LED-Panel V4 data sheet

Overview

Product name	LED-Panel V4
Principle	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-IR (850): diffuse, peak wavelength 850 nm (NIR), viewing angle 80° LED-Panel-IR (940): diffuse, peak wavelength 940 nm (NIR), viewing angle 80°
Accuracy	<0.06% (1 ms -10 s)
Dim function	LCD display dimmable from 0 to 100%
Service life	10,000 h
Manual control	operating buttons: switching between single and continuous trigger, rotary switch: adjusting the frame rate frequency, time, LCD brightness display: shows current setting
Operating mode	external trigger, internal single trigger, continuous trigger
LED running directions	left to right, right to left, top to bottom, bottom to top
Adjustable times	via USB: 200 µs to 10 s* manual control: 20 µs to 10 s*
Maximum reading measurement time	1000 x of set time
Frame Rate measurement frequency	adjustable from 1.0 Hz to 100 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	• dimmable 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	• software control LED-Panel V4
	• analysis of images taken from LED-Panel V4
	    o shooting time lag
	    o shutter release time lag
	    o autofocus time
	    o display refresh rate
	    o exposure time
	    o rolling shutter speed
	    o startup time

Output data	text (*.txt) or XML file
API (C++)	Optional available (LED-Panel API)

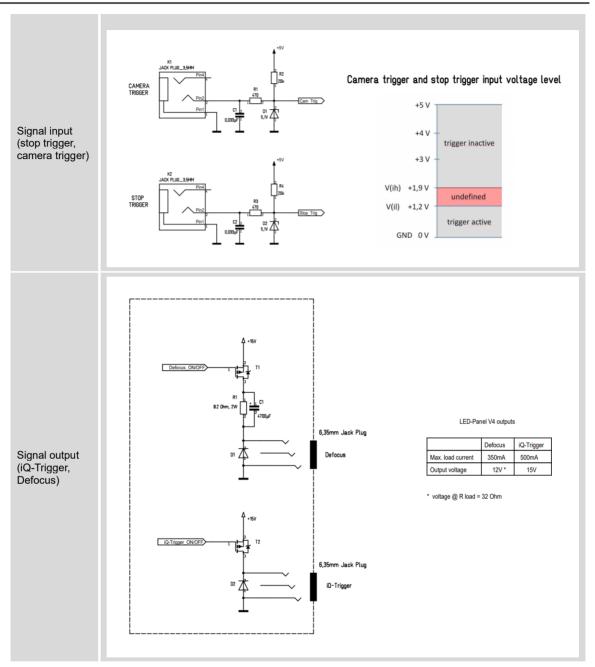## General description hardware

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 2.5 mm TRS connector (remote control) 2 x 6.3 mm TRS connector (iQ-Trigger 1, iQ-Trigger 2) 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
Warm up time	< 2 min. at optimal ambient temperature
Scope of delivery	LED-Panel V4, power supply, USB cable, remote control, control software

Electrical wiring diagrams

Signal input (stop trigger, camera trigger)	
Signal output (iQ-Trigger, Defocus)	

Camera trigger and stop trigger input voltage level

	+5 V	
	+4 V	trigger inactive
	+3 V	
V(ih)	+1,9 V	undefined
V(il)	+1,2 V	trigger active
GND	0 V	

LED-Panel V4 outputs

	Defocus	iQ-Trigger
Max. load current	350mA	500mA
Output voltage	12V *	15V

* voltage @ R load = 32 Ohm

Miscellaneous

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

* depending on measurement mode