SEKONIC

SPECTROMASTER C-7000

THE INTUITIVE SPECTROMETER WITH COLOR TOUCH SCREEN THAT MEASURES EVERY LIGHT PLUS ELECTRONIC FLASH

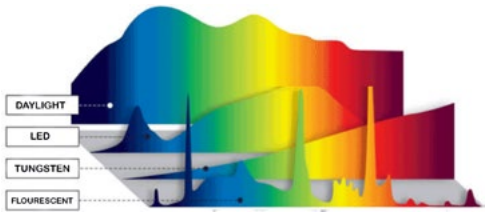
Lighting solutions and applications have never been in greater demand and expansion as they are today. With the overwhelming popularity of these new light sources such as advanced LED and Organic Electroluminescence, the need to understand, manage and control these sophisticated illumination systems is essential. Manufacturing quality and process along with varying color and illumination qualities can often result in consistency issues. To address these lighting challenges, Sekonic Corporation, a leader for over six decades providing advanced precision lighting control for the Photo / Video / Cine industry has offered an ergonomic, intuitive Spectrometer, the SPECTROMASTER C-7000.

The new 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, natural light and electronic flash spectrum) with remarkable precision and data feedback.

With the C-7000 Utility software, output of memorized data is provided at every 1nm (nanometer) increments in CSV format. The C-7000 can be utilized to measure data for light manufactures quality control, medical facilities, educational / office safety and health standards, agricultural lighting / design and many more industrial uses.

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.



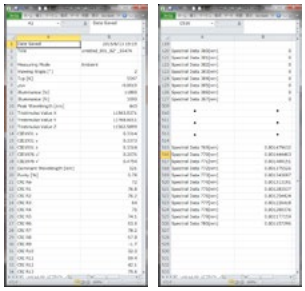
Flash Measurement

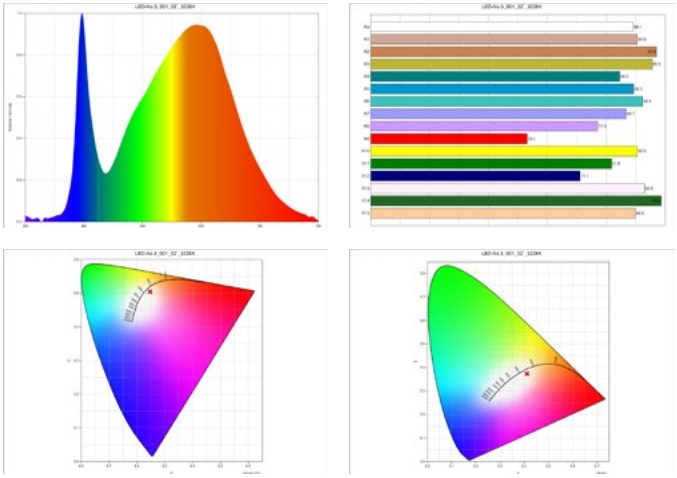
The world's first* stand-alone spectrometer that measure the flash light with synchro cord connection or cordless mode with its sophisticated and unique accumulation type sensor.

* – As of August 2015, by research of Sekonic Corporation

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, the output of the spectrum data at every 1nm in CSV format and the graphics of the spectrum distribution graph, CIE1931(1964), CIE1976 diagram, CRI graph bar in JPEG/BMP/PNG format are also available.





Wide Measurement 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)

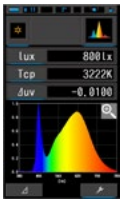
User-Friendly Design

270° swivel head, dark calibration without cap, large 4.3" color touch panel LCD and Customize function, convenient AA batteries for power source.

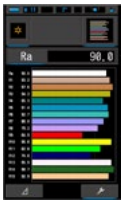
Display Modes

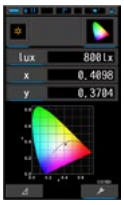
Intuitive color touch screens offer easy navigation, quick selection and easy to read measurements in 8 modes.


TEXT

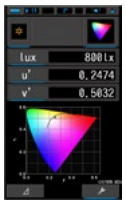

Spectrum


Spectrum Comparison


CRI


CIE1931


CIE1931 Comparison


CIE1976


CIE1976 Comparison

Various Display Items

* Correlated color temperature (Tcp),
* CIE1931(CIE1964) Chromaticity Coordinates (x, y, z / x_{10}, y_{10}, z_{10})
* CIE1976 Chromaticity Coordinates (u', v' / u'_{10}, v'_{10})
* Lux(lx) or Foot-Candle(fc) – ambient light
* Lux sec. (Hlx) or Foot-Candle sec. (Hfc)–flash light
* Tristimulus Value (X ,Y ,Z , / X_{10}, Y_{10}, Z_{10})
* Deviation (Δ uv)
* CRI (Ra / R1 to R15)
* Peak Wavelength (λp)
* Dominant Wavelength (λd)
* Purity (Pe)
* PPFD: Photosynthetic Photon Flux Density (μmolm^{-2}s^{-1})

Display Items Library

C-7000 Specifications

Illuminance Meter Class	* Class A of JIS C 1609-1: 2006 “Illuminance meters Part 1: General measuring instruments” * DIN 5032 Part 7 Class C
Sensor	CMOS linear image sensor
Spectral Wavelength Range	380nm to 780nm
Output Wavelength Pitch	1nm (Requires the C-7000 Utility to output memorized data)
Spectral Bandwidth	Approx. 11 nm (half bandwidth)
Measuring Range	Ambient light: 1 to 200,000lx (= 0.1 to 18,600fc), 1,563 to 100,000K (more than 5lx required)
	Flash light: 20 to 20,500lx • s (= 1.86 to 1,900fc • s), 1,563 to 100,000K
Accuracy (Standard Illuminant A)	Illuminance: ±5% + 1digit (1 to 3,000lx)
	x,y: 0.003 (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)
Visible-region Relative Spectral Response Characteristics (f1')	9% or less
Cosine Response (f2)	6% or less
Temperatutre Characteristic	Illuminance: ±5% of indicated value
	x,y: ±0.006 (Standard Illuminant A, 1000lx)
Humidity Characteristic	Illuminance: ±3% of indicated value
	x,y: ±0.006 (Standard Illuminant A, 1000lx)
Power Source	AA (1.5V) x 2 pcs, USB bus power
Measurement Time	Ambient: Auto - Max.: 15 sec., Min.: 0.5 sec.
	Ambient : Manual - 0.1s, 1sec.
	Flash: 1 to 1/500 sec. (in 1 step)
Measuring Modes	Text mode, Spectrum mode, Spectrum Comparison mode, CRI mode, CIE1931 (CIE1964) mode, CIE1931 (CIE1964) Comparison mode, CIE1976 mode, CIE1976 Comparison mode
Other Functions	Up to 999 memory, Preset function, Auto power off, Auto Dimmer, 2 or 10 deg. Filed of View Setting
Display languages	English, Japanese, Chinese (Simplified) - factory preset, user cannot change.
Interface	USB 2.0
Operating Temperature	-10 to 40 ºC
Storage Temperature	-10 to 60 ºC
Dimensions	73mm (w) × 183mm (h) × 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 without batteries

** Features and Specifications subject to change without notice.*

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