

# HATO ONE

Product specification



## Spectrum

Sensor	CMOS Linear Image Sensor	
Wavelength range	350 to 780 nm	
Wavelength data increment	1 nm	
Spectral bandwidth	Approximately 12 nm (Half bandwidth)	
Wavelength reproducibility	± 1 nm *1	
Measurement range	5 to 100,000 lx	
Illuminance accuracy	Illuminant A @ 2,856 K*2	± 2.5%
Illuminance repeatability (2σ)	Illuminant A @ 2,856 K*2	0.2% (100 ~ 100,000 lx)
		0.5% (5 ~ 100 lx)
Colour Accuracy	Illuminant A @ 2,856 K*2	± 0.002 in CIE 1931 x,y (100 to 100,000 lx)
		± 0.0025 in CIE 1931 x,y (5 to 100 lx)
Colour repeatability (2σ)	Illuminant A @ 2,856 K*2	0.0002 in CIE 1931 x,y (500 to 100,000 lx)
		0.0004 in CIE 1931 x,y (30 to 500 lx)
		0.001 in CIE 1931 x,y (5 to 30 lx)
CCT accuracy	Illuminant A @ 2,856 K*2	± 2%
Stray light	-25 dB max. *3	
Integration time range	100 us to 1,000 ms	
Digital resolution	16 bits	

## Flicker

Measurement range	5 to 100,000 lx	
Sampling rate	100k sample/sec	
Frequency range	5 to 50k Hz	
Frequency resolution	2, 4, 8, 16, 32, Hz	
Flicker accuracy	± 5%	

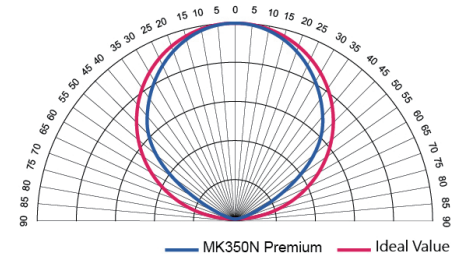
**Feature**

Capture function	One time/continuous
Operation mode	Standalone mode/WiFi Mode *4/USB Mode (MSC Mode *5 + PC connection)
Integration mode	Auto/manual
Measuring modes	1. Basic mode
Measuring modes	2. Spectrum mode
Measuring modes	3. CIE 1931/1976 Chromaticity mode
Measuring modes	4. Flicker mode
Measuring modes	5. Frequency mode
Measuring modes	6. Browser mode
Measuring modes	7. Option mode
Measuring modes	8. Compare mode
Measuring modes	9. Analyze mode
Measuring capabilities	1. Illuminance (LUX)/foot candle (fc)
Measuring capabilities	2. Gallilux
Measuring capabilities	3. Correlated Color Temperature (CCT)
Measuring capabilities	4. CIE chromaticity coordinates
Measuring capabilities	(1) CIE 1931 XYZ value
Measuring capabilities	5. Dominant wavelength ( $\lambda_p$ )
Measuring capabilities	6. Color rendering index (CRI, Ra)/R1 to R15
Measuring capabilities	7. Flicker frequency
Measuring capabilities	8. Percent flicker
Measuring capabilities	9. Flicker index
Measuring capabilities	10. Peak wavelength ( $\lambda_p$ )
Measuring capabilities	11. Peak wavelength value ( $\lambda_pV$ )
Measuring capabilities	12. Scotopic and photopic ratio (S/P)

**System configurations**

Display	3.5" 320X240 resistive touch LCD
Max. Files	≈ 68,000 files @ 8GB SD card (Excel + JPG)
Battery operation time	≤ 5 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
Data format	Compatible Excel/JPG
Dimensions	147.5 x 78 x 24 mm (H x W x D)
Weight (with battery)	225 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
Warranty	3 years**
Display languages	English/traditional Chinese/simplified Chinese/Japanese/Spanish/German/French/Italian/Russian

Cosine correction



\*1 : Input source must be a stable light source.

\*2 : Temperature  $23 \pm 2^\circ\text{C}$  and relative humidity 50% or less.

\*3 : Input the 550 nm monochromatic light and measure the stray light ratio at  $550 \text{ nm} \pm 40 \text{ nm}$ .

\*4 : It can be connected to mobile phones and tablets.

\*5 : MSC Mode - Mass Storage Class.

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

\*\*Ask your sales representative for the product specific warranty terms and conditions.