



PROMETHEUS LF 17 MM LUMINANCE & FLICKER METER

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Specification

ADMESY

colorimeters | spectroradiometers | lightmeters

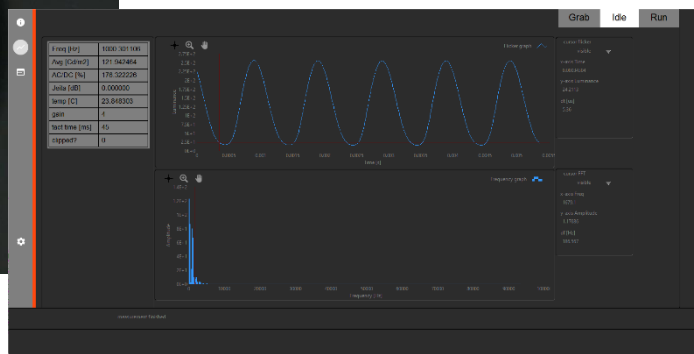
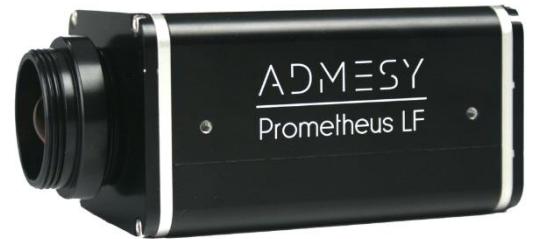
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PROMETHEUS-LF

The Prometheus Luminance and Flicker meter offers a unique combination of high speed and a large dynamic range. It's sole purpose is to measure luminance and flicker at an incredible speed. It can do this at extreme low luminance levels but also at very high luminance levels. The Prometheus-LF is the successor of the Asteria and has been engineered for ultimate performance on the following levels

- Vastly improved luminosity filter accuracy
- Very high sampling speed – 800k samples per second
- Improved sensitivity for the lower part
- Increased large dynamic range



HIGHLIGHTS

- Highly accurate luminance measurements according to human eye (CIE1931)
- Extreme fast luminance measurement even at low luminance level
- Flicker luminance (Y) function: 800 000 (800k) samples/second
- Auto-range function
- Powerful MCU enables internal JEITA flicker calculation
- USBMTC standard compliant
- Windows, Linux and MAC OSX compatible
- SDK available for virtual any language

STANDARDS

The Prometheus-LF is compliant to the USBMTC standard and can be used in combination with external provided USBMTC compliant drivers. Currently it has been tested on Windows, Linux and Apple OSX using NI VISA (www.ni.com/visa) and using the open source drivers on Linux (i686, x86_64 and ARM).

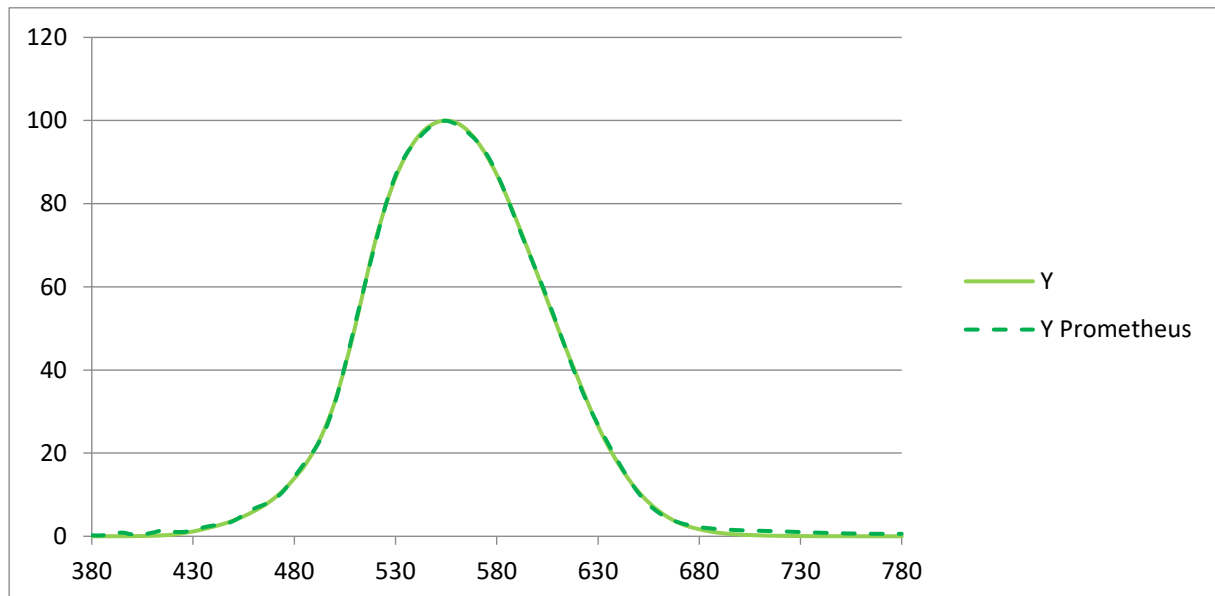
GENERAL SPECIFICATIONS

Interfaces	
USB 2.0	USBMTC compliant, SCPI command set, high speed device
RS 232	For PC and embedded purposes, using same command set as USB
Trigger in & out	5V compliant

Power ratings				
	Min voltage	Typical voltage	Max voltage	Max current
USB power	4.75V	5.00V	5.25V	300mA
9V power	8.75V	9.00V	9.25V	300mA

Measurement system	
Photo detector	single diode using an interference filter to match the CIE1931 photopic response
Measurement parameters	Flicker and Luminance
Size (HxWxD)	53 mm x 70 mm x 100 mm (without lens system)
Weight	~ 450 g
Mounting	12 M3 thread holes spread over four sides

TYPICAL SPECTRAL SENSITIVITY



17 MM MEASUREMENT SPECIFICATIONS

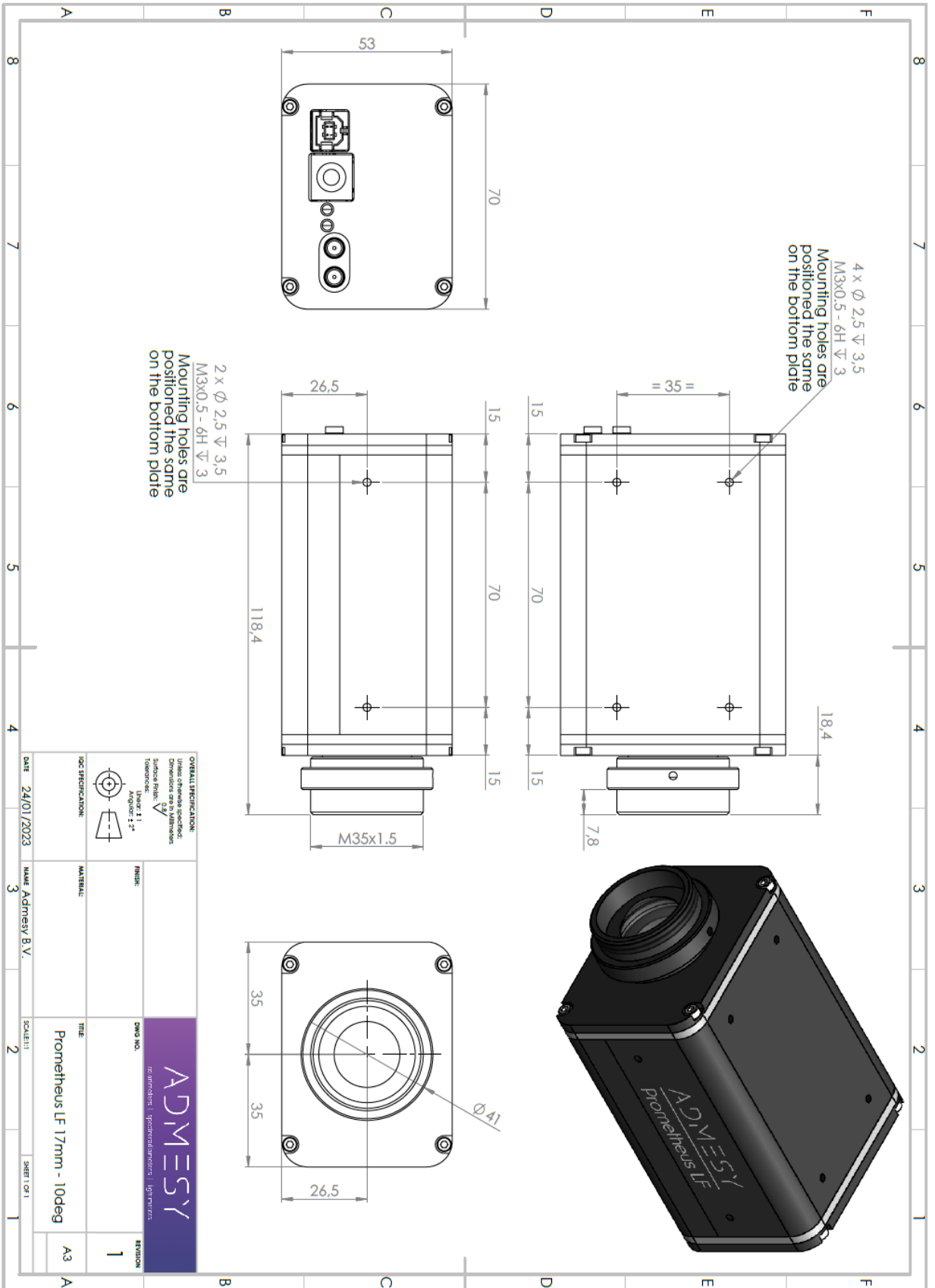
Measurement system	
Optical system- collimating lens	Acceptance angle 20° (± 10°)
Measurement spot size (for longer working distances contact Admesy for spot size)	19.5 mm at 25 mm distance 22.4 mm at 50 mm distance

Sample mode signal frequency response for ultra high speed Y channel sampling circuit	
Gain 1	DC – 3 kHz
Gain 2	DC – 10 kHz
Gain 3	DC – 15 kHz
Gain 4	DC – 15 kHz

Specifications	
Sampling frequency	Up to 800 000 samples per second (can be decreased by using the delay function → this will improve S/N)
Memory for saving sampling data	1 000 000 samples
Max measurement time	Up to 50 seconds
Dynamic range – luminance [cd/m ²]	0.05 – 16 000 Can measure much lower, 0.05 is the indicated level where 1 sample has a S/N ratio of 1:10. When using more samples it is possible to go much lower. Levels of 10 to 100 times less can be detected when using more samples
Luminance accuracy ¹	+/-2%, Calibrated on white screen of LCD display

1) Compared with internal traceable spectrometer used for calibration.

PROMETHEUS-LF 17 MM DIMENSIONS



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