MK350

Portable Spectrometer

Test and Read Visible Spectrum in 3 seconds

MK350 helps building up your own LIGHT STYLE in lighting industry.

MK350 Portable Spectrometer

The UPRtek **MK350 Spectrometer** is the first truly compact, lightweight illuminance spectroradiometer which can be used without a computer for evaluation of next- generation lamps such as **LED**, **OLED** and **EL** illumination, as well as, conventional architectural and stage/ studio lighting, even lab research applications.

With its advanced sensor and outstanding design, it can easily measure **CCT**(Correlative Color Temperature), **CRI** (Color Rendering Index), **Illuminance**, **Chromaticity**, **λP** (peak wavelength), spectral distribution of virtually any light source in the lab or out in the field.

User friendly design, simple menu and 3.5 inch touch screen interface with color graphics make it the ideal tool for multiple applications within the lighting industry.

Reading appears instantly in easy to read full screen color graphics and measurement results stored via an SD card in raw data MS Excel and BMP formats.

The MK350 Spectrometer comes with certificate of calibration to NML/CMS standards, and can be re-calibrated at any time with its internal Dark Calibration feature.
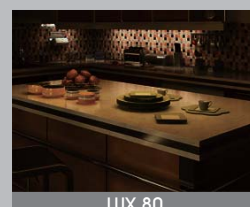
CRI 75%
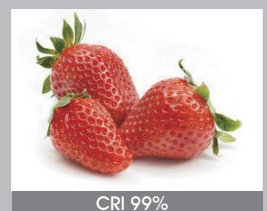
CRI 99%

CCT 2800K

CCT 6500K

LUX 80

LUX 400

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Portable Spectrometer

Applications >

LED,OLED R&D,QC, Sales, Purchase

Light source Spectrum, CCT,CRI evaluation

Outdoor advertising screen test

Computers and mobiles backlight modules test

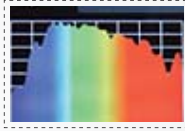Automotive Lighting / Guiding

Street / Tunnel Illumination

Indoor Illumination / Decoration

Museum / Display cabinet light design

Lab and field scientific research

MK350 Spectrometer is a powerful tool for almost all applications of visible lights spectrum analysis in lighting industry, for example:

◆ LED,OLED R&D,QC, Sales, Purchase
◆ Light source Spectrum,CCT,CRI evaluation
◆ Outdoor advertising screen test
◆ Computers and mobiles backlight modules test
◆ Automotive Lighting / Guiding
◆ Street / Tunnel Illumination
◆ Indoor Illumination / Decoration
◆ Museum / Displaycabinet light design
◆ Lab and field scientific research applications

People who will benefit from using MK350 ?
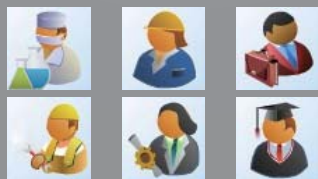
Features >

◆ On-site measuring, in-time reading!

Just bring your portable MK350 to the site and point it directly to evaluate light source, the spectrum graphic will show up in no time, connecting to PC won't be a need anymore.


◆ Clear-cut data list, easy reading

In Simple mode, you can also read CCT(Correlative Color Temperature)、CRI(Color Rendering Index)、λP(Peak wavelength) directly.

◆ 4 modes available for your evaluation

Mode 1：Spectrum Graph
Mode 2：CCT(Correlative Color Temperature)、CRI(Color Rendering Index)、λP(Peak wavelength)
Mode 3：CIE 1931 Chromaticity Diagram
Mode 4：CIE1976 Chromaticity Diagram
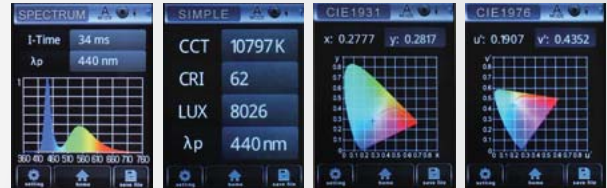
◆ Navigation, nothing can vanish from your sight

In addition to the single-time capture mode, MK350 is also proud of its continuous capture mode which allows users to adjust the light source's Chromaticity, or to navigate along the light sources to evaluate the interior lighting.

◆ Complete storage for your access

All captured data can be stored in SD card, in both Excel and BMP file formats.
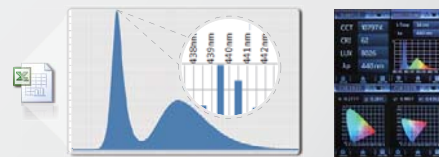
◆ Touchpad interface, easy and user-friendly

MK350 combines the latest OS, humanized-design interface, simple menu, and all these integrated in one 3.5' touchpad, even newcomers can use without any difficulty.
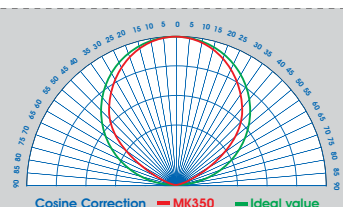
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Specifications >

Sensor	CMOS Linear Image Sensor
Resolution	12 nm
Wavelength Range	360 ~ 750 nm
Measurement Range	70 ~ 70000 Lux
Cosine Recipt Area	6.6 ± 0.1 mm
Exposure Time Range	8 ~ 1000 ms
Capture Mode	Once / Continue
Integrating Mode	Auto / Manual
Measuring Modes	1. Basic Value Mode
	2. Spectrum Graph Mode
	3. CIE 1931 Chromaticity Dragram Mode
	4. CIE 1976 U.C.S Chromaticity Dragram Mode
Measuring Capabilities	1. Spectral Irradiance
	2. C.I.E. Chromaticity Coordinates
	(1) CIE 1931 x,y Coordinates
	(2) CIE 1976 U.C.S u',v' Coordinates
	3. Peak Wavelength
	5. Correlated Color Temperature; CCT (in Kelvins)
	5. Color Rendering Index; Ra (Rendering Average)
	6. Illuminance / Lux
Digital Resolution	16 bits
Dark Calibration	Yes
Stray Light	-25 dB max.
Wavelength Data Increment	1 nm
Wavelength Reproducibility	± 1 nm
	(Measured under constant light input conditions)
Illuminance Accuracy	± 5%
Color Accuracy	± 0.0025 in CIE 1931 x,y
Color Repeatability	± 0.0005 in CIE 1931 x,y
CCT Accuracy	± 2%
CRI Accuracy @ Ra	± 1.5%
Display	3.5" LCD 320X240 Touch Panel
Battery Operation Time	⊠ 5 hours / One Full Charge
Battery	2500 mAh / Rechargeable Li-ion Battery
Date Output Interface	SD Card / USB 2.0
Data Format	Compatible MicroSoft Office Excel Data Format & BMP Format
Dimensions	144.2 x 78 x 24 mm (H x W x D)
Weight (with Battery)	250 g ± 20 g
Operating Temperature Range	0 ~ 35 ℃
Storage Temperature Range	-10 ~ 40 ℃
Language	English, Japanese, Simplified Chinese, Traditional Chinese
Place of Origin	Taiwan

Illuminant A @ 2856k / 20000 lux

Cosine Correction — MK350 — Ideal value

MK350 3.5"touch screen interface

TOUCH CONTROL

Li-ion battery
Power jack
Mini USB
Power key
SD card slot
Strap holder
Sensor
Capture key

SIMPLE
Save Data
file name :
ESPD2012_0716_112204.XLS
OK

CAPTURE

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The applications of MK350

BASIC A ⓘ

CCT	12 792 K
CRI	68
LUX	724
λp	445 nm

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Q1: MK350 application for *LED production line*

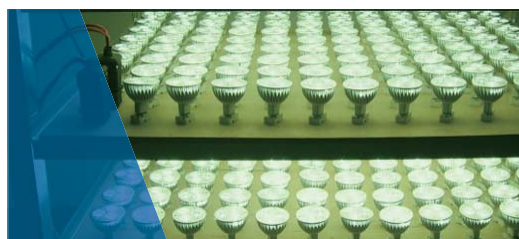**Q2:** For the *interior designers*, **how can they surpass in their jobs by using MK350 spectrometers?**

Q3: How can *lighting subcontractors* **meet the requirements during the acceptance of works?**

Q4: How *lighting designers* **can use MK350 to prompt their efficiency in VM and store fixture design?**

Q1 MK350 application for *LED production line*

A : Thanks to it's characters of refined calibration and mobility, MK350 is always ready to measure wherever you go, and all data such as Spectrum Graph, Under Basic Value Mode, CCT(Correlative Color Temperature), CRI(Color Rendering Index), λ P(Main Emission peak length), CIE 1931 Chromaticity Diagram, CIE1976 Chromaticity Diagram, could be both stored and accessible right at the site.

The portable MK350 could also be a complement to integrating sphere and brings you a enhanced performance during each measurement. To verify by comparing the data from on-site measuring and that of lab, the applications of spectrometer are extended to production line, job site and wherever it needs. Data could be transferred via USB port or wireless Wifi connection.

Q2 For the *interior designers*, how can they surpass in their jobs by using MK350 spectrometers?

A : It is the comfortable design of interior lighting with refined tuning that makes difference! A perfect interior lighting is combined with proper color temperature and light intensity. And CRI of the lights you choose also influence the color saturation reflected by all objects in the space.

From now on, comfortability, can be described with digital values, CCT, CRI, Color Chromaticity. any lighting condition you want, you can defined it and contract it! By using MK350 as a digital communication tool, your accurate execution in decoration project will be performed with more advantages.

Q3 How can *lighting subcontractors* meet the requirements during the acceptance of works?

A : Although the illumination guideline of of an LED electric bulb has been announced and the standards for LED have also implemented in many countries and areas, however, more and more claims are coming up when there are so many kinds and colors of LED lamps developed and designed to be like fluorescent lightings, but are considered not qualified in brightness and color. It was also a factor in many cases that they were not able to measure the brightness, color rendering properties, etc. before switching to new LED lights.

Q4 How *lighting designers* can use MK350 to prompt their efficiency in VM and store fixture design?

A: It's always been a challenge for lighting designers to maximize the visual effects of all kinds of exhibition in display windows, showrooms, or even museums, and lighting intensity and color render index (CRI) always play important roles on it.

Sun and incandescent lights are with the base 100 of CRI, owning to continuous distribution in spectrum, they provide to reflect absolutely true colors of all objects. You may apply MK350 to know the limits of artificial lighting and combine those lights to come up with a lovely atmosphere you want to have.

Strider Instruments

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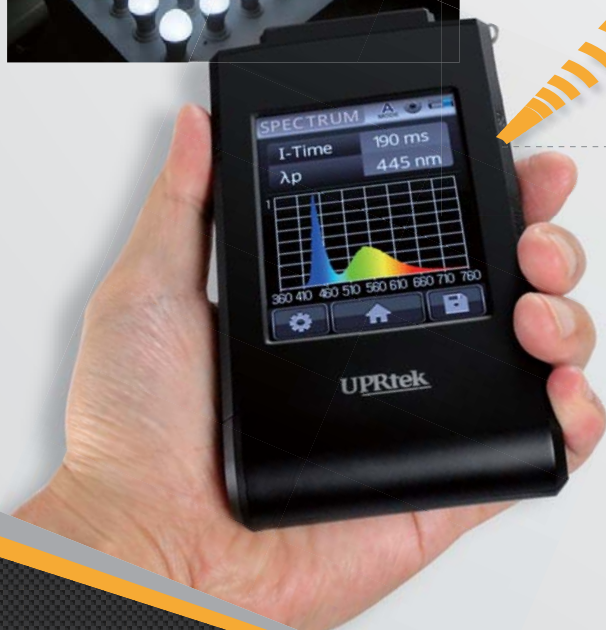Add : 2006, No.511 Tianmu W. Rd. Shanghai 200070, P.R.China

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WiFi Application

MK350 WiFi-SD Solution

1 Effective radius: 5 meters.

2 SD card to Access Point – one to one transmission, not via internet.

3 Encryption data transmission：Confidential.

4 Efficiency: High WiFi speed, high efficiency and convenience.

5 Easy setting & using: plug the SD card, simple setting & easy archive management.

SPECTRUM

I-Time   190 ms

λp   445 nm

360 410 460 510 560 610 660 710 760

UPRtek

MK350 WiFi-SD
Max 5m

SD

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