

# 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, the SpectroMaster C-7000.

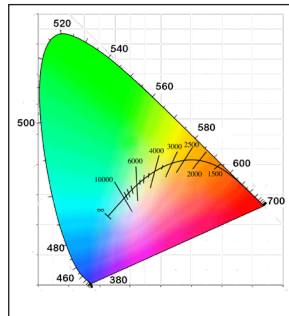
The SpectroMaster C-7000 is a portable handheld spectrometer, designed especially for industrial use. Utilizing Sekonic's CMOS linear image sensor design and software, the C-7000 can measure every light source (LED, HMI, Fluorescent, Flash, Natural Light spectrum) with remarkable precision and data feedback. 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)

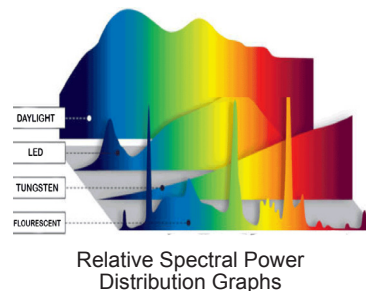


Intuitive color touch screens offer easy navigation through Spectral distribution, lighting comparisons, CRI color data and more

### 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.



Relative Spectral Power Distribution Graphs

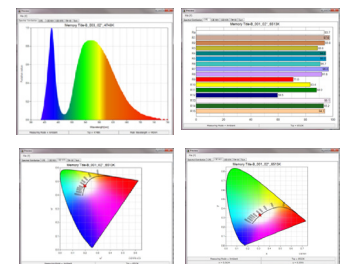
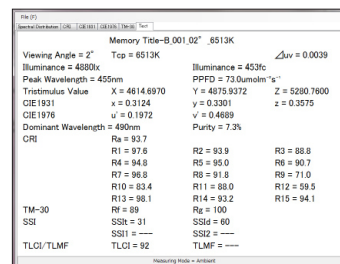
### KEY New Features

- ✓ 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
- ✓ MiniUSB 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

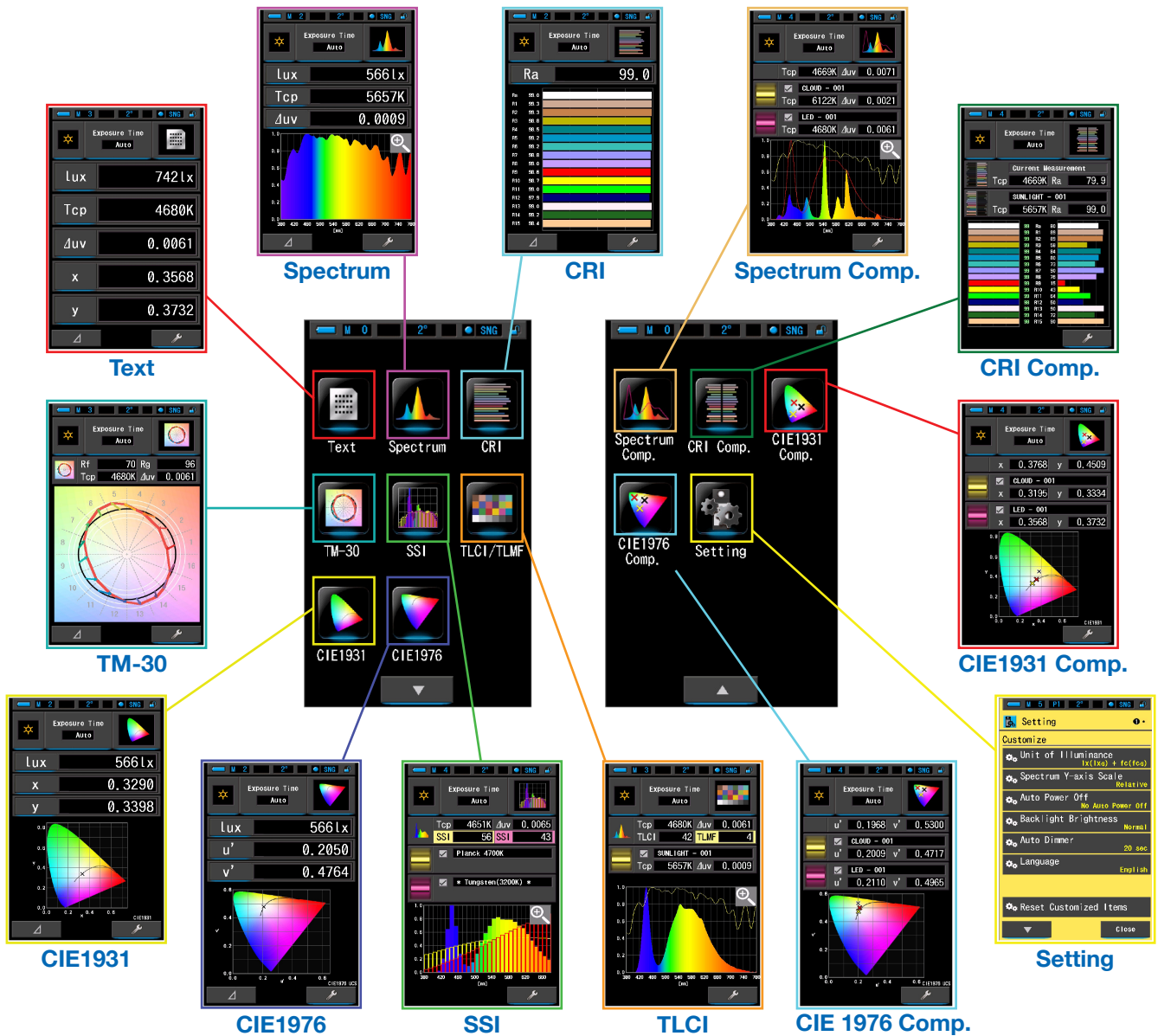


### Wide Measuring Range of Color Temperature and Illuminance

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)

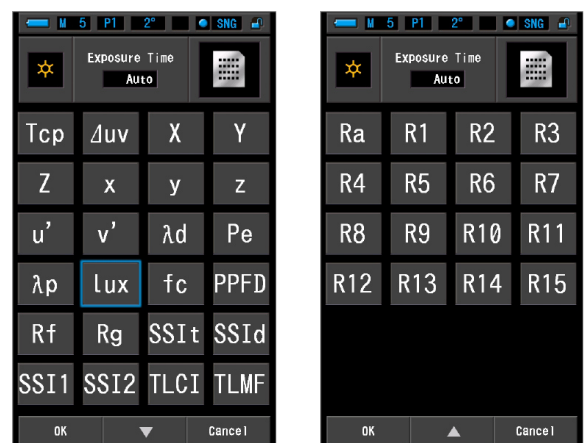
## Various Display Modes with Intuitive Color Touch Screen

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 ( $\Delta uv$ )
- ✓ 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 ( $\lambda d$ )
- ✓ Excitation Purity (Pe)
- ✓ Peak Wavelength ( $\lambda p$ )
- ✓ Lux(Ix) or Foot-Candle(fc) – ambient light
- ✓ Lux sec. (Hlx) or Foot-Candle sec. (Hfc) – flash light
- ✓ PPF: Photosynthetic Photon Flux Density ( $\mu molm^{-2}s^{-1}$ )
- ✓ TM-30 (Rf, Rg)
- ✓ SSI (Tungsten, Daylight, SSI1, SSI2)
- ✓ TLCI/TLMF
- ✓ CRI (Ra / R1 to R15)



Display Items Library

## Specification and Comparison Chart



Product Name and Model		C-7000	C-700R	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"	* Class A of JIS C 1609-1: 2006 "Illuminance meters Part 1: General measuring instruments"
Sensor		CMOS linear image sensor	CMOS linear image sensor	CMOS linear image sensor
Spectral Wavelength Range		380nm to 780nm	380nm to 780nm	380nm to 780nm
Output Wavelength Pitch		1nm (Requires the C-7000 Utility to output memorized data)	N/A	N/A
Spectral Bandwidth		Approx. 11nm (half bandwidth)	Approx. 11nm (half bandwidth)	Approx. 11nm (half bandwidth)
Measuring Mode	Ambient light:	Yes	Yes	Yes
	Cord flash	Yes	Yes	Yes
	Cordless flash	Yes	Yes	Yes
	Radio triggering	No	Yes	No
Measuring Range	Ambient light:	1 to 200,000lx (= 0.1 to 18,600fc), 1,563 to 100,000K (more than 5lx required) (3,000 to 200,000lx)	1 to 200,000lx = 0.09 to 18,600fc 1,600 to 40,000K (more than 5lx required) (3,000 to 200,000lx)	1 to 200,000lx = 0.09 to 18,600fc 1,600 to 40,000K (more than 5lx required) (3,000 to 200,000lx)
	Flash Light:	20 to 20,500lx*s = 1.86 to 1,900 fc*s 1,563 to 100,000K	20 to 20,500lx*s = 1.86 to 1,900 fc*s 1,600 to 40,000K	20 to 20,500lx*s = 1.86 to 1,900 fc*s 1,600 to 40,000K
Accuracy (Standard Illuminant A)		Illuminance: $\pm 5\% \pm 1$ digit (1 to 2,990lx), $\pm 7.5\% \pm 1$ digit (3,000 to 200,000lx) x,y: 0.003 (Standard Illuminant A, 800lx)	Illuminance: $\pm 5\% \pm 1$ digit (1 to 2,990lx), $\pm 7.5\% \pm 1$ digit (3,000 to 200,000lx) CCT: $\pm 4MK-1(800lx)$	Illuminance: $\pm 5\% \pm 1$ digit (1 to 2,990lx), $\pm 7.5\% \pm 1$ digit (3,000 to 200,000lx) CCT: $\pm 4MK-1(800lx)$
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)	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 (f1')		Within 9%	Within 9%	Within 9%
Cosine Response (f2)		Within 6%	Within 6%	Within 6%
Temperature Drift (fT) (Standard Illuminant A 1,000lx)		Illuminance: $\pm 5\%$ of indicated value x,y: $\pm 0.006$	Illuminance: $\pm 5\%$ of indicated value CCT: $\pm 12MK-1$	Illuminance: $\pm 5\%$ of indicated value CCT: $\pm 12MK-1$
Humidity Drift (fH) (Standard Illuminant A 1,000lx)		Illuminance: $\pm 3\%$ of indicated value x,y: $\pm 0.006$	Illuminance: $\pm 3\%$ of indicated value CCT: $\pm 12MK-1$	Illuminance: $\pm 3\%$ of indicated value CCT: $\pm 12MK-1$
Power Source		AA (1.5v) x 2 pcs, USB bus power	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	Auto - Max.: 15 sec., Min.: 0.5 sec. N/A
	Flash Light:	1 to 1/500 sec. (in 1 step)	1 to 1/500s (plus 1/75, 1/80, 1/90, 1/100, 1/200, 1/400)	1 to 1/500s (plus 1/75, 1/80, 1/90, 1/100, 1/200, 1/400)
Display Mode		Text mode, Spectrum mode, CRI mode, TM-30 mode, SSI mode, TLCl/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, Camera filter mode, Lighting filter mode, Multi Lights Mode, White Balance Correction Mode	Text mode, Spectrum mode, Spectrum comparison mode, CRI mode, CRI comparison mode, TM-30 mode, SSI mode, TLCl/TLMF mode, Filter mode (Camera / Lighting), Multi Lights Mode, White Balance Correction Mode
Measuring Capability (Display Item)		Correlated Color Temperature (T <sub>cp</sub> ), Deviation ( $\Delta uv$ ), Tristimulus value (XYZ / X <sub>10</sub> Y <sub>10</sub> Z <sub>10</sub> ), CIE1931/1964 (xyz / x <sub>10</sub> y <sub>10</sub> z <sub>10</sub> ), CIE1976 (u', v' / u'_{10}, v'_{10}), Dominant wavelength ( $\lambda_d$ ), Excitation purity (Pe), Peak wavelength ( $\lambda_p$ ), Lux(lx) or Foot-Candle(fc) – ambient light, Lux Second(Hlx) or Foot-Candle Second(Hfc) – flash light, PPF, TM-30 (Rf, Rg), SSI (Tungsten, Daylight, SSI1, SSI2), TLCl/TLMF, CRI (Ra, R1 to R15)	Correlated color temperature (CCT), Photographic color temperature (PCT), Deviation ( $\Delta uv$ ), LB/CC filter number (camera/gel), LB/CC index, Lux(lx) or Foot-Candle(fc) – ambient light, Lux Second(Hlx) or Foot-Candle Second(Hfc) – flash light, CRI (Ra, R1 to R15)	Correlated color temperature (CCT), Deviation ( $\Delta uv$ ), 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), TLCl, 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	Digital/Film mode, Data memory: 99 data, Preset function, Auto power off, Auto dimmer	Data memory: 99 data, Preset function, Auto power off, Auto dimmer
Display languages		English, Japanese, Chinese (Simplified)	English, Japanese, Chinese (Simplified)	English, Japanese, Chinese (Simplified)
Interface		USB 2.0 (Mini B)	USB 2.0 (Mini B)	USB 2.0 (Mini B)
Operating Temperature		-10 to 40 deg. C	-10 to 40 deg. C	-10 to 40 deg. C
Storage Temperature		-10 to 60 deg. C	-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)	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)	238g = 8.4oz (without batteries)	230g = 8.1oz (without batteries)
Standard Accessory	Software/Utility	Yes (included in the package)	Yes (Downloaded from website)	Yes (Downloaded from website)
	Operating Manual	Yes (Downloaded from website)	Yes (Downloaded from website)	Yes (Downloaded from website)
	USB cable	Yes (included in the package)	No (optional)	No (optional)
	Start Up Guide	Yes (included in the package)	Yes (included in the package)	Yes (included in the package)
	Strap	Yes	Yes	Yes
	Synchro terminal cap	Yes (built-in)	Yes (built-in)	Yes (built-in)
	Soft case	Yes	Yes	Yes

Features and specifications are subject to change without notice.