

# Asteria<sup>SERIES</sup>

## Light Meter

Admesy's Asteria is a high-speed light meter suited to measure illuminance or luminance. Swift and steady as it is, Asteria is able to measure waveforms of light sources to determine flicker characteristics. Designed for in-line use, allows easy integration into production or R&D applications. Asteria is available in multiple configurations.

## Highlights

Absolute illuminance & luminous intensity measurement according to the human eye: CIE 1931 luminosity function

Supported flicker standards  
Lighting: flicker percentage, index and IEEE 1789 recommendation  
Display: JEITA, ESA and Contrast

Measure high and low frequencies

Super high sample rate  
(186 567 samples per second)  
and large memory size

Windows, Linux and macOS

Stand-alone software and support for major programming languages: C++, C#, Labview, Matlab, Python



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[admesy.com/series/asteria](https://admesy.com/series/asteria)

# Asteria application example

## Flicker measurement at the US Department of Energy



The US Department of Energy (DOE) is responsible for advising energy security and economics. As a consequence the Department Of Energy is also very active in research for lighting applications — especially Solid-State-Lighting (SSL).

In 2016 the Department of Energy compared several purchasable flicker measurement solutions to their laboratory test solution. the Admesy Asteria was positively evaluated and is since then used in a permanent installation at the PNNL's Lighting Metrology Laboratory as the reference device for flicker measurements for the Department of Energy.

In November 2018 the Department of Energy published a new report on Characterizing Photometric Flicker with handheld meters, where the Asteria was used as a reference for the handheld meters and comparison. At DOE the Asteria is used in a permanent setup, but the Asteria is very small and compact and can also easily serve for 'on the go' handheld measurements...all you need is a laptop or tablet!

### Specifications

Model	Asteria Illuminance Meter	Asteria Luminance Meter
Photo detector	Silicon photo diode	Silicon photo diode
Spectral response	Approximates CIE 1931 luminosity curve	Approximates CIE 1931 luminosity curve
Optics	1 cm <sup>2</sup> cosine corrector, lambertian response	10 mm collimating lens
Measurement parameters	Illuminance, luminous intensity, flicker (percentage, index), waveform	Luminance, flicker (JEITA, VESA, contrast), waveform
Measurement speed sampling mode	186 567 samples/second Memory for 250 000 samples	186 567 samples/second Memory for 250 000 samples
Range integrating mode	0.05 lx – 150 000 lx with an integration time between 5 s and 1 ms	0.005 cd/m <sup>2</sup> – 15 000 cd/m <sup>2</sup>
Range sampling mode	10 lx – 150 000 lx	1 cd/m <sup>2</sup> – 15 000 cd/m <sup>2</sup>
Illuminance / Luminance accuracy	± 2 %	± 2 %
Repeatability	± 0.03 %	± 0.03 %
Interfaces	USB 2.0, RS 232, Trigger in & out	USB 2.0, RS 232, Trigger in & out
Size (HxWxD)	69 mm x 31 mm x 93 mm	69 mm x 31 mm x 93 mm
Weight	320 g	320 g
Operating temperature	10 °C – 35 °C	10 °C – 35 °C

Download the brochures with detailed specifications from [admesy.com/downloads](https://admesy.com/downloads)

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