

LDI

HIGH-PERFORMANCE LASER DIODE ILLUMINATOR

LDI: OVERVIEW

The LDI is a multiline, solid-state laser illuminator offering up to 1000mW of output power via a multimode fiber at the price of a low power LED light engine. With feedback controlled output stability and up to a 100:1 linear dynamic range, the LDI is the ideal light source for a wide range of applications including spinning disk confocal microscopy, structured illumination microscopy, FRAP, PALM/STORM, and photo-activation/ photoconversion.



The LDI offers the highest price to performance ratio of any laser source available on the market today.

FEATURES AND BENEFITS

HIGH OUTPUT POWER :

- Shorter exposures
- Faster imaging
- Faster activation times in optogenetics and photoactivation experiments
- Faster bleaching times in FRAP experiments

FEEDBACK CONTROLLED OPTICAL STABILITY :

- Quantitative imaging, ideally suited for ratiometric imaging
- More repeatable optogenetics experiments

UP TO 100:1 LINEAR DYNAMIC RANGE:

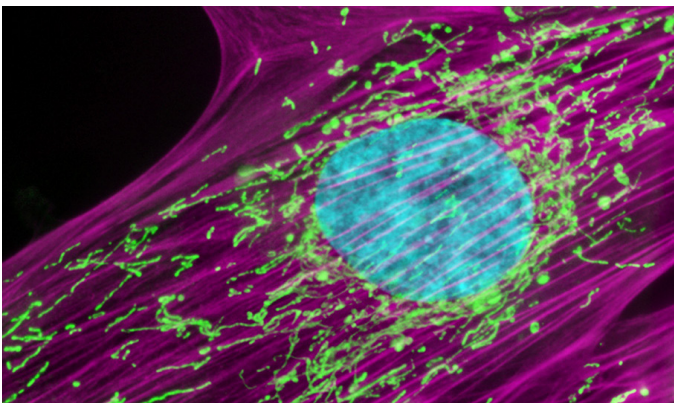
- Ability to turn power down when needed and maintain stability

7 LASER DIODES:

- Covers most of the standard fluorescence probes

NO USER ALIGNMENT:

- Easy to use and maintain



APPLICATIONS

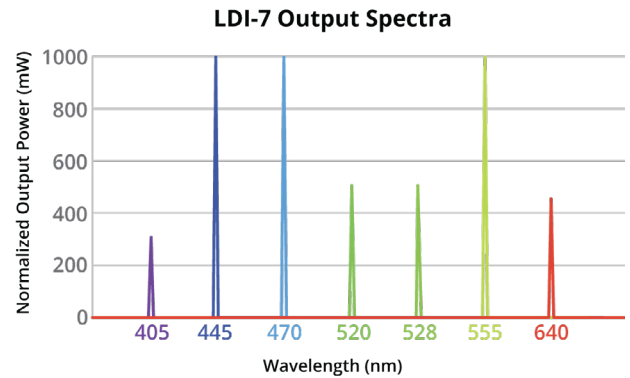
- Spinning Disk Confocal Microscopy with Crest X-Light
- Super Resolution SIM Imaging with Crest DeepSIM
- PALM/STORM
- Optogenetics with DLPs or Multiport Illuminator
- Photoactivation/Photoconversion/FRAP with RAPP GEO
- FRAP with SLM or Multiport Illuminator

LDI-7

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LASER LINES AVAILABLE FOR LDI-7

Laser Line (nm)	Power (mW) <i>Measured out of fiber (400 μm 0.22 NA)</i>
405	300
445	1000
470	1000
520	500
528	500
555	1000
640	450



SPECIFICATIONS

Source Type	Laser Diodes						
Lifetime	20,000 hrs – 2 year warranty						
Wavelength (nm)	405	445	470	520	528	555	640
Width; Max FWHM (nm)	2.2	2.6	2.1	4.2	3.3	1.6	1.9
CWL Range (nm)	397-408	438-450	463-470	514-523	526-535	552-557	632-644
Continuous Wave Stability*	< 2%	< 2%	< 2%	< 2%	< 2%	< 2%	< 2%
Optical Power Min (mW)	300	1000	1000	500	500	1000	450
Rise	< 10 μs	< 10 μs	< 10 μs	< 10 μs	< 10 μs	< 1 ms	< 10 μs
Max On/Off Frequency (Hz)	> 1000	> 1000	> 1000	> 1000	> 1000	100	> 1000
Output Options	optical fiber **						
Control Options	TTL (>2.3 V) Analog (0–5 V) USB–DSP (virtual COM port) – SDK available upon request						
Safety	Interlocked housing Safety interlock Key interlock IEC 60825 compliant						
Dimensions	12.5" x 9.2" x 5.75"						
Weight	~9 lbs						
Operating Temperature	15-30° C per our product spec						
Storage Temperature	-18-50° C						
Humidity	< 80% non-condensing per our spec						
Voltage	90–220 V AC, 50–60 Hz						
Fuse	None						

*Deviation from the mean, measured for powers >20% with an ambient temperature range < 4°C

** Recommended output fiber is 400um, 0.37NA bi-furcated fiber

DANGER - LASER RADIATION. AVOID EYE OR SKIN EXPOSURE TO DIRECT OR SCATTERED RADIATION. CLASS 4 LASER PRODUCT.

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