

# MixxWave

By Oxxius

<b>Product range</b>	Laser Diode Illuminators (LDI)
<b>Product name</b>	LDI-4 Laser Diode Illuminator
<b>Reference</b>	LDI-4
<b>Description</b>	<p>The LDI-4 laser diode illuminator is a user inspired version of the original LDI-7. Many researchers were asking for a laser launch covering only the 4 basic lines: DAPI, FITC, TRITC, Cy5. The LDI-4 has been designed with exactly these lines in mind. While the number of lines inside the box has been reduced, no compromises have been made on quality and performance. This unit is also available with a 488 nm laser for FITC/GFP and with a 577 nm laser for TRITC/mCherry...or both! Note that we can work with you to provide solutions for your unique needs. <b>Key features</b></p> <ul style="list-style-type: none"> <li>• 4 laser lines covering the most widely used fluorescence probes</li> <li>• Up to 1000 mW output power per line</li> <li>• Feedback-controlled optical stability</li> <li>• Optional 488 nm &amp; 577 nm lasers</li> <li>• No user alignment required</li> <li>• TTL &amp; Analog control</li> </ul>



## Product Variations

Part Number	Combined wavelengths
LDI-4	405 / 470 / 555 / 640
LDI-4-577	405 / 470 / 577 / 640
LDI-4-488	405 / 488 / 555 / 640
LDI-4-488-577	405 / 488 / 577 / 640

## Performance by Wavelength

Wavelength	Optical Power Min <sub>1</sub>	CW Stability (typ.) <sub>2</sub>	Max Rise Time (typ.) <sub>3</sub>	Max On/Off Frequency <sub>4</sub>
405	300 mW	2%	10 $\mu$ s	> 1000 Hz
470 or 488	1000 mW	2%	10 $\mu$ s	> 1000 Hz
555 or 577	1000 or 700 mW	2%	2 ms	100 Hz
640	400 mW	2%	10 $\mu$ s	> 1000 Hz

### Legends

1. Optical Power Min: Optical power measured at 100% intensity, 23°C  $\pm$  2°C.
2. CW Stability (typ.): Continuous Wave Stability: Standard Deviation relative to mean power, at 100% intensity, 23°C  $\pm$  2°C.
3. Max Rise Time (typ.): Optical power measured at 100% intensity, 23°C  $\pm$  2°C.
4. Max On/Off Frequency: Measured at 100% intensity, 50% duty cycle

## Optical Characteristics

<b>Output Power</b>	Up to 1000 mW per line
<b>Optical Stability</b>	Feedback-controlled 2% CW stability
<b>Intensity Control</b>	1% steps 100:1 linear dynamic range
<b>Laser Lines</b>	Up to 7 lines : 405 / 445 / 470 or 488 520 / 555 or 577 / 640 / 730 nm
<b>NIR Channel (730 nm)</b>	✓ Deep-tissue imaging Extended spectral range beyond visible
<b>Beam Quality</b>	Standard multimode output
<b>Fiber Output</b>	400 µm bifurcated
<b>User Alignment</b>	Not required

## LDI-4 Series Laser Diode Illuminator General specifications

<b>Output Options</b>	Optical fiber (400 µm bifurcated, 0.39 NA)
<b>Control Options</b>	TTL (> 2.3 V)   Analog (0-5 V) USB-DSP (virtual COM port)
<b>Safety</b>	Interlocked housing   Key interlock IEC 60825 compliant
<b>QUAREP-LiMi WG1</b>	--
<b>Dimensions</b>	318 × 234 × 146 mm (12.5" × 9.2" × 5.75")
<b>Weight</b>	~ 4 kg (~9 lbs)
<b>Operating Temp.</b>	15 to 30 °C
<b>Storage Temp.</b>	-18 to 50 °C
<b>Humidity</b>	80% non-condensing
<b>Voltage</b>	90-220 V AC, 50-60 Hz
<b>Warranty</b>	2 years

## Options

Fiber sets
LDI Breakout Box
Fiber Bend Box
External Despeckler

## Applications / Techniques

Confocal Microscopy
Spinning Disk Microscopy
Widefield Microscopy
Light Sheet Microscopy
Structured Illumination Microscopy (SIM)
Super Resolution Imaging
TIRF
PALM / STORM / DNA-PAINT
FRAP
Photoactivation / Photoconversion
Photoablation
Optogenetics
Neuroscience / Physiology
Cellular Biology
Single Molecule FISH (smFISH)
Spatial Transcriptomics / Proteomics
Digital Pathology

*Oxxius has a policy of continuous product improvement. Specifications may change without notice.*