SPECTROMASTER C-7000

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.

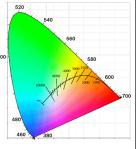
The SpectroMaster C-7000 is a portable handheld spectrometer, designed especially for industrial use. Utilizing Sekonic's CMOS linear image sensor design and software, the C-7000 can measure every light source (LED, HMI, Fluorescent, Flash, Natural Light spectrum) with remarkable precision and data feedback.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



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

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	Memory Title-B_0	01_02°_6513K			1
Viewing Angle = 2°	Tcp = 6513K		⊿uv = 0.0039		
Illuminance = 4880Ix		Illuminance = 453	fc	1	
Peak Wavelength = 455nm		PPFD = 73.0umolm ^{-*} s ⁻⁺			
Tristimulus Value	X = 4614.6970	Y = 4875.9372	Z = 5280.7600		
CIE1931	x = 0.3124	y = 0.3301	z = 0.3575		
CIE 1976	u' = 0.1972	v' = 0.4689	and another		*
Dominant Wavelengt	h = 490nm	Purity = 7.3%		The second secon	S Rectification
CRI	Ra = 93.7			Name in the second seco	
	R1 = 97.6	R2 = 93.9	R3 = 88.8	4000 V	and a free statement of the statement of
	R4 = 94.8	R5 = 95.0	R6 = 90.7	Description of the Control of the Co	Internet in 1997 (and inclus) Servey Taylor Mr. 87, 875
	R7 = 96.8	R8 = 91.8	R9 = 71.0		-
	R10 = 83.4	R11 = 88.0	R12 = 59.5		
	R13 = 98.1	R14 = 93.2	R15 = 94.1		
TM-30	Rf = 89	Rg = 100			in the second
SSI	SSIt = 31	SSId = 60		-	
	SSI1 =	SSI2 =			
TLCI/TLMF	TLCI = 92	TLMF =			
	Measuring	Mode - Ambiert		V 00040	Parally Public Vision 1912/00

Wide Measuring Range of Color Temperature and Illuminance

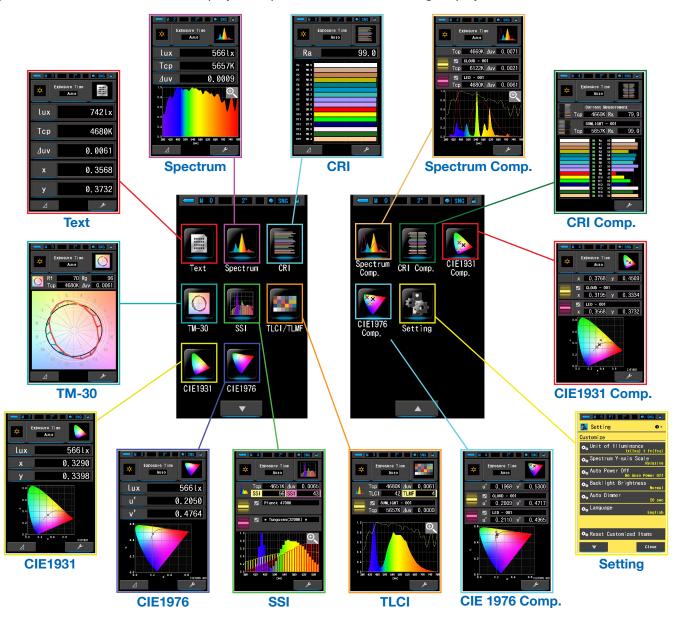
Wide measurement range of Color Temperature (1,563 to 100,000K) and illumination (1 to 200,000lx = 0.1 to 18,600fc in ambient light, 20 to 20,500lx • s = 1.86 to 1,900fc • s in flash light)



SPECTROMASTER

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(Ix) or Foot-Candle(fc) ambient light
- Lux sec. (HIx) or Foot-Candle sec. (Hfc) flash light
- PPFD: Photosynthetic Photon Flux Density (µmolm-2s-1)
- TM-30 (Rf, Rg)
- ✓ SSI (Tungsten, Daylight, SSI1, SSI2)
- TLCI/TLMF
- CRI (Ra / R1 to R15)

*	Exposure Time Auto			
Тср	∆uv	Х	Y	
Z	х	у	Z	
u'	v'	λd	Pe	
λp	lux	fc	PPFD	
Rf	Rg	SSIt	SSId	
SSI1	SSI2	TLCI	TLMF	
OK 🗨 Cancel				

N 5 P1 2° SNC -

- M	💳 M 5 P1 2° 🛛 🗨 SNG 📣					
*	Exposure Time					
Ra	R1	R2	R3			
R4	R5	R6	R7			
R8	R9	R10	R11			
R12	R13	R14	R15			
OK			Cance 1			

Display Items Library

SPECIFICATIONS SHEET

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 F	÷	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 to 200,000lx = 0.09 to 18,600fc	1 to 200,000lx = 0.09 to 18,600fc	
		1,563 to 100,000K (more than 5lx required)	1,600 to 40,000K (more than 5lx required)	1,600 to 40,000K (more than 5lx required)	
	Flash Light:	20 to 20,500lx•s = 1.86 to 1,900 fc•s	20 to 20,500lx•s = 1.86 to 1,900 fc•s	20 to 20,500lx•s = 1.86 to 1,900 fc•s	
		1,563 to 100,000K	1,600 to 40,000K	1,600 to 40,000K	
Accuracy (Standard Illuminant A)		Illuminance: ±5% ± 1 digit (1 to 2,990lx), ±7.5% ± 1 digit (3,000 to 200,000lx)	Illuminance: ±5% ± 1 digit (1 to 2,990lx), ±7.5% ± 1 digit (3,000 to 200,000lx)	Illuminance: ±5% ± 1 digit (1 to 2,990lx), ±7.5% ± 1 digit (3,000 to 200,000lx)	
		x,y: 0.003 (Standard Illuminant A, 800Ix)	CCT: ±4MK-1(800lx)	CCT: ±4MK-1(800lx)	
Repeatability (Standard Illuminant A)		Illuminance: 1% + 1 digit (30 to 200,000lx), 5% + 1 digit (1 to 29.9lx)	Illuminance: 1% + 1 digit (30 to 200,000lx), 5% + 1 digit (1 to 29.9lx)	Illuminance: 1% + 1 digit (30 to 200,000lx), 5% + 1 digit (1 t 29.9lx)	
		x,y: 0.001 (500 to 200,000lx)	CCT: 2MK-1 (500 to 200,000 lx)	CCT: 2MK-1 (500 to 200,000 lx)	
		x,y: 0.002 (100 to 499lx)	CCT: 4MK-1 (100 to 499 lx)	CCT: 4MK-1 (100 to 499 lx)	
		x,y: 0.004 (30 to 99.9lx)	CCT: 8MK-1 (30 to 99.9 lx)	CCT: 8MK-1 (30 to 99.9 lx)	
		x,y: 0.008 (5 to 29.9lx)	CCT: 17MK-1 (5 to 29.9 lx)	CCT: 17MK-1 (5 to 29.9 lx)	
Characteristics (f1')	ve Spectral Response	Within 9%	Within 9%	Within 9%	
Cosine Response (f2		Within 6%	Within 6%	Within 6%	
Femperature Drift (fT		Illuminance: ±5% of indicated value	Illuminance: ±5% of indicated value	Illuminance: ±5% of indicated value	
Standard Illuminant	A 1,000IX)	x,y: ±0.006	CCT: ±12MK-1	CCT: ±12MK-1	
Humidity Drift (fH) Standard Illuminant	A 1 000Hz)	Illuminance: ±3% of indicated value	Illuminance: ±3% of indicated value	Illuminance: ±3% of indicated value	
-	A 1,0000x)	x,y: ±0.006	CCT: ±12MK-1	CCT: ±12MK-1	
Power Source	Ambientlight	AA (1.5v) x 2 pcs, USB bus power Auto - Max.: 15 sec., Min.: 0.5 sec.	AA (1.5v) x 2 pcs, USB bus power Auto - Max.: 15 sec., Min.: 0.5 sec.	AA (1.5v) x 2 pcs, USB bus power Auto - Max.: 15 sec., Min.: 0.5 sec.	
Measurement Time	Ambient light:	Manual - 0.1s, 1sec.	N/A	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, 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, 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 TLCI/TLMF mode, Filter mode (Camera / Lighting), Multi Lights Mode, White Balance Correction Mode	
Measuring Capability (Display Item)		$\label{eq:constraint} \begin{array}{l} Correlated Color Temperature (Tcp), Deviation (_4uv), \\ Tristimulus value (XYZ / X_{10}Y_{10}Z_{10}), CIE1931/1964 (xyz / \\ x_{10}y_{10}Z_{10}), CIE1976 (u', v' / u'_{10}'u_{10}), Dominant wavelength (/A), Lux(k) or Fool-Candle(fc) – ambient light, Lux Second(Hix) or Fool-Candle Second(Hfc) – flash light, PPFD, TM-30 (Rf, Rg), SSI (Tungsten, Daylight, SSI1, SSI2), TLCI/TLMF, CRI (Ra, R1 to R15) \\ \end{array}$	Correlated color temperature (CCT), Photographic color temperature (PCT), Deviation (Δ uv), LB/CC filter number (camera/gel), LB/CC index,Lux(k) or Foot-Candle(fc) – ambient light, Lux Second(Hx) or Foot-Candle Second(Hfc) – flash light, CRI (Ra, R1 to R15)	Correlated color temperature (CCT), Deviation (Δ uv), LB/C filter number (camera/gel), LB/CC index, cc number, Lux(tx, Foot-Candle(fo) – ambient light, Lux Second(Hitk) or Foot- Candle Second(Hito) – flash light, CRI (Ra, R1 to R15), Rf, SSI (daylight, tungsten, selected light source), TLCI, TLMF, 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, 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)	$\label{eq:constraint} \begin{array}{l} 73mm \ (w) \times 183mm \ (h) \times 27mm \ (d) = 2.9^\circ \ (w) \times 7.2^\circ \ (h) \times 1.1^\circ \ (d) \ (excluding portuding part of light receiving) \ max. \\ thickness \ 40mm \ (d) = 1.6^\circ \ (d) \end{array}$	
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	

Soft case Yes
Features and specifications are subject to change without notice.