



MK350S Premium

Handheld Spectrometer

Specification

Spectrum	
Sensor	CMOS Linear Image Sensor
Illuminance meter class	Directional response conforms to JIS C 1609-1:2006 for General Class AA. Directional response conforms to DIN 5032 Part 7 Class B.
Wavelength Range	380 to 780 nm
Wavelength Data Increment	1 nm
Spectral Bandwidth	Approximately 12 nm (Half Bandwidth)
Wavelength Reproducibility	$\pm 1 \text{ nm}^{*1}$
Measurement Range	1 to 150,000 lx
Illuminance Accuracy	Illuminant A @ 2,856 K $\pm 2.5\%$
Illuminance Repeatability (2σ)	at 20,000 lx *2 0.2% in CIE 1931 x,y (100 to 150,000 lx) 0.5% in CIE 1931 x,y (5 to 100 lx) 1% in CIE 1931 x,y (1 to 5 lx)
Color Accuracy	x y: ± 0.002 (100 to 150,000 lx) x y: ± 0.0025 (5 to 100 lx) x y: ± 0.003 (1 to 5 lx)
Color Repeatability (2σ)	x y: 0.0002 (500 to 150,000 lx) x y: 0.0004 (30 to 500 lx) x y: 0.001 (5 to 30 lx) x y: 0.002 (1 to 5 lx)
CCT Accuracy	$\pm 2\%$
CRI Accuracy @ Ra	$\pm 1.5\%$
Stray Light	-25 dB max. *3
Integration Time Range	60us to 5,000 ms
Digital Resolution	16 bits

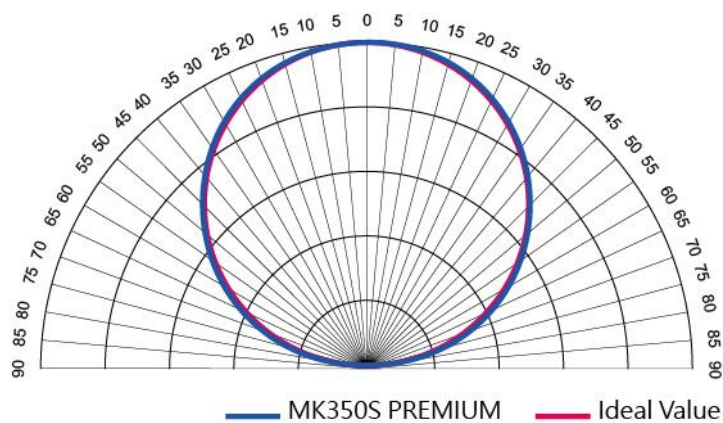
Flicker	
Measurement Range	1 to 150,000 lx
Sampling Rate	100k sample/sec
Frequency Range	5 to 50k Hz
Frequency Resolution	2, 4, 8, 16, 32 Hz
Flicker Accuracy	± 5%
Feature	
Capture Function	One time / Continuous
Operation Mode	Standalone Mode / WiFi Mode ^{*4} USB Mode (MSC Mode ^{*5} +PC connection)
Integration Mode	Auto / Manual
Dark Calibration	Yes (Auto)
Measuring Modes	<ol style="list-style-type: none"> 1. Basic Mode 2. Spectrum Mode 3. CRI Mode 4. CIE 1931 / 1976 Chromaticity Mode 5. LUX Image Distribution Mode 6. Log Mode 7. BIN Chart Mode 8. Quality Control Checker Mode 9. Measurement Comparison Mode 10. Transmit Mode 11. TM-30-15 Mode 12. Flicker Mode 13. Frequency Mode 14. Flicker Risk Mode 15. Blue Light Hazard Mode 16. Browser Mode 17. Option Mode
Measuring Capabilities	<ol style="list-style-type: none"> 1. Illuminance (LUX)/Foot Candle (fc) 2. Correlated Color Temperature ; CCT (K) 3. CIE Chromaticity Coordinates <ol style="list-style-type: none"> (1) CIE 1931 x,y Coordinates (2) CIE 1976 u',v' Coordinates (3) CIE 1931 XYZ Value 4. Δx , Δy , $\Delta u'$, $\Delta v'$ 5. Delta uv (Duv) 6. Dominant Wavelength (λ_d) ; Hue

7. Excitation Purity (%)
8.Scotopic and Photopic Ratio (S/P)
9.BIN ANSI C78.377 or Customized
10.Standard Deviation Color Matching (SDCM)
11.Color Rendering Index (CRI, Ra)/R1 to R15
12.Color Quality Scale (CQS)
13.Gamut Area Index (GAI)
14.TM-30-15 (Rf, Rg, Color Vector Graphic)
15.Television Lighting Consistency Index (TLCI)
16.Flicker Frequency (Hz)
17.Percent Flicker (%)
18.Flicker Index
19.Stroboscopic Effect Visibility Measure (SVM)
20.Flicker Risk - IEEE PAR1789
21. PPFD (400 to 700nm) $\mu\text{mol}/(\text{m}^2*\text{s})$ (1) PFD-UV (380nm to 400nm) $\mu\text{mol}/\text{m}^2/\text{sec}$ (2) PFD-B (400nm to 500nm) $\mu\text{mol}/\text{m}^2/\text{sec}$ (3) PFD-G (500nm to 600nm) $\mu\text{mol}/\text{m}^2/\text{sec}$ (4) PFD-R (600nm to 700nm) $\mu\text{mol}/\text{m}^2/\text{sec}$ (5) PFD-FR (700nm to 780nm) $\mu\text{mol}/\text{m}^2/\text{sec}$
22. Irradiance (380nm~780nm) (W/m^2)
23. Spectral Power Distribution (SPD), Unit: (mW/m^2)
24.Peak Wavelength ; λ_p (nm)
25.Peak Wavelength Value ; λ_pV (mw/m^2)
26.Transmittance (%)
27.Blue Light Weighted Irradiance ; EB (w/m^2)
28.Blue Light Hazard Efficacy of Luminous Radiation ; KB,V (w/lm)
29.Blue Light Hazard Risk Group(RG)

System Configurations	
Display	4.3" 800X480 Resistive Touch LCD
Max. Files	≅ 21,000 Files @ 8GB SD Card (Excel + JPG)
Battery Operation Time	≤ 4 hours / Fully Charged
Power	Adapter; 2500 mAh (3.7V Rechargeable Li-ion Battery)
Data Output Interface	SD Card (SD2.0,SDHC/up to 32G) / Mini USB Port (USB 2.0) / WiFi SD Card compatible with iOS and Android (Android app not ready yet)
Data Format	Compatible Excel / JPG
Dimensions	163 x 81 x 26.6 mm (H x W x D)

Weight (with Battery)	260 g ± 10 g
Operating Temperature / Humidity	0 to 35 °C, relative humidity 70% or less without condensation
Storage Temperature / Humidity	-10 to 40 °C, relative humidity 70% or less without condensation
Display Languages	English / Traditional Chinese / Simplified Chinese / Japanese / Spanish / German / French / Italian / Russian
Camera Resolution	2M pixels

Cosine Correction



- *1 : Input source must be a stable light source.
- *2 : Temperature 23±2°C and relative humidity 50% or less.
- *3 : Input the 550nm monochromatic light and measure the stray light ratio at 550nm ± 40nm.
- *4 : It can be connected to mobile phones and tablets.
- *5 : MSC- Mass Storage Class

The company reserves the right to change product specifications at any time without prior notice.