

## Zeiss Lattice Light Sheet 7 Microscope Specification

<b>Laser Unit</b>	Diode 488 nm (10 mW); Diode 561 nm (10 mW); Diode 640nm (5mW)
<b>LED</b>	Transmitted light: LED (white centered and side, red centered illumination) with oblique contrast for sample positioning and overview
<b>Light Sheet Generation</b>	Beam shaping by cylinder lens and spatial light modulator (SLM)
<b>Illumination Objective</b>	13.3x/0.44 N.A. (at 30° angle to cover glass) with static phase element
<b>Detection Objective</b>	44.83x / 1.0 (at 60° angle to cover glass) with Alvarez manipulator
<b>Stage</b>	Five-axis multi-coordinate stage with Piezo motors
<b>Filter Sets</b>	Emission filters: Emission Filter Camera 1: BP 570-620 + LP 655/BP 495-550 + LP 655/LBF 405/488/561/642/ND filter/Empty/BP 495-570/LP 570 Emission Filter Camera 2: BP 570-610 IR+/Empty/BP 495-550 + BP 570-620/BP 500-550 IR+ Secondary Beam Splitter: Plate/LP 565/LP 640/Empty
<b>Camera</b>	2 x Hamamatsu ORCA-Fusion sCMOS camera with 82% peak QE and 6.5µm pixel size
<b>Auto-immersion System</b>	Auto-water filling system
<b>Resolution (x y z)</b>	Deskewed: 330 nm × 330 nm × 500 – 1000 nm; Deskewed w/DCV: 290 nm × 290 nm × 450 nm– 900 nm (z-res. = light sheet thickness if ≤1000 nm)
<b>Incubation</b>	Environment control module: Heating of sample chamber (no cooling) T: ambient to 42 °C ± 0.1 °C; up to 1.5 °C/min heating, up to 1.0 °C/min cooling. Gas Mixer System: CO <sub>2</sub> and N <sub>2</sub> supply; adjustable concentration CO <sub>2</sub> : 0% to 15% ±0.35% O <sub>2</sub> : 1% to 21% ±0.20% Humidity: 20%– 99% ±2.50%
<b>Sample Carrier</b>	Standard glass bottom cell culture dishes and multi-well plates (glass 1.5; 0.15 µm – 0.19 µm); skirt < 0.5 mm
<b>Sample Carrier Frame</b>	<ul style="list-style-type: none"> <li>• Sample carrier frame Dish 35: for 35 mm cell culture dishes</li> <li>• Sample carrier frame Dish 35...40: for 35 – 40 mm cell culture dishes</li> <li>• Sample carrier frame Slide: for slides 26 mm × 76 mm; also suitable for multi-well glass-bottom slides 26 mm × 76 mm</li> <li>• Sample carrier frame Chamber slide: for LabTekR chambers 25 mm × 57 mm; also suitable for multi-well glass-bottom slides 25 mm × 57 mm</li> <li>• Sample carrier frame Multiwell: for multiwell microplates 85.48 mm × 127.76 mm</li> </ul>
<b>Software</b>	ZEN 3.10 (BLUE version)