



Overview

Product name	LED-Panel V5
Principle	An array of LEDs to perform timing measurements on digital cameras. The LEDs are illuminated in different modes and frequencies.

Features

LED array

Number of LEDs	110 (array of 10 x 10 LEDs, 1 row with 10 LEDs for multiplying counts)
Size LED array	77 x 77 mm
LED specifications	LED-Panel: diffuse, peak wavelength 630 nm (red), viewing angle 100° LED-Panel (525): diffuse, peak wavelength 525 nm (green), viewing angle 50° LED-Panel-VIS-IR (850): diffuse, peak wavelength 850 nm (NIR), viewing angle 80° LED-Panel-VIS-IR (940): diffuse, peak wavelength 940 nm (NIR), viewing angle 90°
Accuracy @ +18 °C ... +28 C°	Frame rate: f ≤ 100 Hz: ± 45 ppm f > 100 Hz: ± 75 ppm Exposure time: ± 40 ppm. Rolling shutter: ± 40 ppm. Response time: ± 12 ppm.
Accuracy @ -20 °C ... +75 C°	Frame rate: f ≤ 100 Hz: ± 55 ppm f > 100 Hz: ± 85 ppm Exposure time: ± 50 ppm. Rolling shutter: ± 50 ppm. Response time: ± 22 ppm.
Dim function	LED-array and LCD display dimmable from 0 to 100%
Service life	10,000 h
Manual control	Operating buttons: switching between single and continuous triggers, rotary switch: adjusting the frame rate frequency, time, LCD, and LED-array brightness Display: shows the current setting



Operating mode	An external trigger, single internal trigger, continuous trigger
LED running directions	Left to right, right to left, top to bottom, bottom to top
Adjustable times	20 μ s to 10 s*
Maximum reading measurement time	1000 x of set time
Frame Rate measurement frequency	Adjustable from 1.0 Hz to 200 Hz
iQ-Trigger ON time	Adjustable from 0.1 s to 25.5 s in steps of 0.1 s
LEDs follow-up time after iQ-Trigger OFF	Adjustable from 0 to 65535 ms in steps of 1 ms
Defocus time before iQ-Trigger ON	Adjustable from 0 to 65535 ms in steps of 1 ms
Specialties	<ul style="list-style-type: none"> • Dimmable LED array and LCD display • Designed to be combined with iQ-Trigger-T, iQ-AF Box, lightSTUDIO, iQ-Trigger • Manual and software control possible

Software

System requirements	PC with Windows 7 operating system (or higher) USB port
Functions	<ul style="list-style-type: none"> • Software control LED-Panel V5 • Analysis of images taken from LED-Panel V5 <ul style="list-style-type: none"> ○ shooting time lag ○ shutter release time lag ○ autofocus time ○ display refresh rate ○ exposure time ○ rolling shutter speed ○ startup time
Output data	Text (*.txt) or XML file
API (C++)	Available as a separate option (LED-Panel API)

General description hardware

Line voltage for included power supply	100 – 240 V AC, 50/60 Hz
Supply voltage	15 V DC, 1A
Ports	1 x USB Mini (connection to PC for software control) 1 x port for power supply 15 V 2 x 3.5 mm TRS connector (camera trigger input, stop trigger input) 1 x 6.3 mm TRS connector (iQ-Trigger) 1 x 6.3 mm TRS connector (iQ-Defocus)
Dimension [W x H x D]	240 x 130 x 55 mm
Weight	1 kg
Operating conditions	Optimal: 22 - 26 degrees Celsius, maximum: 18 - 28 degrees Celsius
Warmup time	< 2 min. at optimal ambient temperature



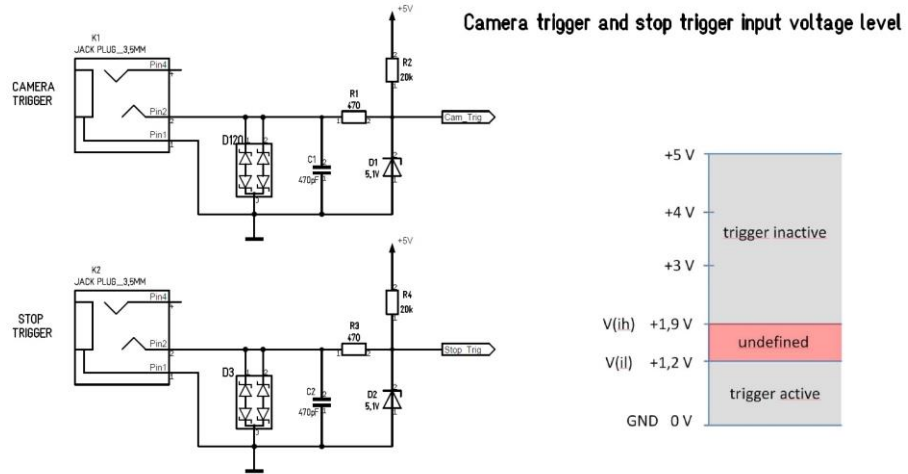
Scope of delivery

LED-Panel V5, power supply, USB cable, control software

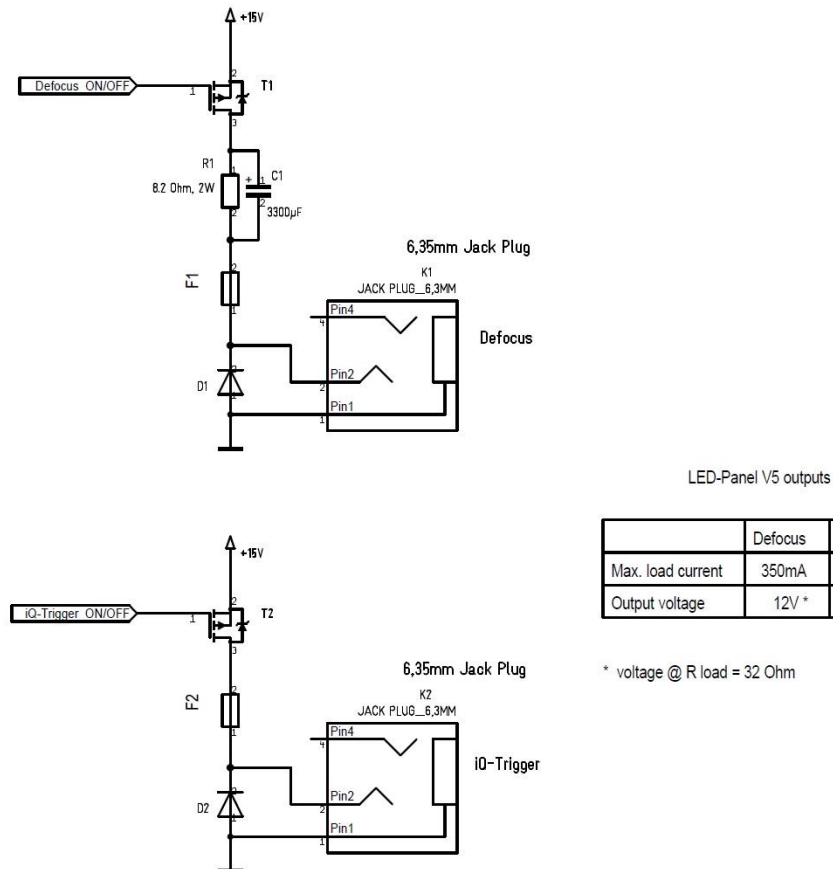


Electrical wiring diagrams

Signal input
(stop trigger,
camera trigger)



Signal output
(iQ-Trigger,
Defocus)





Miscellaneous

Standards	ISO 15781 Measuring shooting time lag, shutter release time lag, shooting rate, and startup time IEC 62676 Part 5: Data specifications and image quality performance for camera devices
Accessories	C++ API

* Depending on measurement mode