89 NORTH®
Illuminate Today, Transform Tomorrow™

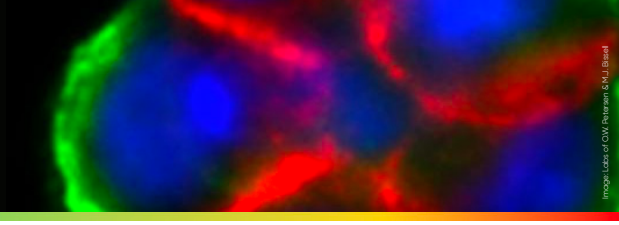


Image: Lubs of GW Petersen & M.J. Bissell

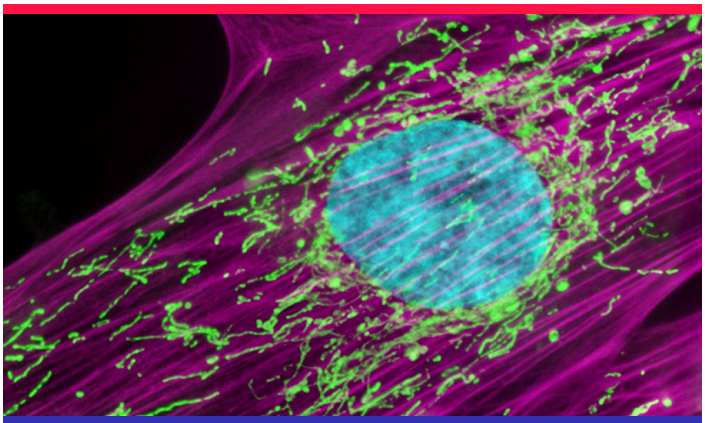
LDI

HIGH-PERFORMANCE LASER DIODE ILLUMINATOR

OVERVIEW

The LDI is a multiline, solid-state laser illuminator offering up to 1000mW of output power per laser line 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, photoactivation/ photoconversion, and spatial biology.

The LDI offers the most cost efficient price-to-performance ratio of any laser source available on the market today.



APPLICATIONS

- Spinning Disk Confocal Microscopy
- Super Resolution SIM Imaging
- PALM/STORM
- Optogenetics with DLPs or Multiport Illuminator
- Photoactivation/Photoconversion/FRAP
- FRAP with SLM or Multiport Illuminator
- Spatial Biology

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

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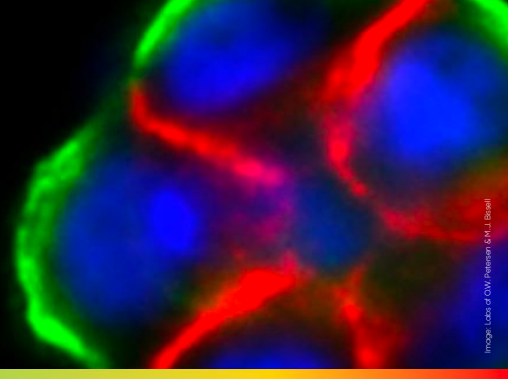
LDI-7
HIGH-PERFORMANCE LASER DIODE ILLUMINATOR

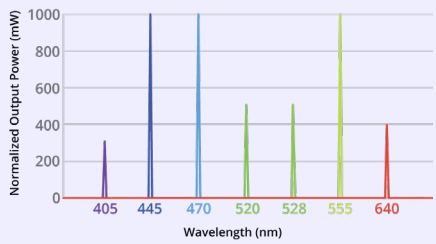


LASER LINES AVAILABLE

405 Laser Line (nm)	300 Power (mW)*
445	1000
470	1000
520	500
528	500
555	1000
640	400

**Measured out of fiber (400 µm 0.39 NA)*

LDI-7 Output Spectra



SPECIFICATIONS

Source Type	Laser Diodes						
Lifetime	20,000 hrs – 2 year warranty						
Laser Line (nm)	405	445	470	520	528	555	640
Width; Max FWHM (nm)	1.8	2.2	2.2	3.8	4.0	1.6	2.0
Centroid Wavelength Range (nm) [1]	397-407	438-450	463-470	514-523	526-535	552-557	632-644
Continuous Wave Stability [2]	< 2%	< 2%	< 2%	< 2%	< 2%	< 2%	< 2%
Optical Power Min (mW) [1]	300	1000	1000	500	500	1000	400
Max Rise Time [1]	< 10 µs	< 10 µs	< 10 µs	< 10 µs	< 10 µs	< 2 ms	< 10 µs
Max On/Off Frequency (Hz) [3]	> 1000	> 1000	> 1000	> 1000	> 1000	100	> 1000
Output Options	optical fiber [4]						
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", 318mm x 234mm x 146mm						
Weight	~9 lbs						
Operating Temperature	15-30° C						
Storage Temperature	-18-50° C						
Humidity	< 80% non-condensing						
Voltage	90–220 V AC, 50–60 Hz						
Fuse	None						

1. Measured at 100% intensity, 23°C ± 2°C
2. RMSE relative to the mean power measurements, measured at 100% intensity, 23°C ± 2°C
3. Measured at 100% intensity, 50% duty cycle
4. Recommended output fiber is 400 µm, 0.39 NA bifurcated fiber

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

Document Number: 01-000000001190, Rev A

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