

SEKONIC

LIGHT METERS AND SPECTROMETERS



PHOTO

VIDEO

CINEMATOGRAPHY

INDUSTRIAL APPLICATIONS



For nearly 70 years, Sekonic Corporation has designed and manufactured the most innovative and sophisticated light measuring instruments in the photographic and Cine/Video industry. Our commitment to meet and exceed the demands of the professional and their expectations continues with a vigorous passion.

From our humble beginnings, it all started on June 16th, 1951, when Mr. Ryuichi Mitani, a young man at the time, established “Seiko Electronic Co. Ltd” an engineering, manufacturing and Design Company for exposure meters and selenium purification systems. That same year the company released their first exposure meter, the L-1 under the brand name of Sekonic. By 1960 the Sekonic brand meters became so popular that the company changed the name from Seiko Electronic Co. Ltd to Sekonic Corporation, a true testament that Sekonic meters were destined for success.

The company grew over the years and in 1963 it was listed on the Tokyo Stock Exchange. Sekonic’s detail to precision engineering and business expertise in the electronics business landed them many notable OEM clients such as Copal and Konica. In 1974 Sekonic received the “Good Design” award from the Ministry of International Trade and Industry in Japan for the L-428 System Meter. Sekonic would later be honored with this prestigious award again in 1994 for the L-308B Flashmate. During the years to follow, Sekonic diversified into other markets such as Industrial Recorders, Plotters, Optical Mark Readers and other various measuring instruments.

In 1984 Sekonic received worldwide recognition when NASA chose the L-518 Digipro X-1 for the Space Shuttle missions. As the first Shuttle launched, so did the future of Sekonic light meters, with popular models such as the L-408 Multi Master in 1995, and L-508 Zoom Master in 1997. As the new millennium started, Sekonic released the world’s first radio triggering light meters (L-358 Flash Master and L-608 Super Zoom Master) compatible with PocketWizard that offered wireless triggering and measuring of remote flash equipment in addition to other features.

As the photo industry evolved into digital capture technology, Sekonic demonstrated its’ commitment to the needs of the professional photographer. Starting with the L-558 DualMaster and then the L-308S Flashmate, Sekonic began to release digital ready light meters. However, in 2006 Sekonic completely reinvented the meaning of a light meter with the world’s first digital “Exposure Profiling” solution, the L-758 Series DigitalMaster. The L-758 Series offered photographers a hardware/software package that ensures perfect digital exposure control. It was the first truly digital-ready light meter with tons of cool features and has earned the nickname, the ultimate “Multi Tool”. With the L-758 Series off the drawing board, Sekonic engineers fueled with excitement, set off to break another digital milestone. In 2008 the world’s first digital ready color meter with wireless triggering built-in was born, the C-500 series ProDigi Color.

In recent times, Sekonic has seen the merge of still and moving images, and Sekonic was there with products such as the L-308DC DigiCineMate launched in 2010. In 2012, with the astounding penetration of smart phone touch screen technology, Sekonic re-energized the concept of a light meter by creating the L-478 Series LiteMaster Pro. Breaking all the barriers, Sekonic created the world’s first color touch screen, wireless power control & triggering ready exposure profiling light meter. Its compact and intuitive design offers today’s shooters with everything they need at the touch of a finger. With the rapid development of new light sources entering into the Photo/Video industry, Sekonic was faced with the challenge of measuring pulsed light sources like LED’s accurately. Responding to the needs of today’s color conscious image makers, the Spectrometer C-700/C-700R was born in 2014. Providing a large color touch screen interface, the C-700 series offers color measurements of all light sources including wireless triggered Flash. In 2015, an addition industrial version of the C-700 was launch, the C-7000 to address industrial color control accuracy requirements using standards of measure necessary for the market. As new flash photography techniques and function enter the industry, it became necessary for Sekonic engineers to raise the bar with ground breaking feature never before available in a traditional light meter. The SpeedMaster L-858D was introduced in 2016 and has fast become one of the most popular multi-function meters in the world. With its ability to measure flash duration, High Speed Synch and easily navigate through its large color LCD screen, the L-858D has revolutionized what a light meter is today. Most recently, Sekonic has updated and added value to it very popular FlashMate series. Combining Photo/Video/Cine modes all in an affordable and compact design the new 2017 FlashMate L-308X is everyone’s go to meter. Most recently, Sekonic raised the bar again meeting the needs of the every changing world of Cine/Video lighting with the new and improved C-800 Spectrometer. Released in 2018, the C-800 incorporates expanded Color Rendering Properties to address the evolutionary progress of the industry. Software enhancements now include Spectral Similarity Index (SSI) Television Lighting Consistency Index (TLCI), Television Luminance Matching Factor (TLMF) and Technical Memorandum (TM-30-18).

Today Sekonic continues to bring innovative new products to professional photographers and CINE/Videographer’s.

Sekonic.....because it’s all about controlling the light.



THE WORLD’S FIRST MULTI-FUNCTION
LIGHT METER WITH FLASH DURATION &
MULTI-BRAND WIRELESS TRIGGERING

The Sekonic SpeedMaster L-858D combines nearly 70 years of Sekonic innovation with cutting-edge, flash-measurement technology to meet the needs of today’s photographers as well as motion image makers. Incorporating flash duration measurement, the first time in a multi-function light meter, the L-858D provides the critical flash data needed to calculate proper ambient-flash exposure. As its name implies, the SpeedMaster L-858D also measures the brief flash bursts of HSS (High Speed Sync) for precision flash exposure control.

The L-858D includes the essence of the popular L-478D series features and functions that enables photographers to break through the boundaries of ISO sensitivity, flash and ambient shutter speeds, as well as frame rates (f/s) and shutter angles for cinematographers. Increased sensitivity for both incident and reflected-spot sensors in ambient light allows extreme low light level measurements. In addition, the L-858D offers an optional wireless triggering modules now available for Broncolor and Godox in addition to Elinchrom, Phottix and PocketWizard brand radio triggering devices. With its 2.7” color touch screen and truly innovative advanced and sophisticated features, the L-858D breaks away towards the next generation of light measurement control.

Ultimate Multi-Function Light Meter

PHOTO MODE:

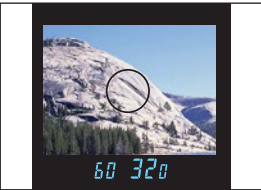
How do you know what the real flash exposure is when you’re trying to overpower the sun with your flash set to HSS (High Speed Sync), what’s the best flash duration speed to stop that bullet in mid-air, how do you know how much highlight or shadow details you are really getting in your digital exposures? Stop wondering. With the world’s first multi-function flash duration light meter you’ll have all your answers before you ever release the shutter.

- ✓ 1 Degree Spot Viewfinder with illuminated display
- ✓ HSS Flash Measurement
- ✓ Flash Duration Analysis
- ✓ Wireless Triggering (Optional)
- ✓ All Weather Design

HD_CINE/CINE MODE:

For many shooters today, one camera has to do it all. That’s why the L-858D offers extensive Cine mode features all in one super tool light meter. From its full information Spot Viewfinder to its Illuminance / Luminance measuring modes, it’s no surprise that the L-858D is the new standard and still & cine shooters’ go to meter. With its extensive frame rates (1 to 1000f/s) and shutter angle settings (1 to 358 degree shutter angle), it provides the cinematographer and videographer the ultimate control in creative and special effects lighting.

- ✓ Extended Range of Frame Rates (1 to 1000f/s)
- ✓ Extended Shutter Angle(1 to 358 degree)
- ✓ Filter Factor Compensation
- ✓ Illuminance/Luminance (FC, LUX, FL, cd/m2,)



The rectangular 1° Optical Spot viewfinder displays f-stop, shutter speed, percentage of flash and much more with an EL digital display.



Programmable to match the exposure characteristics of your DSLR or Cine camera. Match the response of film or digital exposure characteristics, dynamic range, reflected, incident, flash or ambient light throughout the ISO range of your camera, using data transfer software.



Optional wireless triggering modules now available for Broncolor and Godox in addition to Elinchrom, Phottix and PocketWizard brand radio triggering devices.



The L-858D offers frame rate, shutter angle, illuminance (lx, cd/m2) and luminance (fc, fl).

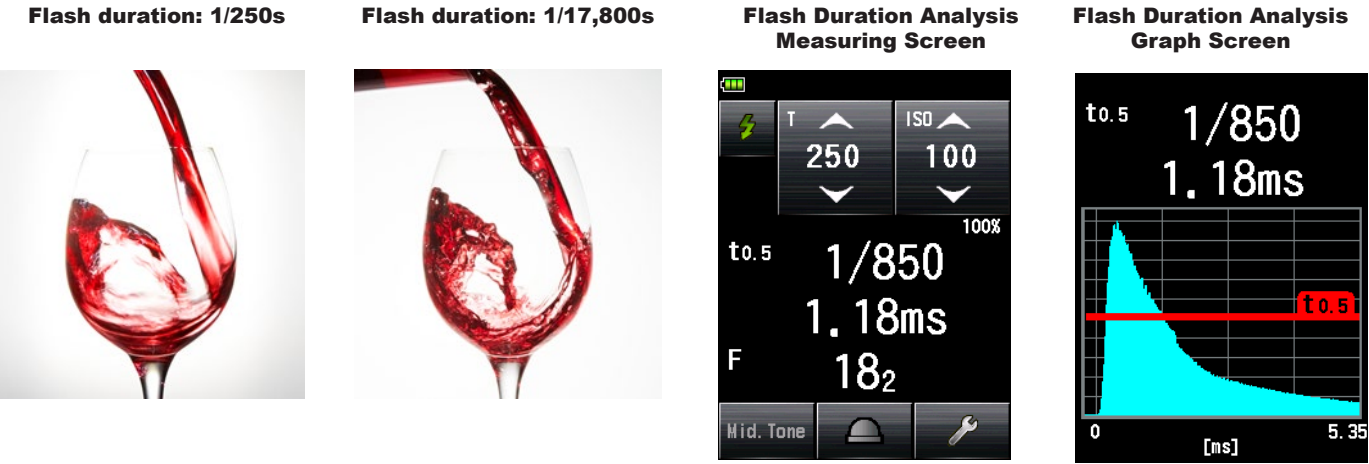


All Weather Design. All buttons, switches and compartments are sealed and the housing has been design to endure rugged outdoor conditions.



Flash Duration Measurements

Measuring the flash duration or “burn time” of a flash exposure has always been a critical part of any fast moving subject such as sports, fashion, wildlife and special effect flash photographs. Unfortunately, flash duration meters have always expensive and complicated additional pieces of gear to carry, until now. The SpeedMaster puts all that in the past with selectable flash duration measures from t=0.1 to 0.9. Setting flashes to yield the fastest or in the case of HyperSync® exposure the slowest duration can be made in a quick, precise and easy process.



HSS Measurements

High Speed Synch exposures have always been limited in their applications, especially when it comes to the accurate flash exposures. It was impossible for the traditional meter to measure the rapid burst of flash output for HSS. The L-858D HSS measurement capability is a game changer for HSS shooters, especially when the shot involved multiple HSS flash units.



Five Wireless Triggering/Power Control System Available

The L-858D has an optional wireless plug-in radio module that offers a wireless solution for triggering and/or flash power control. The L-858D offers many of the features available to wireless shooters including selective zone/group triggering, multi-channel selection and even camera triggering. There are five different wireless modules compatible with each radio brand system:



	RT-3PW	RT-EL/PX		RT-BR	RT-GX
Radio System	PocketWizard	elinchrom EL-Skyport	Phottix	broncolor RFS2.1	godox
Radio Frequency & Channels/ Studios	CE:433.42-434.42MHz 3 Channels (ControlTL), 32 Channels (Standard)	2.4GHz 20 Channels	2.4GHz (Strato II protocol) 4 Channels	2.4GHz 99 Studios	2.4GHz 32 Channels
Zones/Groups	3 Zones (A to C) (ControlTL) 4 Zones (A to D) (Standard)	4 Groups (G1 to G4) plus ALL	4 Groups (A to D) for Phottix Strato II protocol	40 Lamps (1 to 40) plus ALL	16 Groups (A to F, 0 to 9) plus ALL with Wireless ID (1 to 99 or OFF)
Flash Power Control	Yes	Yes	No (triggering only)	Yes	Yes
Modeling Lamp Control	Yes (ON/OFF only)	Yes (Power control)	No	Yes (ON/OFF only)	Yes (Power control)

Wireless flash power control is in a palm of your hand.
Now you can simultaneously trigger and measure your electronic flash units wirelessly.

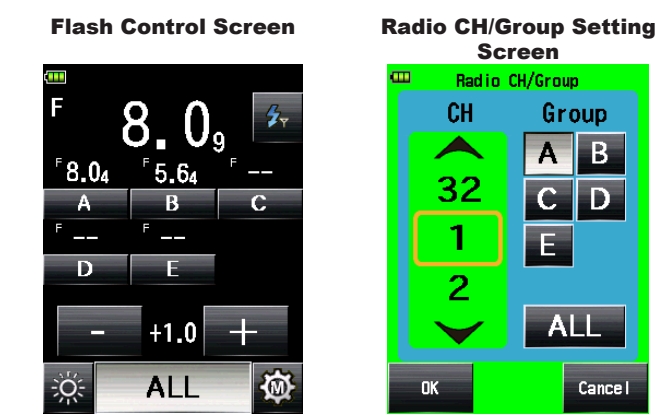
Broncolor

RT-BR transmitter is compatible with Broncolor RFS2.2/2.1/2 systems.



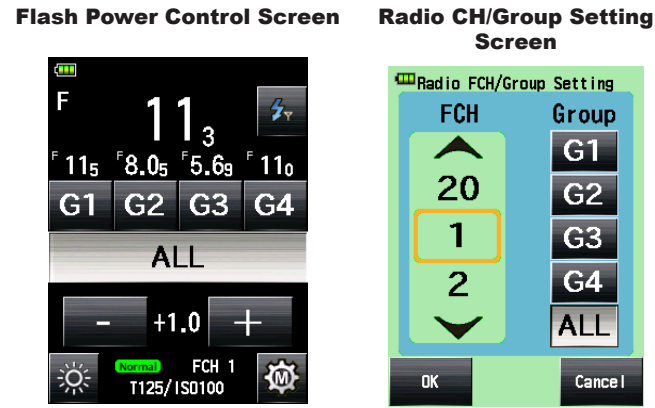
Godox

RT-GX transmitter is compatible with all Godox radio system.



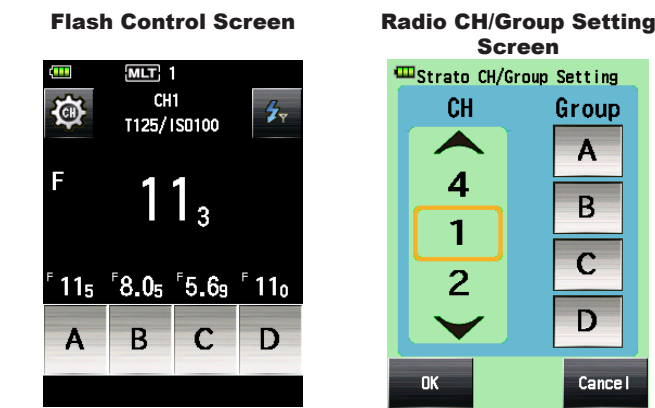
Elinchrom

RT-EL/PX transmitter is compatible with EL-skyport radio system.



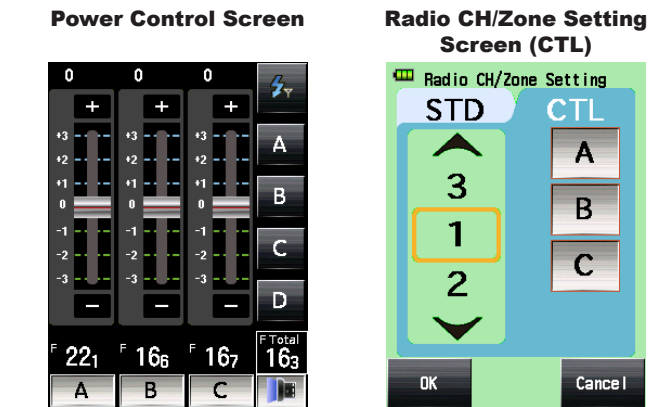
Phottix

RT-EL/PX transmitter is compatible with Phottix Strato II protocol.



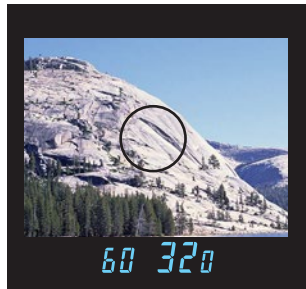
PocketWizard

RT-20PW (FCC/IC) and RT-3PW (CE) transmitters are compatible with ControlTL and Standard system of PocketWizard.



The Only light meters that show you the Dynamic Range of your D-SLR. 1 Degree Spot with Digital Display:

The rectangular 1° spot viewfinder displays f-stops, shutter speed, percentage of flash and much more with an EL (Electronic-Luminescent) digital display. It incorporates a parallax-free spot finder preventing erroneous close-up photography light measurements. It can instantly be switched from incident to spot measurement mode. With its super sensitive sensor, the L-858D can measure the reflected flash output down to an amazing f/1.0 and ambient measurements as low as EV-1. In addition, it also included an adjustable diopter eyepiece.



Exposure Profiling:

Because every digital camera, lens, and software is unique in its capability to capture and process light, each can produce differences in the tonal range (dynamic range) and exposure of an image. Knowing the limits of your camera's capabilities enables making better exposures with less post-processing, and ensures you'll get what you see. Sekonic's pioneering Data Transfer Software allows quick dynamic range mapping and camera/meter calibration for the most precise control of light. Create and store up to ten camera exposure profiles with Sekonic, X-Rite or datacolor brand calibration targets.

Flash Analyzing Functions:

In normal flash modes, the L-858D simultaneously reads both flash and ambient light automatically in order to analyze and display the exposure data in 3 convenient ways:

- ✓ **Combined readings (aperture) of flash and ambient light**
- ✓ **Percentage of flash in the total exposure**
- ✓ **Simultaneous display of flash, ambient and combined readings on the analog scale.**



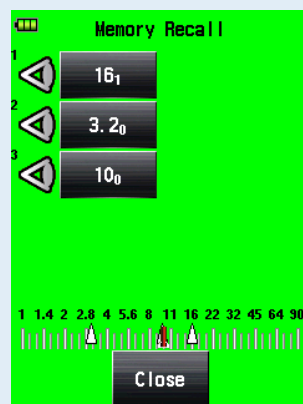
Flash 80%



Flash 60%



Flash 20%

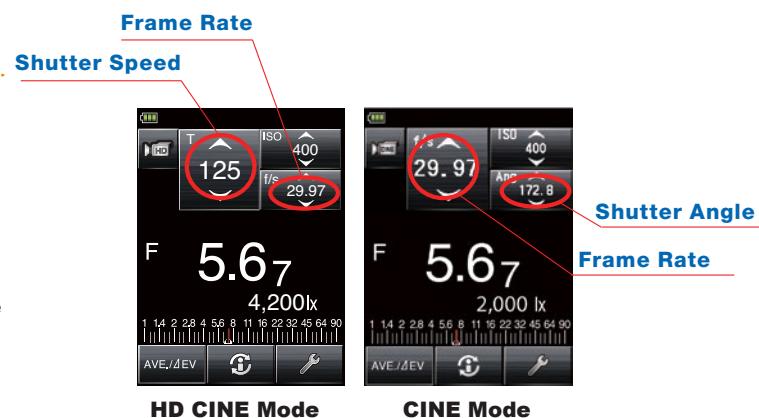


Memorize Up To Nine Readings and Mid-Tone Adjustment

The L-858D can memorize measured values in both incident and reflected modes independently or combined. When the memorized values are combined it is possible to take a mid-tone measurement using the Lumisphere in incident mode, then take a spot highlight, and shadow measurement by simply switching to reflected measuring mode. Highlight and shadow tones can be measured and quickly viewed to determine if there are within the Dynamic range or Clipping points of the digital camera or type of film being used. In addition, the Mid.Tone value can be shifted to adjust the highlight or shadow to be within the range required.

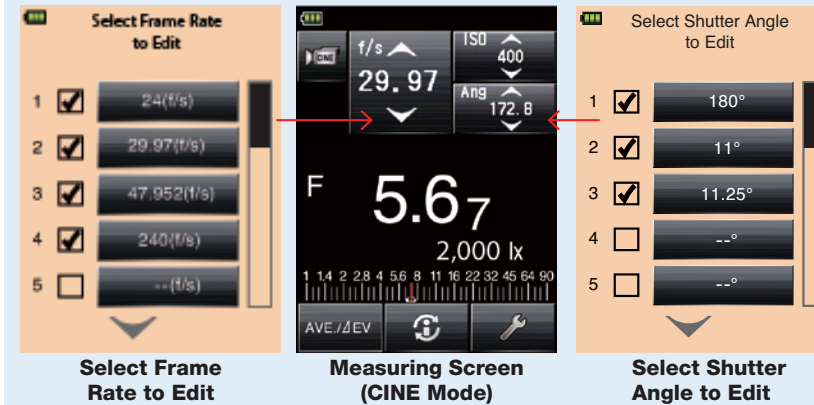
Enhanced HD Cine / Cine Features

Today's digital cameras offer both still and motion capture. Offering shooters seamless cross platform media capabilities, these cameras provide a variety of uses in a single production. To complement sophisticated cameras, the L-858D has two motion capture modes in addition to still capture to accommodate any shoot. Touch to set shutter speeds and frame rates for HD-Cine cameras or quickly select frame rates and shutter angles for Cine cameras. Creating unique frame rates and shutter angles for special effects is just a finger tip touch away.



Frame Rate
Shutter Speed

Shutter Angle
Frame Rate

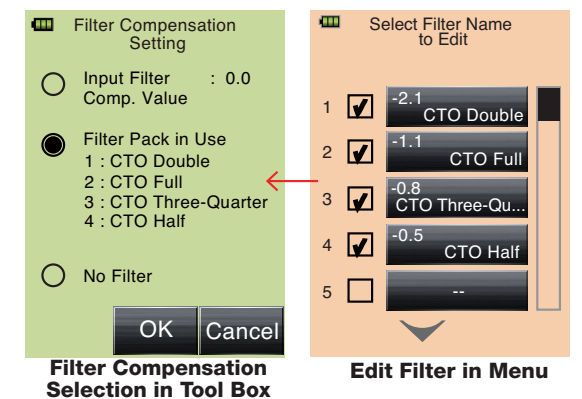


Infinite Frame Rate/ Shutter Angle

Special effects and light sources can push standard camera settings to their limits. That's why the L-858D also allows creating unique frame rates and shutter angles up to 20 user-customized values to enable precise exposure and lighting, producing the very best images and reducing time in post-production.

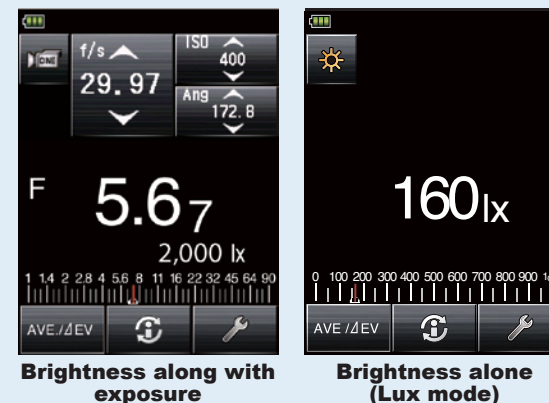
Unique Filtration Compensation Mode

Like all light and exposure meters, the L-858D is calibrated for visual light. Because meters can't measure filtered light by design, Sekonic designers added a unique Filter mode that enables getting exact light levels with touch screen ease. Touch the L-858D to instantly call up light-source or camera filtration expressed in industry standard terms. For special filters or applications, create a unique filter factor and give it a name. Up to four filters can be used together as a pack to assure full control in virtually any situation.



Filter Compensation
Selection in Tool Box

Edit Filter in Menu

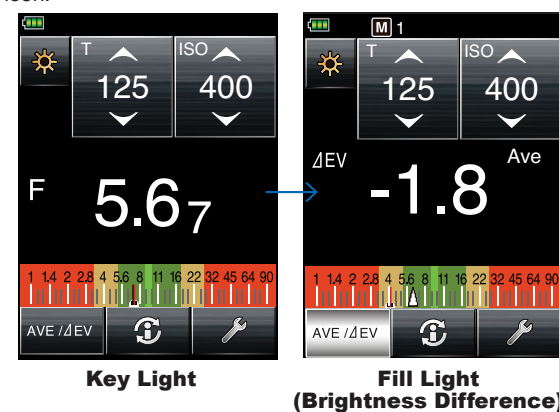


Illuminance or Luminance Measurement

Brightness measurements in Lux or FC (Foot Candles) and Cd/m2 or FL (Foot Lambert) position the L-858D as a major player on movie sets around the world. It can display brightness along with exposure measurements or just brightness alone.

Contrast Function

The L-858D continuous measurement mode provides a contrast range measurement to evaluate the overall lighting conditions. In addition, you can also check lighting ratios or the evenness of an illuminated background, scene or light source. Changes in the measured values are related to a saved measurement such as the center of a background or key light by pressing AVE/ΔEV icon.



Key Light

Fill Light
(Brightness Difference)

All Weather Design

All buttons, switches and compartments are sealed and the housing has been design to endure rugged outdoor conditions. Ideal for on-location shooting, at the beach, in the rainy or in humid environments. Dust-proof and splash-proof (JIS Standard Water Resistance Class 4)



THE COLOR TOUCH SCREEN LIGHT METER WITH POWER CONTROL AND EXPOSURE PROFILE

Creative image makers, still or motion, have known for generations that light and the ability to control it has always been the key to capturing the essence of still or moving images. Today's sophisticated cameras and lighting equipment offer more control and creative possibilities than ever before. To compliment these advances in the photographic, cine and video worlds, Sekonic offers the most innovative and advanced light-measuring instrument in the industry.

Seven Meters in One

PHOTO mode:

The L-478-series takes the mystery out of mixing ambient light and flash. Select the measurement mode that fits your shooting style with just the touch of your fingertip. Measure the brightness of a single light source or the exposure for the entire scene. Measure flash with cord or cordless mode or trigger your flash units wirelessly with the built-in radio transmitter (L-478DR). Rest assured that every measurement is backed with the most accurate readings via Sekonic's Exposure Profiling System that matches and compensates for your DSLR exposure characteristics.

- ✓ Flash Meter
- ✓ Ambient Meter
- ✓ Incident Meter
- ✓ Reflected 5 degree spot meter (with optional viewfinder attachment)

HD_CINE/CINE Mode

The L-478 series has motion capture modes accomodating today's sophiscated video and CINE camera systems. With the touch of your finger, select the shutter speeds, frame rates and shutter angles for your camera. Create unique frame rates and shutter angles for special effects. For quick and creative shoots, select your favorite custom stored compensation filter or gel pack. Via Sekonic's Exposure Profiling System, every measurement is accurate and precise.

- ✓ HD Cine Meter
- ✓ Cine Meter
- ✓ Illuminance/Luminance Meter



Pressure sensitive 2.7" large color LCD Screen with tap or scroll interface. Adjustable color brightness for fast, more intuitive, better interactive control.



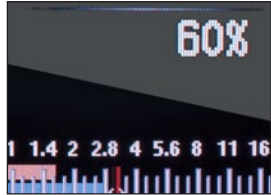
Programmable to match the exposure characteristics of your DSLR or Cine camera. Match the response of film or digital exposure characteristics, dynamic range, reflected, incident, flash or ambient light throughout the ISO range of your camera, using Data Transfer Software.



Elinchrom, Phottix and PocketWizard radio system are available for flash triggering and/or power control.



The world's first meter to offer HD/CINE and CINE mode with features such as: frame rate, shutter angle, lux, foot-candle, cd/m2 and foot-lambert.



Measure ambient and flash output simultaneously. Displays ambient/flash ratio in two separate ways: on a graphic color bar, as a percentage of flash. In addition, total exposure is shown in f/stop.

Digital Exposure Control - Camera Calibration



Because every digital camera, lens, and software is unique in its ability to capture and process light they can produce differences in the Tonal Range (dynamic range) and exposure of an image. Knowing the limits of your camera's ability to make better exposures with less post-processing ensures you'll get what you see.

Sekonic's pioneering Data Transfer Software enables quick dynamic range mapping and camera/meter calibration for the most precise control of light. Create and store up to ten camera exposure profiles with Sekonic, X-Rite or datacolor brand calibration targets. Sekonic, X-Rite or datacolor brand targets or use the touch display to directly enter profile information obtained from other sources. See page 10 for full explanation on the Data Transfer Software.

Three Wireless Triggering/Power Control System Available (L-478DR series only)

The L-478DR series has a built-in wireless triggering system that offers a cordless solution for triggering and/or flash power control. The L-478DR series offers many of the features available to wireless shooters including selective zone/group triggering, multi-channel selection and even camera triggering (w/PocketWizard only). There are three models compatible with each radio system:



L-478DR - - - PocketWizard



Original L-478DR started with PocketWizard radio: Standard system and ControlTL system. The Sekonic L-478DR features 1) triggering any flash unit with a PocketWizard connected and measuring them at the same time, and 2) remote flash power control of up to three separate zones of lighting. Utilizing PocketWizard ControlTL technology, changing flash power output is as easy as sliding your finger tip on an intuitive touch screen slider. Change the power settings on your Nikon or Canon Speedlights mounted on PocketWizard FlexTT5 transceivers or select studio flash units connected to ControlTL receivers. Switch Zones on or off to measure remote flash units separately for precise lighting ratios scenario.



L-478DR-EL - - - Elinchrom



The L-478DR-EL's power screen enables separate selection of any of the four lighting Groups, 1,2,3,4, for flash brightness adjustment in 0.1 increments by simply tapping buttons on the meter's touch screen. The F-number value for the light being measured appears in a central area on the screen as well as over respective group selection button. The measured value for each group is maintained as a visual record of the brightness difference of the lights in use so that lighting ratios can be easily determined. Once flash adjustment is made for each group, ALL flashes can be triggered for a total reading for exposure. The L-478DR-EL can also be used to measure and adjust modeling light brightness of Elinchrom flashes for cine/video lighting applications. The L-478DR-EL triggering and power control is compatible with all Elinchrom flashes that use the EL-Skyport triggering system. ControlTL receivers. Switch Zones on or off to measure remote flash units separately for precise lighting ratios scenario.



L-478DR-PX - - - Phottix

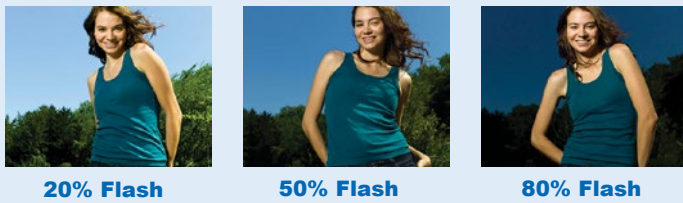


The L-478DR-PX flash control screen allows selection of a single group or a combination of groups for flash brightness measurement. The F-number value for the light being measured appears in a central area on the screen as well as over respective group selection button. The measured value for each group is maintained as a visual record of the brightness-difference of the lights in use so that lighting ratios can be easily determined. The L-478DR-PX group selection and triggering is compatible with Phottix flashes and radios that are compatible with the Phottix Strato II protocol. This includes flashes connected to the Strato and Strato II receivers and the Atlas II transceivers. Compatible Phottix flashes include the Indra series, Juno series and Mitros+ series.

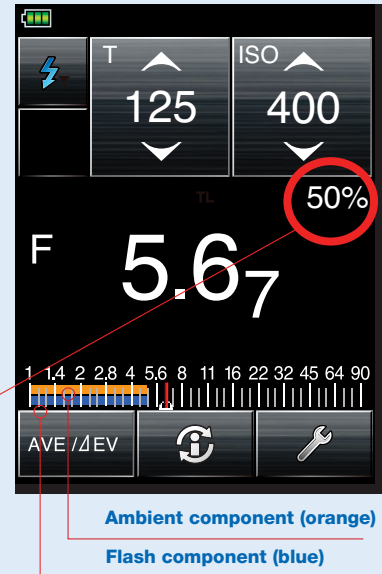


Flash Analyzing Function

The L-478-series meters offer a quick and easy way to balance flash and ambient light with one press of the measuring button. That's because they measure ambient and flash simultaneously and automatically indicate the percentage of flash in the total exposure. Touch the screen to adjust settings to get the perfect ambient to flash ratio. The meter's analog display uses color bars to graphically display the relationship between the ambient and flash levels.



Percentage of flash

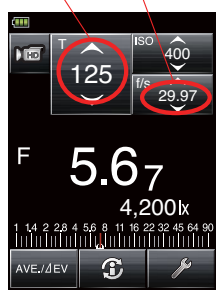


Ambient component (orange)
Flash component (blue)

Enhanced HD Cine / Cine Features

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Frame Rate
Shutter Speed

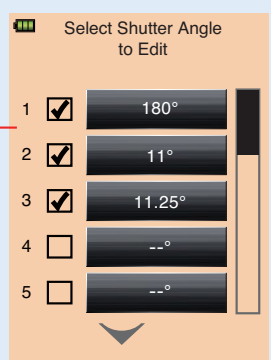
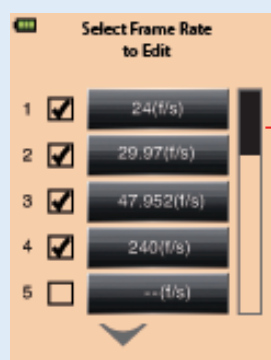


HD CINE Mode



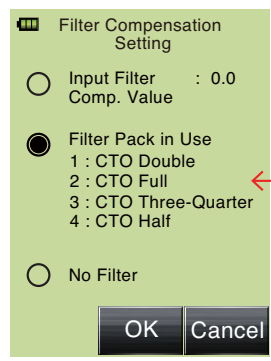
CINE Mode

Shutter Angle
Frame Rate

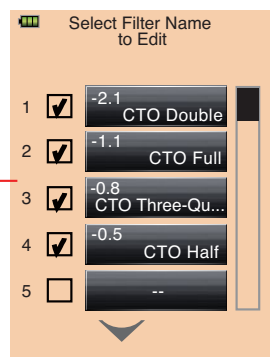


Infinite Frame Rate/ Shutter Angle

Special effects and light sources can push standard camera settings to their limits. That's why the L-478 series also allows creating unique frame rates and shutter angles up to 20 user customized values to enable precise exposure and lighting, producing the very best images and reducing time in post-production.



Filter Compensation Selection in Tool Box



Select Filter Name to Edit in Menu

Unique Filtration Compensation Mode

Like all light and exposure meters, the L-478 series are calibrated for visual light. Because meters can't measure filtered light by design, Sekonic designers added a unique Filter mode that enables getting exact light levels with touch screen ease. Touch the L-478 series to instantly call up light-source or camera filtration expressed in industry standard terms. For special filters or applications, create a unique filter factor and give it a name. Up to four filters can be used together as a pack to assure full control in virtually any situation.

DATA TRANSFER SOFTWARE

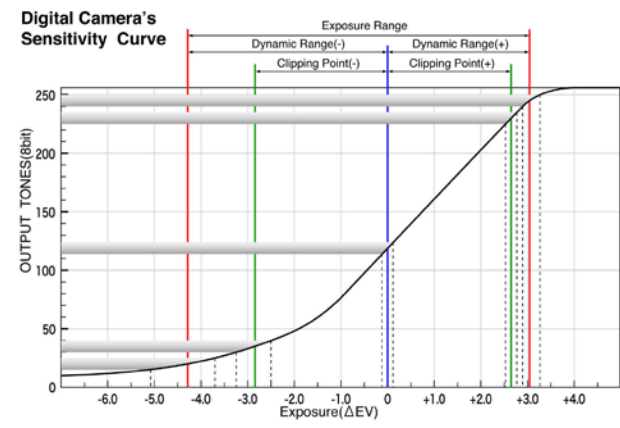


The L-858D and L-478 series light meters are designed to learn the exposure characteristic of your digital camera. By compensating for exposure and dynamic range limitations, these programmable meters can guide in capturing a perfectly exposed digital image for the ultimate in reproduction quality print or presentation.

The link between these programmable light meters and the camera is Sekonic's Data Transfer Software (DTS). The Sekonic DTS program evaluates test target images capture from your camera and creates an exposure profile of your camera's capabilities. These profiles are then transferred to either the L-858D or L-478 series light meters for real time use. In addition, the DTS program offers exposure profile editing, loading and unload different profiles as well as firmware update. Custom Settings for both the L-858D and L-478 series are quick and easy through the use of the DTS program in place of making the changes in the meters.

The only light meters that show you the Dynamic Range of your D-SLR.

The dynamic Range of a digital camera can be different due to it's unique camera sensor file format (Tiff, JPEG, RAW, etc.), selected ISO and more. Knowing the limits of the digital camera (or film) is essential in exposure control. The graph below shows the Latitude or Dynamic range of a particular digital camera (or film), as well as the Clipping points (where the exposure exceeds the dynamic range of the sensor film).



Exposure profiling



Step 1

Shoot target (X-Rite or datacolor brand) with the equipment you use most.



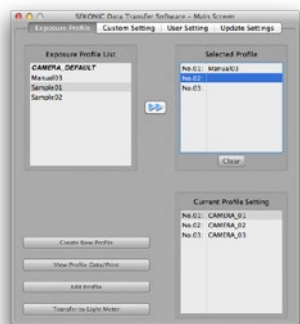
Step 2

Transfer images into your computer. If images are captured as RAW files convert them to TIFF or JPEG for analyzing. Enter ISO, incident and reflected shooting data into the Data Transfer Software and DTS will evaluate and create a graph of dynamic range and clipping points for your camera. Name and save the profile data for future use.



Step 3

Connect the meter to your MAC or PC computer and transfer the exposure profiles. Profiles can be stored and recalled at any time. Exposure latitude warnings alert you when the exposure exceeds the range of the camera.



Main Screen

Display a graph of the sensitivity curve for your DSLR

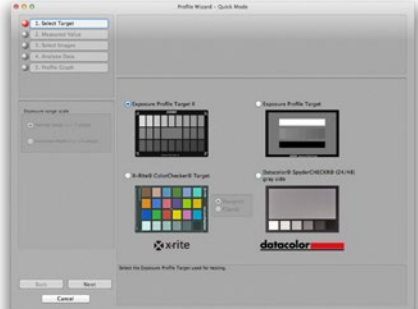
Data Transfer Software automatically analyzes the test images and displays the sensitivity curve of your camera. It also enables you to set the dynamic range and clipping point in your way, and to transfer the exposure profile data into the light meter. Additionally, it is possible to compare multiple exposure profiles on a basis of ISO sensitivity or camera.

The Wizard - The Easy way to create Exposure Profile

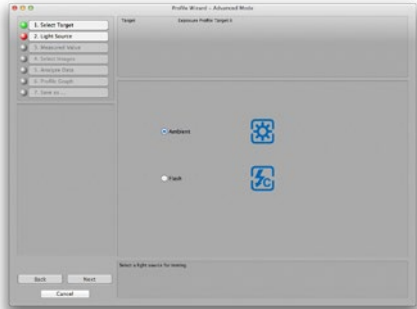
The Wizard enables you to create the exposure profile in an easy way by just following the instruction on the screen. To create a new profile, select "Quick Mode - for a fast and simple profile", "Advanced Mode - for a more precise exposure profile" or "Manual Input Mode - direct input Manually".



"Profile Mode" Selection Screen



"Select Target" Screen

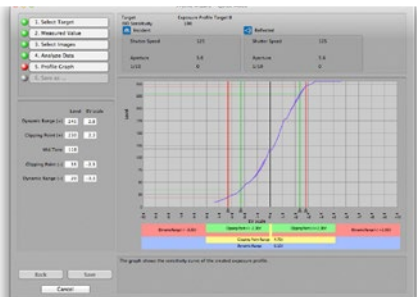


"Select Light Source" Screen

Analyze the test images automatically

A preview and Exif information are displayed when clicking a thumbnail image, so you can be free from entering the exposure value of each selected image.

Just select the necessary images and align the cross mark for the analyzing area, and then the data is automatically analyzed.



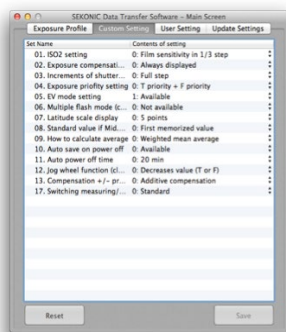
Transfer the data via USB from the computer to the light meter.

Connect the USB cable to the USB port (on the side of the light meter) and the other end to the USB port (on the computer) to transfer the computer data to the light meter. While transferring the data, the USB icon blinks on the connected light meter's screen to confirm that the data transfer is in progress and the meter and computer are correctly connected. It's also possible to transfer data from the light meter to the computer.



Customize your meters via Data Transfer Software

Custom Settings for both the L-858 and L-478 series are quickly and easily made through the Data Transfer Software. Both the meter's firmware and Data Transfer Software are automatically updated while DTS is connected to the internet.



Custom Setting



Update Screen

THE PERFECT BLEND OF PHOTO/CINE FEATURES
ALL IN ONE LIGHTMETER
COMPACT | LIGHTWEIGHT | INTUITIVE DESIGN

Inspired by the popular legacy of the L-308 series that began almost a quarter of a century ago, the NEW Sekonic FLASHMATE L-308X addresses significant features and functions that meet and exceed the needs of today's Photo and Cine/Video shooters. The L-308X includes the familiar blend of compact, lightweight and intuitive design, which has made the L-308 series so popular, as well as the Cine/Video features of the affordable DigiCineMate L-308DC.

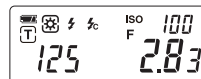
The versatility of the latest DSLR cameras has expanded the capabilities and creativity of today's image makers. With just one camera, today's shooters have become multi-media image makers, blending both still and moving images seamlessly, for the ultimate storytelling. Offering all the features expected from the latest generation L-308 series, the NEW FLASHMATE L-308X features an LCD backlight, Aperture priority (Photo Mode), and ISO 850 setting (for native ISO Cine Camera's). The FLASHMATE L-308X is the perfect blend of Photo/Cine features all in one light meter.

Three Meters in One

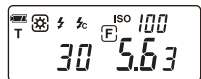
Whether your shooting assignment is capturing images at a wedding, producing short training videos for a local business or producing a cinematographic documentary, the FLASHMATE L-308X accommodates your lighting challenge with accurate and comprehensive measurements that put the image maker in control.

PHOTO Mode:

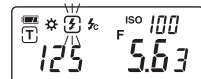
The FLASHMATE L-308X offers full exposure control for photographer's on-location or in the studio. In addition to Shutter Priority Mode, the NEW Aperture Priority Mode offers the carefree depth-of-field control provided on most DSLR's. In addition, a range of ambient and flash functions including Cord and Cordless flash measurement, as well as ambient EV measurement are fully displayed.



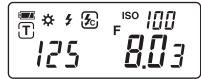
Shutter Speed Priority Mode



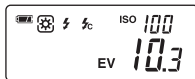
Aperture Priority Mode



Cordless Flash Mode



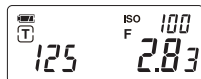
Cord Flash Mode



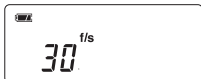
EV Mode

HD_CINE Mode:

A compact and portable choice for today's videographers, the FLASHMATE L-308X offers an impressive range of features only found more sophisticated models. Determining the correct exposure reading and controlling the lighting situation with the shutter speed and frame rate settings, provides aperture readings within one-tenth stop accuracy.



Shutter Speed Priority Mode



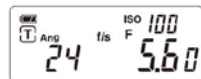
Frame Rate Setting



Simplified Illuminance Mode

CINE Mode:

Designed with the professional in mind, the FLASHMATE L-308X can take on the challenges of digital cinematography. Select from the right combination of frame rates and shutter angles to achieve the exposure control necessary with one-tenth stop accuracy. Truly universal, the FLASHMATE L-308X offers Lux (lx) and foot-candle (fc) readout enabling a quick set up of lighting in a compact, affordable and easy-to-use design.



Frame Rate Priority Mode



Shutter Angle Mode



Simplified Illuminance Mode

Other Key Features:

- ✓ Illuminated display - Backlight LCD turns on automatically under EV5.
- ✓ Calibration compensation - Adjustable +/-1.0EV in 0.1 step.
- ✓ Custom setting - 1) Select display mode, 2) Increment of measurement and 3) Unit of illuminance (lx or fc)

FLASHMATE
L-308X



Three Ways to Measure

Light receptor 1 (lumisphere)

Slide the mounting umisphere to the left until it clicks to switch to incident light measurement.



Light receptor 2 (lens)

Slide the built-in lumisphere to the right until it clicks into position for reflected light measurement



Light receptor 3 (lumidisc)

Slide the built-in lumisphere to the right and insert the lumidisc (optional) into the slot over the light receptor lens to measure flat subjects or lighting contrast with precision.



PURE, SIMPLE AND EFFECTIVE

The classic Sekonic L-398A has become a favorite with cinematographers around the world for over half a century. A pure analog needle and exposure dial system, the L-398 provides all exposure combinations at a single glance. And because it uses an amorphous photocell that generates its own power, there is no need for a battery. Incident measurement with it's swivel head and lumisphere or lumidisc provide the lighting information necessary for lighting setups. The Sekonic L-398A Studio Deluxe III is an ideal prime or back-up meter. for still or motion picture shooters.

Instant reading of aperture/shutter combinations with dial ring

It is possible to read combinations of aperture values and shutter speeds on the dial ring at one view.

Amorphous photosensor eliminates need for battery

As light receptor element, amorphous photosensor is newly adopted. It is not necessary to bring replacement of batteries.

Continuous measurement

The needle is released by holding and turning the measuring button. At this time, the meter will deflect freely even if the stopper button is released.

How to Use L-398A



- Step 1**

You can set ISO in ISOindicator window by rotating ISO sensitivity selector knob.
- Step 2**

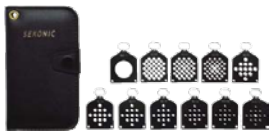
Pressing the measure button causes the meter needle to deflect according to brightness level. When the measuring button is released, the needle stops at a fixed position indicating the measured values.
- Step 3**

Foot-candle values can be read on the foot-candle scale measurement scale. Rotate dial ring to set scale mark to match the foot-candle value on dial scale.
- Step 4**

Once the foot-candle scale value has been matched with the dial scale, any of the corresponding shutter speed and aperture combinations will provide the correct exposure.

Slide Set for L-398 Series (Optional Accessory)

A total of 11 slides are available, for direct reading of aperture on Foot-Candle scale in incident measurement



A CLIP ON LIGHT METER FOR BOTH INCIDENT & REFLECTED LIGHT MEASUREMENT

The twinmate L-208 can be mounted on the camera's hot shoe using the accessory shoe mounting plate. The compact design fits nicely on classic cameras without built-in exposure meters

Instant reading of aperture/shutter combinations with dial ring

It is possible to read combinations of aperture values and shutter speeds on the dial ring at one view.



Shoe Mounting on Camera

The accessory shoe is mounted using shoe mounting plate. The mounting location of the shoe mounting plate is variable; therefore mount it correctly for the camera that you are using.

One Hand Operation

It is possible to operate with one hand by using the guide needle position retained during 15 seconds after measurement.

Selection of reflected or incident light measurement at one touch of sliding the lumisphere

Selection of reflected or incident light measurement at one touch of sliding the lumisphere. You can select reflected or incident light measurement by sliding the lumisphere until it clicks. The light receiving angle for reflected light is 33 degrees (approx. 73mm) corresponds to approx. 70% of angle for 50mm standard lens of 35mm SLR camera (approx. 46 degrees). Make measurements using the fan-shaped lines indicating 33° light receiving angle on the scale plate as a guide.



How to Use L-208



- Step 1**

You can select incident or reflected measurement by sliding the lumisphere to the right or left until it clicks.
- Step 2**

You can set ISO in ISO indicator by rotating ISO switch over knob on the dial ring.
- Step 3**

Pressing the measure button causes the meter needle to deflect according to brightness level. When the measuring button is released, the red guide needle stops at a fixed position for 15 seconds indicating the measured values.
- Step 4**

Rotate dial ring to align the green match needle with the red guide needle. Any of the corresponding shutter speed and aperture combinations will provide the correct exposure.



Specification and
Comparison Chart



Product Name and Model				L-858D	L-478DR series	L-478D	L-308X	L-398A	L-208			
Measuring System	Incident light	Swivel head		Horizontal (270 degrees)	Horizontal (270 degrees)	Horizontal (270 degrees)	No	Horizontal (300 degrees)	No			
		Lumidisc		Retractable	Retractable	Retractable	Removable (Optional)	Removable	No			
	Reflected light	Switching incident/reflected		Operation on LCD	Removable	Removable	Slide	Removable	Slide			
Light receiving angle			1° (Built-in)	VF 5° (Optional VF)	VF 5° (Optional VF)	40° (Built-in)	30° (Lumigrid)	33° (Lumigrid)				
Measuring Mode	Ambient light	T priority		Yes	Yes	Yes	Yes	Yes	Yes			
		F priority		Yes	Yes	Yes	Yes	Yes	Yes			
		TF priority		Yes	Yes	Yes	No	No	No			
		HD_CINE (T priority)		Yes	Yes	Yes	Yes	Yes	No			
		CINE (f/s priority)		Yes	Yes	Yes	Yes	Yes	No			
		Lux/FC		Yes	Yes (w/Optional VF)	Yes (w/Optional VF)	Yes	Yes (FC only)	No			
		Cd/m²/FL		Yes	Yes (w/Optional VF)	Yes (w/Optional VF)	No	No	No			
		Flash light	Cordless/cord-in		Yes	Yes	Yes	Yes	No	No		
	Radio triggering			Yes (Optional)	Yes (Built-in)	No	No	No	No			
	Multiple cumulative flash			Yes (Unlimited)	Yes (99 times)	Yes (99 times)	No	No	No			
	HSS			Yes	No	No	No	No	No			
	Flash duration analysis			Yes	No	No	No	No	No			
	Measuring Range (ISO100)	Ambient	Incident light	EV	-5 to 22.9	-2 to 22.9	-2 to 22.9	0 to 19.9	4 to 17	3 to 17		
Reflected light			EV	-1 to 24.4	3 to 22.9	3 to 22.9	0 to 19.9	9 to 17	3 to 17			
Illuminance			Lux	0.1 to 2,000,000 lx	0.63 to 2,000,000 lx	0.63 to 2,000,000 lx	2.50 to 190,000 lx	No	No			
			FC (Foot-Candle)	0.01 to 180,000 fc	0.10 to 180,000 fc	0.10 to 180,000 fc	0.23 to 17,000 fc	0 to 1,250 fc (scale)	No			
Luminance			Cd/m²	0.1 to 980,000 cd/m²	1.0 to 980,000 cd/m²	1.0 to 980,000 cd/m²	No	No	No			
			FL (Foot-Lambert)	0.03 to 290,000 fl	0.29 to 290,000 fl	0.29 to 290,000 fl	No	No	No			
Flash		Incident light	F	F0.5 to F161.2(=128.9)	F1.0 to F161.2(=128.9)	F1.0 to F161.2(=128.9)	F1.0~F90.9	No	No			
		Reflected light	F	F1.0 to F161.2(=128.9)	F2.8 to F161.2(=128.9)	F2.8 to F161.2(=128.9)	F1.0~F90.9	No	No			
		Illuminance	Lux·s	No	No	No	No	No	No			
			FC (Foot-Candle)·s	No	No	No	No	No	No			
		Display/Setting Range	ISO Sensitivity	Ambient	Aperture	Range	3 to 13,107,200 plus 850	3 to 409,600 plus 850	3 to 409,600 plus 850	3 to 8,000 plus 850	6 to 12,000	12 to 12,500
						Range	F0.5 to 161.2 (=128.9) in 1, 1/2, 1/3 step	F0.5 to 161.2 (=128.9) in 1, 1/2, 1/3 step	F0.5 to 161.2 (=128.9) in 1, 1/2, 1/3 step	F0.5 to 90.9 in 1, 1/2, 1/3 step	F0.7 to 128 in 1, 1/3 step	F1.4 to 32 in 1, 1/2 step
	Shutter speed			Analog scale	F1.0 to 90 in 1/3 step	F1.0 to 90 in 1/3 step	F1.0 to 90 in 1/3 step	No	No	No		
				Range	30m to 1/64,000s in 1, 1/2, 1/3 step	30m to 1/64,000s in 1, 1/2, 1/3 step	30m to 1/64,000s in 1, 1/2, 1/3 step	Photo Mode: 60s to 1/8,000s HD_CINE Mode: 1/8s to 1/8,000s in 1, 1/2, 1/3 step	60s to 1/8,000s in 1 step	30s to 1/8,000s in 1 step		
	Analog scale			4s to 1/2,000s in 1/3 step	4s to 1/2,000s in 1/3 step	4s to 1/2,000s in 1/3 step	No	No	No			
Frame Rate	Range			1 to 1,000 f/s plus other 20 settings (customized from 0.001 to 99,999.999)	1 to 1,000 f/s plus other 20 settings (customized from 0.001 to 9,999.999)	1 to 1,000 f/s plus other 20 settings (customized from 0.001 to 9,999.999)	8 to 128f/s	8, 18, 24, 64, 128	No			
Shutter angle	degrees			1 to 358 deg. plus other 20 settings (customized from 0.001 to 360)	1 to 358 deg. plus other 20 settings (customized from 0.001 to 360)	1 to 358 deg. plus other 20 settings (customized from 0.001 to 360)	45, 90, 180, 270, 360: CINE Mode	No	No			
EV	Range			-73.9 to 103.8 for incident -69.9 to 105.3 for reflected	-27.9 to 55.8	-27.9 to 55.8	-6 to 27.2	1 to 20	3 to 17			
	Analog scale			-3.0 to +3.0 EV for incident -7.0 to +7.0 EV for reflected	-3.0 to +3.0 EV for incident -7.0 to +7.0 EV for reflected	-3.0 to +3.0 EV for incident -7.0 to +7.0 EV for reflected	No	No	No			
Flash	Aperture			Range	F0.5 to 161.2(=128.9) in 1, 1/2, 1/3 step	F0.5 to 161.2(=128.9) in 1, 1/2, 1/3 step	F0.5 to 161.2(=128.9) in 1, 1/2, 1/3 step	F0.5 to 90.9 in 1, 1/2, 1/3 step	No	No		
			Analog scale	F0.1 to 90 in 1/3 step	F1.0 to 90 in 1/3 step	F1.0 to 90 in 1/3 step	No	No	No			
	Shutter speed		Range	30m to 1/16,000s in 1, 1/2, 1/3 step	30m to 1/1,000s in 1, 1/2, 1/3 step	30m to 1/1,000s in 1, 1/2, 1/3 step	1s to 1/500s in 1, 1/2, 1/3 step	No	No			
	Flash duration	Range	1/40 to 1/55,500s(25ms to 18us)	No	No	No	No	No				
	t value	0.1 to 0.9 (in 0.1 step)	No	No	No	No	No					
Functions			Exposure Profile	Yes	Yes	Yes	No	No	No			
			Memory	Yes (9 times) both incident and spot	Yes (9 times)	Yes (9 times)	No	Yes (1 memory with indicator)	No			
			Average	Yes	Yes	Yes	No	No	No			
			Contrast Function	Yes (+/-9.9EV in 1/10 step)	Yes (+/-9.9EV in 1/10 step)	Yes (+/-9.9EV in 1/10 step)	No	No	No			
			Flash Analyzing	Yes (in 10% step)	Yes (in 10% step)	Yes (in 10% step)	No	No	No			
			Filter compensation	Yes (-20 to 20EV)	Yes (-12 to 12EV)	Yes (-12 to 12EV)	No	No	No			
			Filter factor number compensation	Yes (preset 24 types plus 6 settings)	Yes (preset 24 types plus 6 settings)	Yes (preset 24 types plus 6 settings)	No	No	No			
			Exposure compensation	Yes (-9.9 to +9.9)	Yes(-9.9 to +9.9)	Yes(-9.9 to +9.9)	No	No	No			
			Calibration compensation	Yes (-1.0 to +1.0)	Yes(-1.0 to +1.0)	Yes(-1.0 to +1.0)	Yes (-1.0 to +1.0)	No	No			
			Custom settings	Yes (17 items)	Yes (13 items)	Yes (13 items)	Yes (3 items)	No	No			
			LCD backlight	Yes	Yes	Yes	Yes (under EV5)	No	No			
			Water resistance	Yes	No	No	No	No	No			
			Diopter adjustment	Yes (-1 to 2.5 D)	No	No	No	No	No			
			Tripod socket	Yes	No	No	No	No	No			
			Others			Operating temperature	-10 to 50	-10 to 50	-10 to 50	0 to 40°C	0 to 40°C	0 to 40°C
Storage temperature	-20 to 60	-20 to 60				-20 to 60	-20 to 60	-20 to 60	-20 to 60			
Power source	1.5V x 2 (AA battery)	1.5V x 2 (AAA battery)				1.5V x 2 (AAA battery)	1.5V x 1(AA battery)	No battery (amorphous sensor)	3.0V x 1(CR2032 battery)			
Weight (without battery)	240g	140g				130g	80g	190g	40g			
Dimensions (W x H x D)	94 x 176 x 49	57 x 140 x 26				57 x 140 x 26	63 x 110 x 22	58 x 112 x 34	45 x 65 x 24			
Standard Accessory			LCD	2.7" color dot matrix LCD	2.7" color dot matrix LCD	2.7" color dot matrix LCD	B&W, Segment type	No	No			
			Software/Utility	Yes (Downloaded from website)	Yes (Downloaded from website)	Yes (Downloaded from website)	No	No	No			
			Operating Manual	Yes (Downloaded from website)	Yes (Downloaded from website)	Yes (Downloaded from website)	Yes (Downloaded from website)	Yes (included in the package)	Yes (included in the package)			
			Quick Guide / Start Up Guide	Yes (included in the package)	Yes (included in the package)	Yes (included in the package)	Yes (included in the package)	Yes (included in the package)	Yes (included in the package)			
			Lens Cap	Yes	No	No	No	No	No			
			Strap	Yes	Yes	Yes	Yes	Yes	Yes			
			Synchro terminal cap	Yes (built-in)	Yes (built-in)	Yes (built-in)	Yes	No	No			
			Soft case	Yes	Yes	Yes	Yes	Yes	Yes			
			Lumidisc	Yes (same as Lumisphere)	Yes (same as Lumisphere)	Yes (same as Lumisphere)	No (Optional)	Yes	No			
			Anti glare film	Yes	Yes	Yes	No	No	No			
Optional Accessory			Viewfinder	No	Yes (5")	Yes (5")	No	No	No			
			Lumisphere	Yes	Yes	Yes	No (built-in)	Yes	No (built-in)			
			Lumidisc	Yes (same as Lumisphere)	Yes (same as Lumisphere)	Yes (same as Lumisphere)	Yes	Yes	No			
			Lumigrid	No	No	No	No	Yes	No			
			Deluxe case	No	Yes	Yes	No	Yes	No			
			Synchro cord	Yes	Yes	Yes	Yes	No	No			
			Radio transmitter	Yes (Broncolor, Elinchrom, Godox, Phottix Strato II, PocketWizard)	No (built-in PCB)	No	No	No	No			
			Step-up ring	Yes	No	No	No	No	No			
			Exposure Profile Target / II	Yes	Yes	Yes	No	No	No			

PRECISION COLOR CONTROL EXPANDED
COLOR INTERPRETATION FOR EVERY
LIGHT SOURCE AT THE TOUCH OF YOUR FINGER

The gap between still and motion image capture has narrowed considerably, and so has lighting and the ability to control it. Now both still and motion shooters are faced with the choices and challenges of conventional and emerging light sources. With the many sophisticated and versatile camera's available today, a new generation of image capture talent has entered the field. New camera and lighting technology has lead the way to media content that has never before been possible. New challenges, especially in lighting and specifically in color consistency have hindered the creative flow of many studio and on-locations productions. Reproducing colors as they appear in the image has always been the essential goal and dream in photography and cinematography since its inception. Today's digital shooters remain unchanged in their desire to control color precisely, while the diversity of light sources is ever-changing. With the popularity of LED lighting, the need for a spectrometer that can measure it and all light sources has become critical to ensure accurate color fidelity. The NEW Sekonic Spectrometer C-800 takes the urgency for precision color control, expanded color interpretation and the need to measure all light sources to the next generation of standards in color evaluation. Born from the first spectrometer, the Spectrometer C-700 series, the New Spectrometer C-800 continues to measure every light source (LED, HMI, Fluorescent and the natural light spectrum) PLUS flash. In addition, it incorporates expanded Color Rendering Properties to address the evolutionary progress of the industry. Software enhancements now include Spectral Similarity Index (SSI) Television Lighting Consistency Index (TLCI), Television Lminaire Matching Factor (TLMF) and Technical Memorandum (TM-30). With its CMOS linear sensor image, the Spectrometer C-800 makes it possible to capture spikes in light source output, especially fluorescent and LED lighting, providing unmatched color measurement accuracy.

Ultimate Tool for Color Control

Spectrometer (Color Meter)

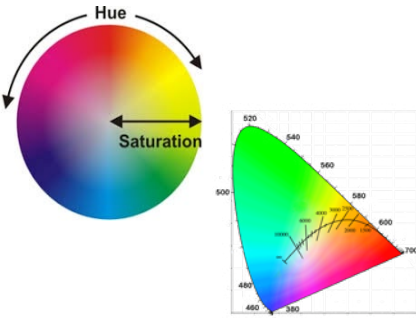
- ✓ Measures Color Temperature (K)
- ✓ Provides Color Compensation Data
- ✓ Provides Light Quality Information such as CRI, TM-30, SSI, TLCI/TLMF, and Spectrum distribution graph

Illuminance Meter

- ✓ Provides Lux, Foot-Candle, Lux Sec., Foot-Candle Sec.
- ✓ Conforms to Class A of JIS C 1609-1: 2006



Utilizing a CMOS linear image sensor, the C-800 Spectrometer measures any light source with repeatable and precise accuracy



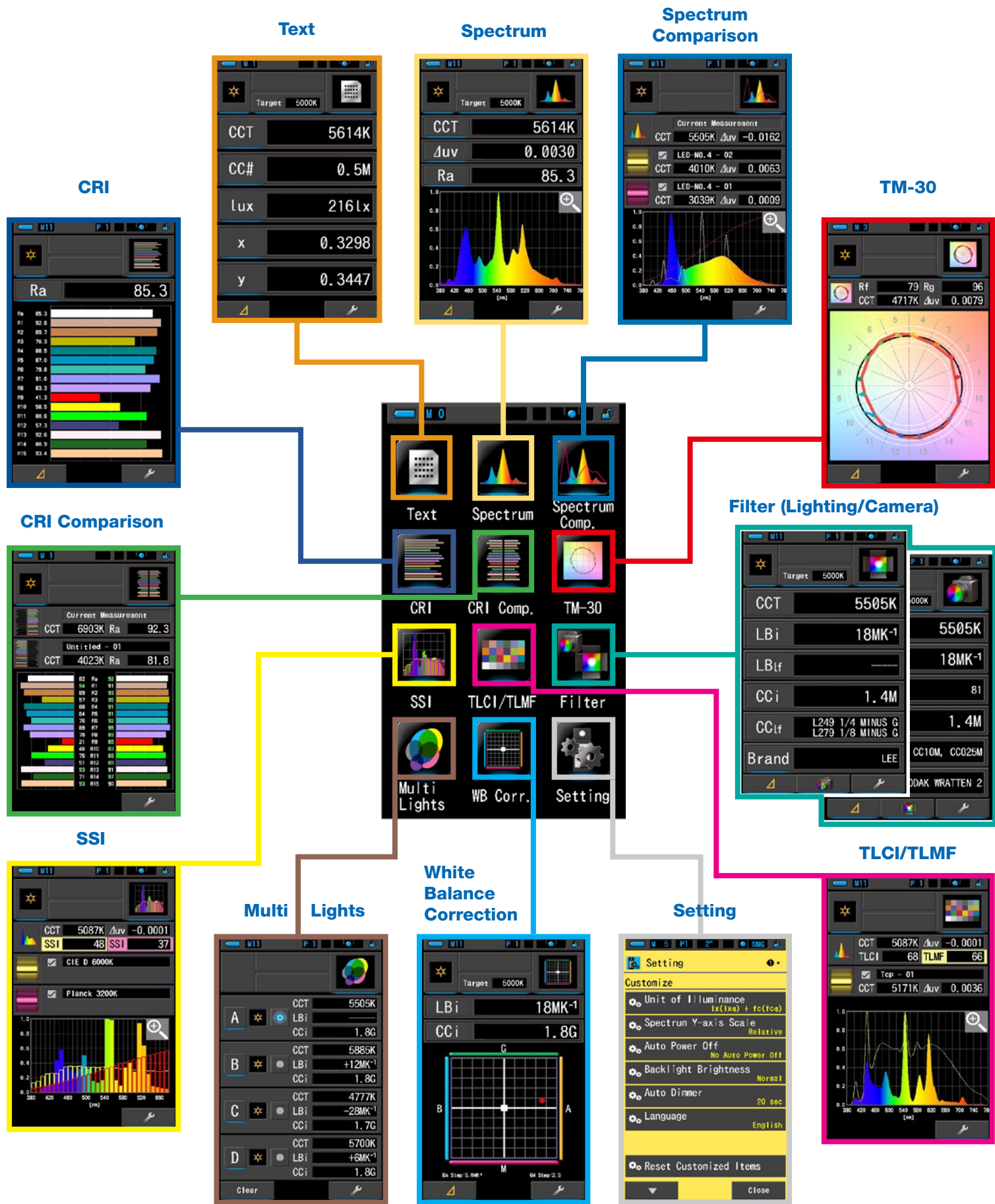
Extended color control parameters such as hue/saturation and x, y (CIE 1931) offer further interpretation and understanding of new data fields for quick and easy use in various lighting applications



Expanded color rendering properties such as SSI (Spectral Similarity Index), TLCI (Television Lighting Consistency Index), TLMF (Television Lminaire Matching Factor) and TM-30 (Technical Memorandum) on top of CRI (Color Rendering Index).

Various Display Modes with Intuitive Color Touch Screen

The C-800's 4.3" large color touch dot-matrix screen displays various modes and functions in a logical and intuitive layout. The main selection screen displays the quick icons for the following Display Modes.

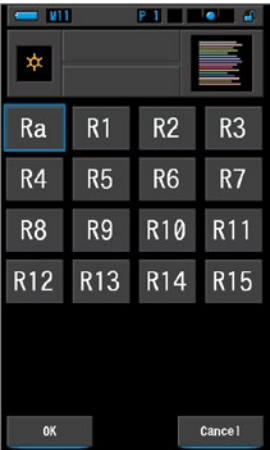


Expanded Measurement and Compensation Values

The C-800 Spectrometer offers a wide selection of measuring values and various compensation solutions. Access to these values can be quickly selected by a tap of your finger on the appropriate icon.

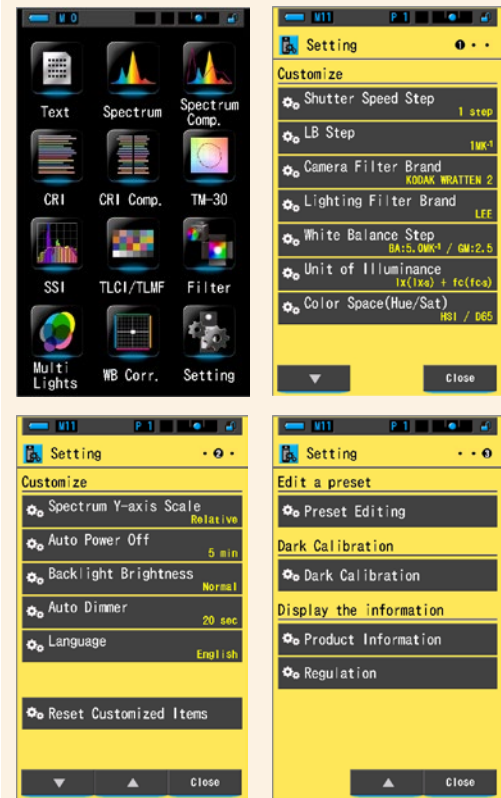
No.	Indication	Display Item Name	Description
1	CCT	Color Temperature	Display Displays correlated color temperature.
2	Δuv	Color Temperature	Deviation Displays deviation from the black-body radiation.
3	Lux, fc	Illuminance *	Displays illuminance in lux or foot-candle.
4	HLx, Hfc	Exposure *	Displays exposure in lux-second or foot-candle-second.
5	CCi	CC Index	Displays the CC correction value in CC index.
6	CC#	CC Filter Number	Displays the CC corrected value in total value of CC filter number.
7	CCcf	CC Camera Filter	Displays the CC correction value in the compensation filter name. The filter brand is selected in the Measuring screens and Setting Mode.
8	LBi	LB Index	Displays the LB correction value in LB index.
9	LBcf	LB Camera Filter	Displays the LB correction value in the compensation filter name. The filter brand is selected in the Measuring screens and "Customize" in the Setting screen.
10	Rf	Fidelity Index	Displays the Fidelity index of TM-30 in the value from 0 to 100.
11	Rg	Gamut Index	Displays the Gamut index of TM-30 in the value from 0 to 200.
12	SSIt	SSI Tungsten	Displays the SSI index in the value from 0 to 100 in comparison with CIE Tungsten (3200K).
13	SSId	SSI Daylight	Displays the SSI index in the value from 0 to 100 in comparison with CIE D55 (5500K).
14	SSI1	SSI #1	Displays the SSI index in the value from 0 to 100 in comparison with #1 selected light source (yellow graph) in SSI mode.
15	SSI2	SSI #2	Displays the SSI index in the value from 0 to 100 in comparison with #2 selected light source (red graph) in SSI mode.
16	TLCI	TLCI	Displays the TLCI index in the value from 0 to 100.
17	TLMF	TLMF	Displays the TLMF index in the value from 0 to 100 in comparison with selected memorized value.
18	x	Chromaticity coordinate x	CIE1931 Chromaticity coordinate x
19	y	Chromaticity coordinate y	CIE1931 Chromaticity coordinate y
20	Hue	Hue	Displays the color (i.e. red, green, blue) in the value from 0 to 359 degrees.
21	Sat	Saturation	Displays the saturation in the value from 0 to 100.
22	Ra	Average CRI	Displays the average value of CRI R1 to R8 in the value of from 0 to 100.
23	R1 to R15	CRI Number	Displays Individual CRI number from R1 to R15 in the value of from 0 to 100.

* Models sold in some countries do not display illuminance and exposure in "fc (fc-s)" due to legal restrictions.



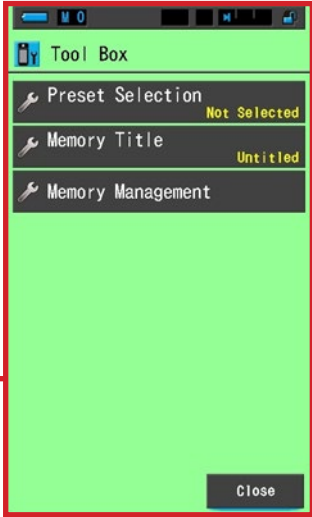
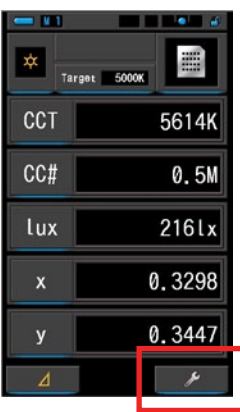
Customize Your Meter

All settings and preferences can be selected and adjusted within this Setting menu.



Tool Box

Frequently used settings such as Present selection, Memory titles and Memory management can be selected in the Tool Box by tapping your finger on the wrench icon on all Measuring screen.



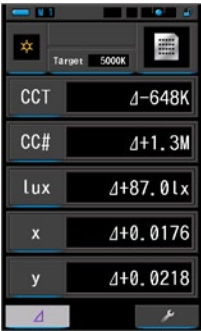
No.	Name	Description
1	Preset Selection	Selection screen to apply preset preferences such as camera or lighting filter settings or change the target color temperature.
2	Memory Title	Creates special titles for memorized values.
3	Memory Management	Memorized values can be cleared renamed or recalled.

Other Functions

- Up to 99 readings can be memorized (pic 1).
- Comparison Function to show the difference between standard value and currently being measured value (pic 2).
- Dark calibration can be done by turning the Light Selection Ring to set to the dark calibration position or perform it from Setting menu without a cap to cover the light receiving section (pic 3).
- Two AA batteries (alkaline or maganese recommended) conveniently provide portable power (pic 4). A USB cable provides continuous power during measurement, firmware updates, data uploads or downloads and custom settings.
- 270° swivel head



Pic 1



Pic 2



Pic 3



Pic 4

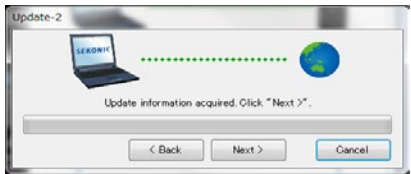
C-800 Series Utility Software

The C-800 series Utility (included with the meter) offers an easy ways to make meter settings such as shutter speed increments, filter brand selection and Illuminance units (lux or fc). Memorized data can be evaluated and analyzed using the advantage of a larger screen from a desktop or notebook computer. The latest firmware can be quickly and easily updated to the meter.

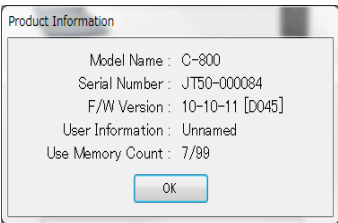
- Analyzes and saves the memorized data in the computer.
- Provides convenient selection and adjustment of meter settings.
- Quick view of Meter Information (serial number, user name, etc)
- Updates the meter and Utility Software
- Captures the meter screen (C-800 only)
- Saves data on computer can be transferred to the meter (C-800 only)



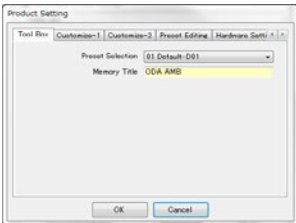
Main Screen



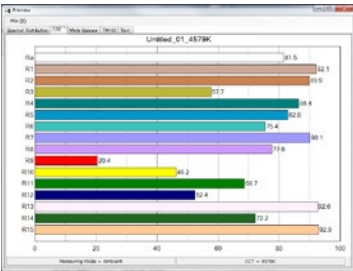
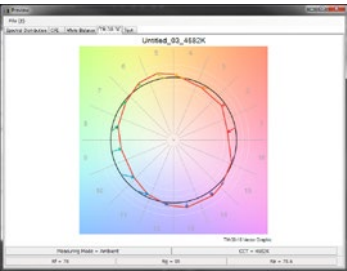
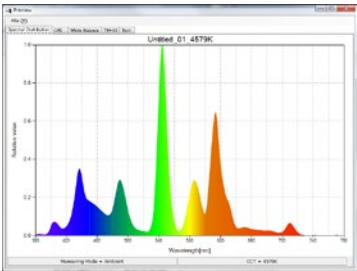
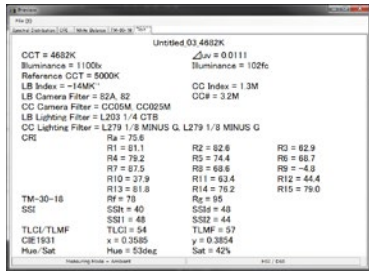
Update Screen



Product Information



Product Setting



Memory Data Preview

PRECISION COLOR CONTROL EXPANDED
COLOR INTERPRETATION FOR EVERY LIGHT
SOURCE AT THE TOUCH OF YOUR FINGERTIPS

Lighting solutions and applications have never been in greater demand and expansion as they are today. Fueled by advances in lighting technology such as OLED's, lighting has become just as much a lifestyle today as it is a necessity in our daily lives. With the overwhelming popularity of these new light sources, the need to understand, manage and control them has never been in more demand. Manufacturing quality and process along with varying color and illumination can often result in consistency issues. In response, Sekonic, a leader for nearly 70 decades in light measurement instruments, offers an ergonomic, intuitive advanced Spectrometer C-7000.

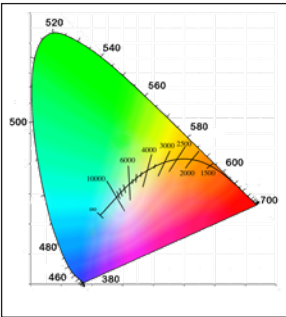
The Spectrometer C-7000 is a portable handheld spectrometer, designed especially for industrial use. Utilizing Sekonic's CMOS linear image sensor design and software, the C-7000 can measure every light source (LED, HMI, Fluorescent, Flash, Natural Light spectrum) with remarkable precision and data feedback. In addition, with recent firmware enhancement it offers expanded lighting interpretation metrics and metering applications for industrial lighting. The new firmware provides expanded color interpretation (TM-30, TLCI/TLMF, SSI and CRI comparison), to enhance its precision color control for every light source. Final with the C-7000 Utility software, output of memorized data is provided at every 1nm (nanometer) increments in CSV format.



Ultimate Tool for Color Control



Utilizing a CMOS Linear Image sensor the C-7000 series spectrometer measures any light source with repeatable and precise accuracy



Wide measuring range
*Correlated color temperature (1,600 to 40,000K)
*Illuminance (1 to 200,000lx)

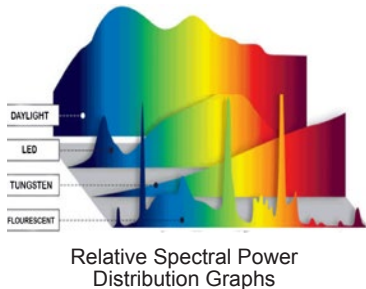


Intuitive color touch screens offer easy navigation through Spectral distribution, lighting comparisons, CRI color data and more

Precise Measurement

Measures LED, HMI, Fluorescent, Tungsten, Natural Light and Flash in 1 nanometer (nm) output wavelength increments from 380 to 780 nm.

It conforms to requirement of "Illuminance meter class" for JIS C 1609-1: 2006 "Illuminance meters Part 1: General measuring instruments" Class A, and DIN 5032 Part 7 Class C.



KEY New Features

- ✓ TM-30, TLCI/TLMF, SSI, CRI comparison
- ✓ Continuous/Single measurement selection
- ✓ Preset Display (Toolbox menu)
- ✓ Windows(7 to 10) and MAC OS (10.13 to 10.15)Ready Utility
- ✓ MiniB USB cable included
- ✓ SDK in Visual Basic (Windows only) for Remote Control

Memory Function and Data Management

Up to 999 measurements can be stored in memory. C-7000 Utility (in CD-ROM included in the package) offers easy settings and updating firmware of the meter.

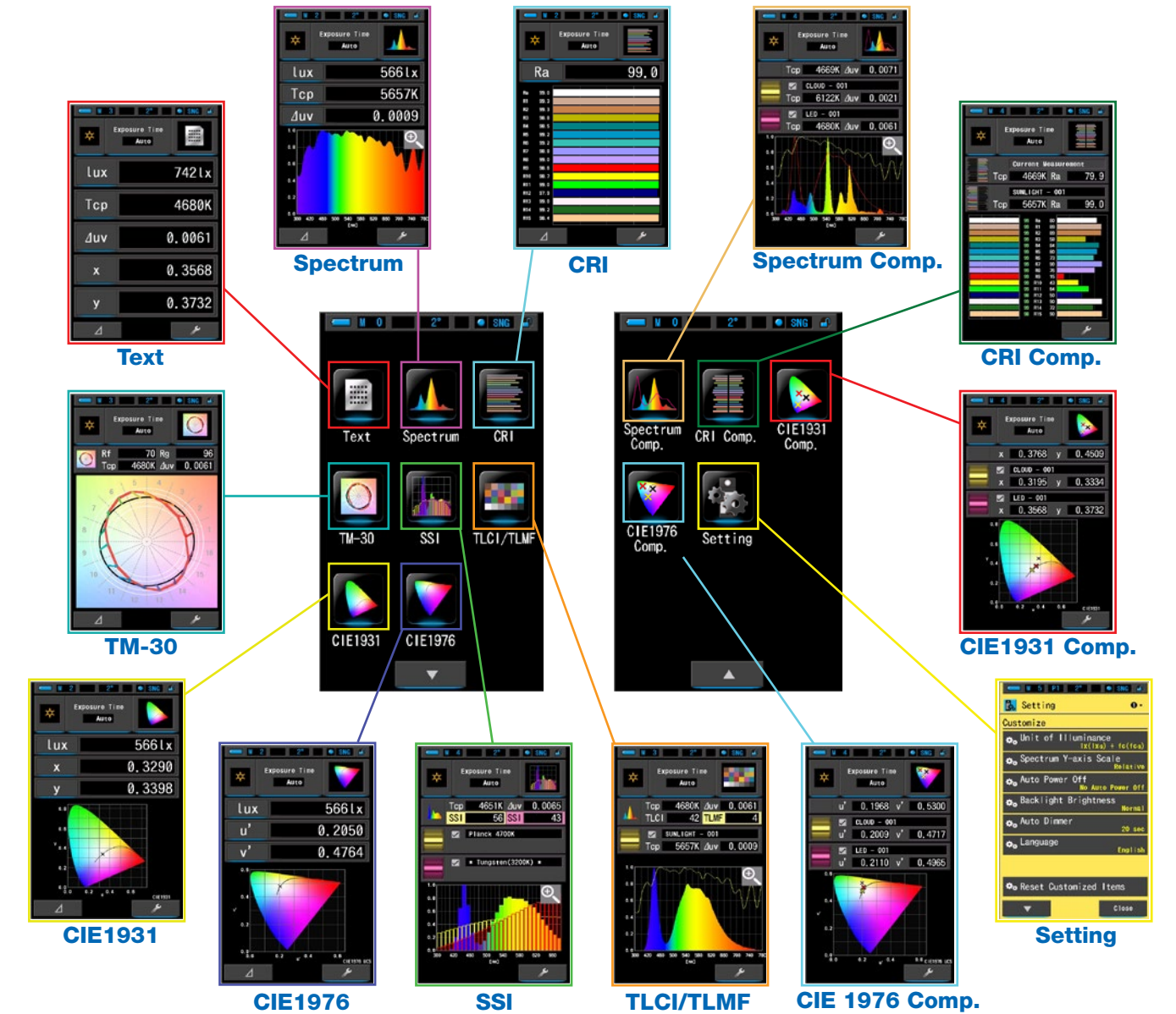
Via C-7000 Utility software for both Windows and Macintosh, the output of the spectrum data at every 1nm in CSV format and the graphics of the Spectrum, TM-30, CIE1931/1964 or CIE1976 in JPEG/BMP/PNG format are also available.

Wide Measuring Range of Color Temperature and Illuminance

Wide measurement range of Color Temperature (1,563 to 100,000K) and illumination (1 to 200,000lx = 0.1 to 18,600fc in ambient light, 20 to 20,500lx • s = 1.86 to 1,900fc • s in flash light)

Various Display Modes with Intuitive Color Touch Screen

The C-7000's 4.3" large color touch dot-matrix screen displays various modes and functions in a logical and intuitive layout. The main selection screen displays the quick icons for the following Display Modes.



Various Display Items

- ✓ Correlated color temperature (Tcp)
- ✓ Deviation (Δuv)
- ✓ Tristimulus Value (X, Y, Z, / X10, Y10, Z10)
- ✓ CIE1931(CIE1964) Chromaticity Coordinates (x, y, z / x10, y10, z10)
- ✓ CIE1976 Chromaticity Coordinates (u' , v' / $u'10$, $v'10$)
- ✓ Dominant Wavelength (λd)
- ✓ Excitation Purity (Pe)
- ✓ Peak Wavelength (λp)
- ✓ Lux(lx) or Foot-Candle(fc) – ambient light
- ✓ Lux sec. (Hlx) or Foot-Candle sec. (Hfc) – flash light
- ✓ PPFD: Photosynthetic Photon Flux Density ($\mu mol m^{-2} s^{-1}$)
- ✓ TM-30 (Rf, Rg)
- ✓ SSI (Tungsten, Daylight, SSI1, SSI2)
- ✓ TLCI/TLMF
- ✓ CRI (Ra / R1 to R15)

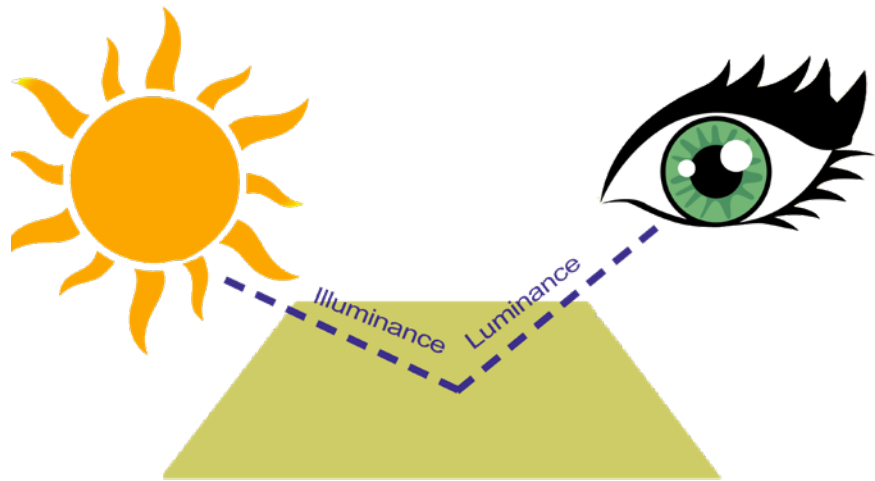


Display Items Library

WHAT IS ILLUMINANCE AND LUMINANCE?

Luminance

Luminance is the measurement of how much light is coming from, passing through or reflected from a surface at a particular angle. It also indicates how much light intensity can be perceived by the human eye. The International System of Units (SI) uses candela/square meter (cd/m²) as the units to measure luminance. In the U.S. one of the most common units of measure is the foot-lambert (fl); 1 foot-lambert (fl) equals 3.426 cd/m². In the screens/display industry the term nit (nt) is commonly used. Nit is a non-SI term used for luminance, and 1 nit is equivalent to 1 cd/m². In the display industry, luminance is used to quantify the brightness of displays.



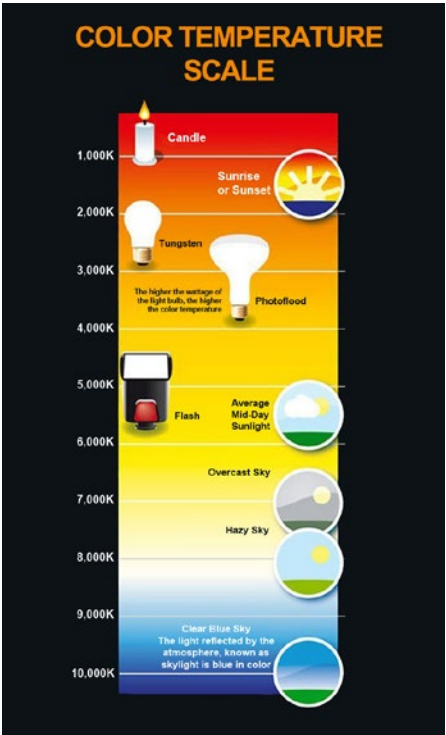
Illuminance

Illuminance is the measurement of how much light is falling onto (illuminating) and covering a surface area. Illuminance also indicates how humans perceive the brightness of an illuminated area. The terms illuminance and brightness can be confusion as the same thing, but they're not, as brightness can also describe luminance. The difference between the two is that illuminance refers to intensity of light falling onto a surface, while brightness refers to the visual and physiological perceptions of light. Brightness should not be used as a quantitative measurement at all. The SI unit for illuminance is lux (lx). In the U.S. people sometimes use the non-SI term foot-candle when referencing illuminance. The term “foot-candle” means “the illuminance on a surface by a candela source one foot away”. One foot-candle is equivalent to one lumen per square foot which is approximately 10.764 lux.

WHAT IS COLOR TEMPERATURE?

Color temperature is a way of describing the Color (chromaticity) of a light source in a numeric value. It is usually expressed as either warm (yellowish) or cool (bluish) and measured in Kelvin (K). Color temperatures over 5,000K are called cool colors (bluish white). Clear blue skies, electronic flash and certain continuous light sources are examples of ‘cool’ blue light. Lower color temperatures (under 3,000 K) are called warm colors (orange or red), candles, sunsets and tungsten bulbs are examples of these types of light sources. The Kelvin Color Temperature scale is based on heating an object at various degrees of physical heat and recording the color changes.

For example, if we heat up a lamp filament at some point, the filament will get hot enough to begin to glow. As it gets hotter, its glowing color will change, moving from deep reds, such as a low burning fire, to oranges and then yellows and finally up to white superhot. Light sources that glow in this manner are considered “incandescent radiators” (like blackbody) and the advantage to them is that they have a continuous spectrum of light. This means that they radiate light energy at all wavelengths of their spectrum, thus render all the colors of a scene being illuminated by them, equally. Only light from sources functioning in similar ways can meet the definition of color temperature.



WHY IS COLOR TEMPERATURE IMPORTANT?

In order to accurately view or evaluate objects, environments, events or grow various plants, the consistence of color temperature and illumination of light is extremely important.

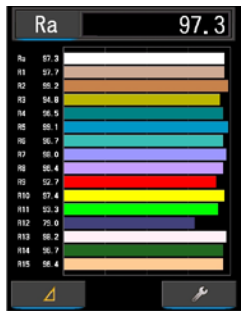
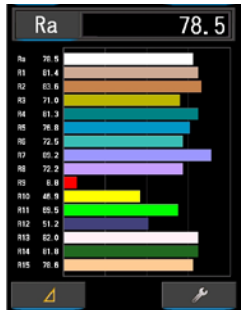
Like photography, videography and cinematography, light sources need to produce consistent, repeatable, and correct color temperature for optimum color representation. However, color temperature can be even more important for industrial lighting

applications. Because different light sources can change the appearance of a product finish, the mood in theater lighting, a medical evaluation, quality control in manufacturing, proper plant growth and even the perceived value of jewelry, its critical to select and maintain the desired color temperature of a light source. Without color temperature control, the color of lighting can have a large impact on how people experience an environment or accurately achieve a desired result.



WHAT IS CRI AND WHY IS IT IMPORTANT?

CRI (Color Rendering Index) is a quantitative measure revealing the ability of a light source to represent the colors of various objects faithfully in comparison with an ideal or natural light source. The Color Rendering Index (CRI) is a scale from 0 to 100, which describes how a light source makes the color of an object appear to the human eye and how well subtle variations in colors and shades are revealed. The higher the CRI, the better the color rendering ability. A Black Body Radiator (i.e.: a filament from a light bulb) is considered the “reference” light source and they produce a CRI value of 100. CRI values can be evaluated from R1 through R8 (color rendering index) and R9 through R15 (special color rendering index). Each R value represents a color for specific color rendering performance for the measured light source. Ra is commonly used because it represents an average color rendering performance of a light source from R1 through R8. It is important to measure various light sources for their CRI values before using them.



Specification andComparison Chart



Product Name and Model			C-7000	C-800
Illuminance Meter Class			* Class A of JIS C 1609-1: 2006 "Illuminance meters Part 1: General measuring instruments" * DIN 5032 Part 7 Class C	* Class A of JIS C 1609-1: 2006 "Illuminance meters Part 1: General measuring instruments"
Sensor			CMOS linear image sensor	CMOS linear image sensor
Spectral Wavelength Range			380nm to 780nm	380nm to 780nm
Output Wavelength Pitch			1nm (Requires the C-7000 Utility to output memorized data)	N/A
Spectral Bandwidth			Approx. 11nm (half bandwidth)	Approx. 11nm (half bandwidth)
Measuring Mode	Ambient light:		Yes	Yes
	Cord flash		Yes	Yes
	Cordless flash		Yes	Yes
	Radio triggering		No	No
Measuring Range	Incident light	Ambient light:	1 to 200,000lx (3 significant digits)	1 to 200,000lx (3 significant digits)
			0.09 to 18,600fc	0.09 to 18,600fc
			1,563 to 100,000K (more than 5lx required)	1,600 to 40,000K (more than 5lx required)
		Flash Light:	20 to 20,500lx*s	20 to 20,500lx*s
	1.86 to 1,900 fc*s		1.86 to 1,900 fc*s	
	2,500 to 100,000K		2,500 to 40,000K	
	Reflected light		Ambient light:	N/A
		Flash Light:	N/A	N/A
Accuracy (Standard Illuminant A)			Illuminance: ±5% ± 1 digit (1 to 2,990lx), ±7.5% ± 1 digit (3,000 to 200,000lx) x,y: 0.003 (Standard Illuminant A, 800lx)	Illuminance: ±5% ± 1 digit (1 to 2,990lx), ±7.5% ± 1 digit (3,000 to 200,000lx) CCT: ±4MK ⁻¹ (Standard Illuminant A, 800lx)
Repeatability (Standard Illuminant A)			Illuminance: 1% + 1 digit (30 to 200,000lx), 5% + 1 digit (1 to 29.9lx) x,y: 0.001 (500 to 200,000lx) x,y: 0.002 (100 to 499lx) x,y: 0.004 (30 to 99.9lx) x,y: 0.008 (5 to 29.9lx)	Illuminance: 1% + 1 digit (30 to 200,000lx), 5% + 1 digit (1 to 29.9lx) CCT: 2MK ⁻¹ (500 to 200,000 lx) CCT: 4MK ⁻¹ (100 to 499 lx) CCT: 8MK ⁻¹ (30 to 99.9 lx) CCT: 17MK ⁻¹ (5 to 29.9 lx)
Visible-region Relative Spectral Response Characteristics			Within 9%	Within 9%
Cosine Response (f2)			Within 6%	Within 6%
Temperature Drift (fT) (Standard Illuminant A 1,000lx)			Illuminance: ±5% of indicated value x,y: ±0.006	Illuminance: ±5% of indicated value CCT: ±12MK ⁻¹
Humidity Drift (fH) (Standard Illuminant A 1,000lx)			Illuminance: ±3% of indicated value x,y: ±0.006	Illuminance: ±3% of indicated value CCT: ±12MK ⁻¹
Power Source			AA (1.5v) x 2 pcs, USB bus power	AA (1.5v) x 2 pcs, USB bus power
Measurement Time	Ambient light:		Auto - Max.: 15 sec., Min.: 0.5 sec. Manual - 0.1s, 1sec.	Auto - Max.: 15 sec., Min.: 0.5 sec. N/A
	Flash Light:		1s to 1/500s (in 1 step)	1s to 1/500s (plus 1/75, 1/80, 1/90, 1/100, 1/200, 1/400) (in 1, 1/2, 1/3 step)
Display Mode			Text mode, Spectrum mode, CRI mode, TM-30 mode, SSI mode, TLCI/TLMF mode, CIE1931 (CIE1964) mode, CIE1976 mode, Spectrum Comparison mode, CRI Comparison mode, CIE1931 (CIE1964) Comparison mode, CIE1976 Comparison mode	Text mode, Spectrum mode, Spectrum comparison mode, CRI mode, CRI comparison mode, TM-30 mode, SSI mode, TLCI/TLMF mode, Filter mode (Camera / Lighting), Multi Lights Mode, White Balance Correction Mode
Measuring Capability (Display Item)			Correlated Color Temperature (Tcp),Deviation (Δuv), Tristimulus value (XYZ / X ₁₀ Y ₁₀ Z ₁₀), CIE1931/1964 (xyz / x ₁₀ y ₁₀ z ₁₀), CIE1976 (u', v' / U' ₁₀ V' ₁₀), Dominant wavelength (λd), Excitation purity (Pe), Peak wavelength (λp), Lux(lx) or Foot-Candle(fc) – ambient light, Lux Second(Hlx) or Foot-Candle Second(Hfc) – flash light, PPFD, TM-30 (Rf, Rg), SSI (Tungsten, Daylight, SSI1, SSI2), TLCI/TLMF, CRI (Ra, R1 to R15)	Correlated color temperature (CCT), Deviation (Δ uv), LB/CC filter number (camera/gel), LB/CC index, CC number, Lux(lx) or Foot-Candle(fc) – ambient light, Lux Second(Hlx) or Foot-Candle Second(Hfc) – flash light, CRI (Ra, R1 to R15), Rf, Rg, SSI (daylight, tungsten, selected light source), TLCI, TLMF, x, y, Hue, Saturation,
Other Functions			Up to 999 memory, Preset function, Auto power off, Auto dimmer, 2 or 10 deg. filed of view setting, Continuous/Single measurement selection	Up to 99 memory, Preset function, Auto power off, Auto dimmer
Display languages			English, Japanese, Chinese (Simplified)	English, Japanese, Chinese (Simplified)
Interface			USB 2.0 (Mini B)	USB 2.0 (Mini B)
Operating Temperature			-10 to 40 deg. C	-10 to 40 deg. C
Storage Temperature			-10 to 60 deg. C	-10 to 60 deg. C
Dimensions			73mm (w) x 183mm (h) x 27mm (d) = 2.9" (w) x 7.2" (h) x 1.1" (d) (excluding protruding part of light receiving) max. thickness 40mm (d) = 1.6" (d)	73mm (w) x 183mm (h) x 27mm (d) = 2.9" (w) x 7.2" (h) x 1.1" (d) (excluding protruding part of light receiving) max. thickness 40mm (d) = 1.6" (d)
Weight			230g = 8.1oz (without batteries)	230g = 8.1oz (without batteries)
Standard Accessory	Software/Utility		Yes (included in the package)	Yes (Downloaded from website)
	Operating Manual		Yes (Downloaded from website)	Yes (Downloaded from website)
	USB cable		Yes (included in the package)	No (optional)
	Start Up Guide		Yes (included in the package)	Yes (included in the package)
	Strap		Yes	Yes
	Synchro terminal cap		Yes (built-in)	Yes (built-in)
Soft case			Yes	Yes

Features and specifications are subject to change without notice.

Lumidisc for L-308 Series:

This flat diffuser can be attached to the light recieving part of the L-308 series to measure flat subjects or lighting contrast with precision.

Slide Set for L-398 Series:

A total of 11 slides are available, for direct reading of aperture on Foot-Candle scale in incident measurement.

5 Degree Viewfinder for L-478 Series:

For accurate, reflected light, spot measurements of specific subject areas. It is useful for distant objects such as landscapes or for metering subjects that generate light (neon signs, etc.), highly reflective surfaces or translucent subjects (stained glass, etc.).

Deluxe Case for L-478 Series:

The Deluxe Case for the L-478 series provides a stylish way to transport the meter and a convenient way to store the optional 5-degree viewfinder. Padded front and back panels provide excellent protection. Front pouch with hook-and-loop closure is provided to store the meter's optional 5-degree viewfinder or lumisphere when not in use.

Step-up ring for L-858D (30.5 - 40.5mm):

The step-up ring, available as an optional accessory, makes it possible to mount step rings and filters of other manufacturers. This simplifies the setting of exposure without the troublesome correction calculation of PL filters, etc. The step-up ring can also be used as a hood to protect lenses from scratching, soiling, etc.

Radio Transmitters RT-BR for L-858D

This transmitter module is compatible with 2.4GHz frequency for Broncolor radio systems, which is sold separately and requires a receiver for each remote flash. Installing the transmitter module in the L-858D enables triggering an electronic flash units wirelessly, while simultaneuosly taking a measurement. It also allows you to control the power of flash output and turn modeling lamps ON or OFF.

Radio Transmitters RT-GX for L-858D

This transmitter module is compatible with 2.4GHz frequency for Godox radio systems, which is sold separately and requires a receiver for each remote flash. Installing the transmitter module in the L-858D enables triggering an electronic flash units wirelessly, while simultaneuosly taking a measurement. It also allows you to control the power of flash output and modeling lamps.

Radio Transmitter RT-EL/PX for L-858D

This transmitter module is compatible with 2.4GHz Elinchrom (EL-Skyport) and Phottix (Strato II protocol) radio systems, and require a receiver for each remote flash. Installing the transmitter module in the L-858D enables triggering the electronic flash units wirelessly. With EL-Skyport radio system, you can wirelessly control the power output of a flash and turn modeling lamps ON or OFF.

Radio Transmitter RT-3PW for L-858D

This transmitter module is compatible with 433MHz CE (Europe) frequency for PocketWizard radio systems, which is sold separately and requires a receiver for each remote flash. Installing the transmitter module in the L-858D enables triggering an electronic flash units wirelessly while simultaneuosly taking a measurement. With the PocketWizard ControlTL system, you can wirelessly control the power output of a flash and turn modeling lamps ON or OFF.

Synchro Cord:

This is a five-meter long cord with three plugs to connect with flash, light meter and camera. Cord has two male connectors and one female one. One of the male connectors has the lock function not to easily come off.





SEKONIC CORPORATION

7-24-14, Oizumi-Gakuen-Cho,
Nerima-Ku, Tokyo 178-8686, Japan

TEL: +81-3-3978-2335
FAX: +81-3-3978-5229
<https://www.sekonic.com>
Catalog No: C22Z2