# Sekonic C-700 Spectrometer



- Selecting digital mode/film mode Measures LED, HMI, fluorescent, tungsten, daylight and flash, from 380 to 780 nm Wide measurement range for color temperature (1,600 to 40,000 K) and illuminance (1 to 200,000 kx in ambient light, 20 to 20,500 kx/s in flash light) Complies with Class A of JIS C 1609-1:2006 as an illuminance meter class Color Rendering Index (CRI) Lighting filter for Rosco[ and LEE], camera filter for Kodak Wratten[], LEE] and Fuji[] and LB/CC Index n Convenient display modes for photo/(cimentography such as multiple lights and white balance correction U p to 99 data measurements can be stored in memory U Ser-friendly design: 270 degrees wivel head, caples dark calibration, large screen 4.3-inch color LCD buch screen and customization function The C-700 Series Utility Software (downloadable from www.sekonic.com) provides easy meter adjustments and analysis of data stored in a computer.

## **Overview**

The C-7000 Spectrometer is a portable handheld spectrometer, designed especially for industrial use. Utilizing Sekonic's CMOS linear image sensor design and large touch-screen color display, the C-7000 can measure and accurately describe LED, HMI, fluorescent, as well as natural light and electronic flash. The C-7000's Utility software displays memorized data in several ways and outputs spectral data in 1nm/5nm (nanometer) increments in CSV format. The C-7000 is an important measuring tool for quality control in lamp manufacturing, medical facilities, educational / office safety and health standards, agricultural lighting / design and many more industrial uses.

## **Recommended customers**

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Customers engaged in quality control, research and development, etc. for LEDs, organic ELs, projectors, etc.

Customers who design and install lighting for buildings, offices, etc.

Customers engaged in the selection and management of lighting equipment with high color rendering

### Customers managing grow lights used in plant factories



## **Features**

# Measurement capabilities for various light sources (LED, organic EL, HMI, fluorescent light, tungsten light, natural light, flash

**light**, etc.) The C-7000 uses a CMOS linear image sensor in the light receiving section. Spectroscopic measurement is performed in the wavelength range of 380nm to 780nm to obtain an accurate color temperature.

It can accurately measure not only conventionally used flash light and constant light sources (fluorescent light, tungsten light, HMI, etc.), but also light sources such as LEDs and organic ELs, which have been increasing in recent years.

 Figure 1. Conventional filter method

 Measure the wavelength range covered by the RGB filte

Image 2. C-7000 A CMOS linear image sensor equipped with an LVF covers the measurement wavelength range with a fine pitch.

# **Specification**

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C-700	
Sensor:	CMOS linear image sensor
Measuring system:	Spectrometer Incident light: Swivel head
Measuring range and modes	
Measuring modes (ambient light)	Ambient light
Measuring modes (Flash light)	Wireless, wired (PC)
Measuring range at ISO100 (ambient incident light)	1 lx to 200,000 lx * 0.1 fc to 18,600 fc * Class A of IIS C 1609-1: 2006 "Illuminance meters Part 1: General measuring instruments"

Measuring range (flash incident light)	220 k]s to 20,500lx]s 1.86 fc]s to 1,900 fc]s	
Spectral wavelength range	380nm to 780nm	
Color measurement mode (display mode)	1 lx to 200,000 lx * 0.1 fc to 18,600 fc * Class A of JIS C 1609-1: 2006 "Illuminance meters Part 1: General measuring instruments"	
Color measurement range (ambient light)	1,563 to 100,000K	
Color measurement range (flash lamp)	2,500 to 100,000K	
Color measurement units (color settings)	Correlated Color Temperature (Tcp), Deviation ([]uv ), Tristimulus value (XYZ / X10Y10Z10), CIE1931/1964 (xyz / x10y10z10), CIE1976 (u'v' / u'10v'10 )	
Color measurement units (color rendering properties)	CRI (Ra /R1 to R15), TM-30-18 (Rf, Rg), SSI(t, d, 1, 2) TLCI, TLMF	
Color measurement units (photo/cinematography)	LB/CC filter number (camera/lighting filter), LB/CC index	
Target color temperature range	2,500,000 to 10,000,000	
Shutter speed range (ambient light)	Auto - Max. : 15 s, Min. : 0.5 sec.	
Shutter speed range (flash)	1s to 1/500s (plus 1/75, 1/80, 1/90, 1/100, 1/200, 1/400)	
Memory:	Yes (999 times)	
Contrast/Comparison function	Yes	
Custom settings	Yes (5 custom settings)	
Physical		
Tripod socket:	Yes	
Operating temperature	-10 to 40 degrees. VS	
Storage temperature	-10 to 60 degrees. VS	
Energy source	1.5V x 2 (AA battery), USB bus power	
LCD	4.3-inch color dot matrix touchscreen LCD	
LCD backlight	Yes	
Product weight (kg)	0.23	
Size (cm)	18.3*2.7*7.3	