, LED lighting also is helpful with its dimming capabilities and the ability to alternate between lighting temperatures without gels. According to ProVideo Coalition, “LED lighting has come onto the scene with a vengeance. Above all the other types of lighting mentioned, LED is advancing at a higher rate than any other.”<sup>[3]</sup>

In order for cinematographers to keep up with these trends, they will need to be able to match the lighting and color of the scenes to meet these aesthetics.

## Solutions

So how can cinematographers keep up with the current issues and trends in cinematography particularly in lighting and color? They can use tools such as a spectrometer or color and exposure meters to make it easier to match the desired lighting and color. A spectrometer or color meter is an instrument used for measuring wavelengths of light spectra. It’s also helpful for color meters to have the ability to check exposure. A gaffer can use a spectrometer to determine the exact color temperature and also visualize the light spectrum being received. In addition, spectrometers can be used to detect poor CRI lighting sources, flicker, and calculate which filter to use based on the current source and the target you want to reach.



## CV600

One solution that cinematographers can use is the CV600 color/exposure meter from UPRtek. If you’ve used a color/exposure meter before, it is simple to use. If you haven’t, you can easily learn how to use the CV600.

The CV600 is distributed by Ikan Corp – a company that designs, manufactures, and distributes a variety of award-winning products used in film, video, and photographic productions worldwide. According to No Film School, “the CV600 is a step beyond a light meter because it can check color wavelengths along with exposure.”<sup>[4]</sup>

The CV600 is the latest spectrometer from UPRtek and is part of the company’s next generation of advanced color/exposure meters. The device is a great way for filmmakers and photographers to figure out the best lighting to use. It’s designed for quick, efficient measurements and its new Color Correction Filters Calculator makes it easy to match the color of any light source. The CV600 film and broadcasting spectrometer has various features including: Basic Mode, CIE 1931/1976, Filter, Spectrum, CRI Chart, Flicker, Browser, and Exposure.

**“The CV600 is a step beyond a light meter because it can check color wavelengths along with exposure.”**  
-No Film School

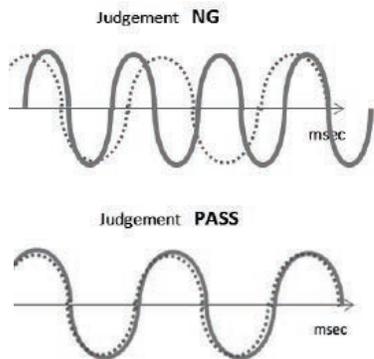
In Basic Mode, users can view four different measurements simultaneously (CCT, CRI, Duv, TLCI, fc, etc.) in order to adjust and decide color temperatures. The Spectrum Mode shows where Delta Ascension happens and since the CV600 uses an advanced grating type sensor technology, it shows the human visible spectrum. In the CRI Chart, users can measure 15 swatches at a time to get a quick overview of the LED light’s performance. The Filter Mode helps users identify and match the color of any light source by comparing it to color correction filters that are preprogrammed into the machine such as Rosco, Lee, Kodak, or Fuji. This mode is great because it identifies

2 "The Future of Digital Lighting: A Portrait of Modern Diffusion." VideoBlocks Blog. VideoBlocks, 6 Apr. 2015. Web.

3. Marko, Bobby. "Helpful Ways for Cinematographers to Get a Grip on Lighting Part 4." ProVideo Coalition. N.p., 22 Aug. 2014. Web.

4. NFS Staff. "Ikan's CV600 Spectrometer Will Tell You Almost Everything About Your Light Source." No Film School. N.p., 30 Apr. 2016. Web.

which gel would have the most accurate color temperature. With Flicker, users can figure out if the light is within the camera's frames per second or if the flicker is outside the safe (PASS) zone. This allows the camera to see the flickering of the light in the frame.



Exposure is a new feature that broadcasters will like because it helps in adjusting the settings of the Time of exposure (T Mode), the F-Stop (F mode), or both (TF Mode) in the iris. The (EV Mode) Exposure Value helps to compensate for light or dark in the image. The CIE 1931 or 1976 feature identifies the white in the spectrum and the location of the black body radiator line. In a large lighting setup, the Browser is a helpful feature to use in order to see the readings of various lights.



In addition to all these features, the CV600 can be controlled through a mobile device. With the iOS or Android app, users can control the spectrometer from their phone or tablet by utilizing a Wing Wi-Fi adapter card. Overall, the CV600 spectrometer is great for Directors of Photography, Gaffers, camera operators, corporate video producers, and photographers that want to experiment with constant lighting instead of flash. The CV600 is currently available online at [ikancorp.com](http://ikancorp.com). With

a spectrometer like the CV600, a gaffer and others involved in filmmaking will have a more accurate way to measure lights and can adjust accordingly. ◇



Visit [ikancorp.com](http://ikancorp.com) for more specs and information about the UPRtek CV600.

## ***About Ikan***

Founded by Kan Yeung in 2005, Houston, Texas-based Ikan Corp designs, manufactures, and distributes a variety of award-winning products used in film, video and photographic productions worldwide. Starting with the introduction of a single on-camera HD video monitor, the company has kept pace with the ever-accelerating technology curve and, in a number of instances, has been ahead of the curve. Now, in addition to high quality video monitors, Ikan Corp offers a full range of lighting equipment, camera support rigs, teleprompters, gimbals, and accessories for both studio and field production. Ikan products are sold through authorized dealers located in more than 50 countries around the world and at [www.ikancorp.com](http://www.ikancorp.com). Ikan Corp's reputation is emblematic of the company's mission to "build quality products that creative people want and need at a reasonable price," as well as Yeung's philosophy "to always put the customers first and take care of them — no matter the situation."

## ***White Paper Creators***



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