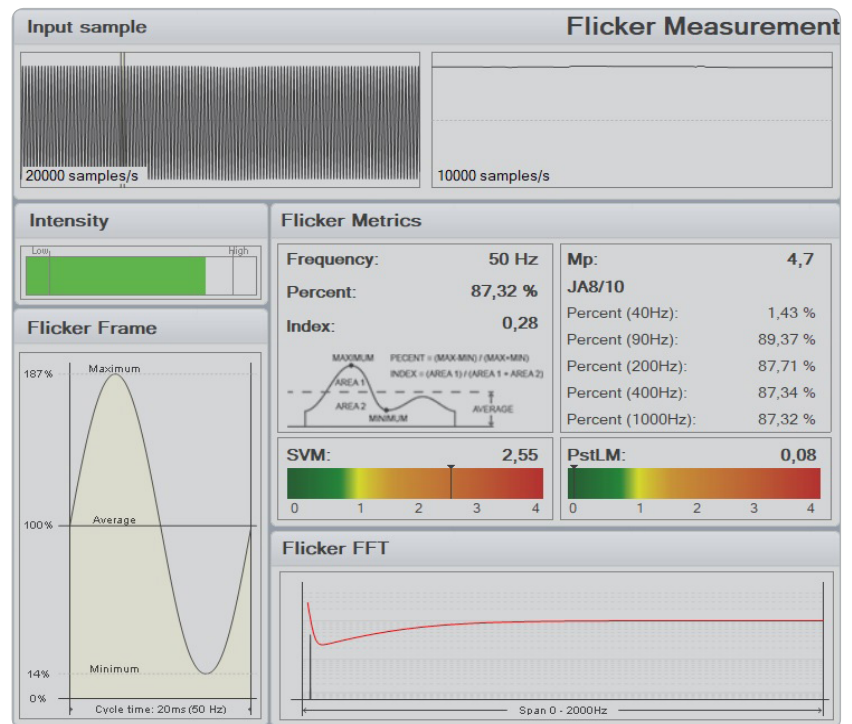# LABFLICKER

VISO SYSTEMS

The LabFlicker® is the first flicker instrument to integrate seamlessly with your light measurement system, making it simpler than ever to automatically incorporate all photometric data into your reporting.

The LabFlicker connects directly to the Light Inspector software giving you a live preview of your flicker signal. The smart signal processing algorithm frames and calculates your flicker data in real-time. The LabFlicker can be used as a stand-alone device but gets more powerful when used together with any Viso product as all photometric data can be seamlessly exported into one complete report.
The LabFlicker is designed to be used in a laboratory setting positioned close to the light source.

RESULTS

- **PstLM Short term flicker severity**
  (CIE: TN-006, IEC TR 61547)

- **SVM, Stroboscopic Visibility Measure**
  (CIE: TN-006, IEC TR 63158)

- **Percent Flicker**
  (IEEE Std 1789-2015, IES: RP-16-10, CIE: TN-006)

- **Flicker Index**
  (IEEE Std 1789-2015, IES: RP-16-10, CIE: TN-006)

- **FFT Frequency component analysis**

- **Mp ASSIST Flicker perception metric**

- **Joint Appendix JA10 (California)**

Input sample

20000 samples/s

Flicker Measurement

10000 samples/s

Intensity

Low / High

Flicker Metrics

Frequency:	50 Hz	Mp:	4,7
Percent:	87,32 %	JA8/10	
Index:	0,28	Percent (40Hz):	1,43 %
		Percent (90Hz):	89,37 %
		Percent (200Hz):	87,71 %
		Percent (400Hz):	87,34 %
		Percent (1000Hz):	87,32 %

PERCENT = (MAX-MIN) / (MAX+MIN)
INDEX = (AREA 1) / (AREA 1 + AREA 2)

MAXIMUM, AREA 1, AREA 2, MINIMUM, AVERAGE

SVM: 2,55
0 1 2 3 4

PstLM: 0,08
0 1 2 3 4

Flicker Frame

187 %
100 %
14 %
0 %
Maximum
Average
Minimum
Cycle time: 20ms (50 Hz)

Flicker FFT

Span 0 - 2000Hz

Connects directly to your PC via USB allowing for a fast, real-time preview
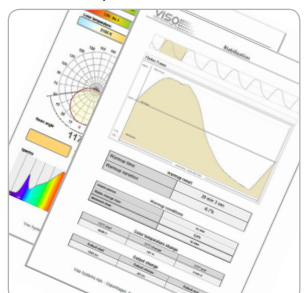
OLED display gives live flicker results during measurement

Ultra-fast 640.000 samples/sec photo sensor gives you precise data

Seamless integration with Viso pdf-reporting: All photometrics in one output

SPECIFICATIONS

The LabFlicker is easy to use - no matter whether you work on-site or in the lighting laboratory. The newest flicker indices, PstLM (flicker) and SVM (stroboscopic effects), are no problem.

KEY ADVANTAGES

- Ideal for measurements of the new flicker metrics: PstLM and SVM (mandatory in EU as off September 2021)
- Accuracy demonstrated by U.S. Department of Energy, November 2018
- One of the highest sampling rates in the market to improve accuracy
- The instrument uses the high capacity of your PC for advanced live display, and fast data handling
- Seamless integration of output into other Viso light measurements
- Full export of raw data
- Generate flicker reports - for internal purposes or marketing. Standard or customized reports.

USING THE LABFLICKER

- Install the Light Inspector software on your PC
- Connect LabFLicker and the PC with the USB cord
- Hold the sensor in proximity of the light source under test. The LabFlicker will indicate on the screen whether the distance is right
- Press the button to make a measurement
- Most measurements (**SVM**, **Flicker Percent**/**Index**, **Ja8**, **Frequency**) takes less than a second. Press the button again stop the measurement
- All **PstLM** measurements take 180 seconds as a minimum. Mount the LabFlicker on any standard tripod via the magnetic holder, and measure
- Measurements can also be started/stopped remotely from the PC
- While you measure there is a live output on the PC screen
- After measuring, you have the option of storing and downloading all results.

TECHNICAL SPECIFICATIONS

Physical dimensions

Dimensions (L x W x H)	115 x 53 x 13 mm
Weight	155 g
Shipping Dimensions (L x W x H)	170 x 130 x 70 mm
Shipping weight	500 g

Sampling

Sensor analog-to-digital converter resolution	12 bit
Sensor analog-to-digital sample rate	640,000 sample/s
Software working sample rate (down-rated for accuracy)	SVM 20,000 samples/s - PstLM 10,000 samples/s
Automatic pre-ADC gain levels (Ensuring maximum dynamic use of ADC)	3 levels
Bandwidth	10 Hz to 2,000 Hz

Photometric

Sensor lux range	1,200 to 11,000 lux
Sensor candela range (at distance from lamp from 0.1 m to 10 m)	12 cd @ 0.1 m to 1,100,000 cd @ 10 m

Electric

Connection	Micro USB
Power	Connection via USB only 5 V / 200 mA / 1 W