GEOCAL / GEOCAL XL / GEOCAL IR data sheet

Overview

Product name	GEOCAL / GEOCAL XL / GEOCAL IR
Principle	DOE-based geometric calibration of digital cameras

Features

Hardware

Diffractive Optical Element (DOE)	Generates a very evenly distributed grid of light points, virtually originating from infinity
Output window	**GEOCAL / GEOCAL IR:** Usable aperture: Ø 77 mm **GEOCAL XL:** Usable aperture: Ø 155 mm (camera lens needs to have an equal or smaller diameter)
Usable FoV	Approx. 30 – 120° (Larger values possible, depending on the camera. Please contact us for details).
Dimensions (L x W x H)	**GEOCAL / GEOCAL IR:** approx. 575 mm x 144 mm x 170 mm **GEOCAL XL:** approx. 850 mm x 244 mm x 270 mm
Mounting points	**GEOCAL / GEOCAL IR:** 3 x M5 x 0.8 tapped holes in the base plate **GEOCAL XL:** 10 x M5 x 0.8 tapped holes in the base plate

Illumination (CAUTION: DO NOT LOOK DIRECTLY INTO THE LIGHT SOURCE!)

Light source	Frequency-stabilized diode laser
Wavelength	**GEOCAL / GEOCAL XL:** 633 nm **GEOCAL IR:** 935 nm
Output power	5 mW
Laser Class (diode only)	3B
Laser Class (GEOCAL)	1M
Lifetime	> 10,000 h
Warm-up time	Not required

Software

System requirements	PC with Windows 7 operating system (or higher) USB port
Functions	• Load multiple images • View selected image • Perform calibration • Overlay detected point grid • Various result visualization methods • Export results (CSV and XML) and coordinates of detected points (CSV)
Output data	Camera intrinsic and extrinsic data, the orientation of DOE
API (C++)	Available as a separate option

General description hardware

Power supply/consumption	25 W 5 V / 5 A / Pmax = 2 W
Ports	USB type B
Weight	**GEOCAL / GEOCAL IR:** approx. 4.5 kg **GEOCAL XL:** approx. 9 kg
Operating conditions	15 – 35 °C

Requirements on the device under test (DUT)

Max. dimensions	**GEOCAL / GEOCAL IR:** max. diameter of the camera lens: 77 mm **GEOCAL XL:** max. diameter of the camera lens: 155 mm
Usable FoV	Approx. 30 – 120° (Larger values possible, depending on the camera. Please contact us)