

LDI^{G2}

HIGH-PERFORMANCE LASER DIODE ILLUMINATOR

THE NEXT GENERATION OF ILLUMINATION

The LDI-G2 is the next evolution of our trusted Laser Diode Illuminator family—engineered for today's most demanding imaging applications. With higher power density, rock-solid stability, and more efficient light delivery, the LDI-G2 line ensures researchers get the illumination performance they need, without compromise.



HIGHER POWER DENSITY

Single output and optimized fiber core size concentrates optical power into a smaller output area, dramatically boosting power density. The result: brighter illumination, enhanced resolution, and better performance for your research.

ROCK-SOLID STABILITY

LDI-G2 delivers dramatically improved power stability, reducing fluctuations that can compromise experiments. Researchers can trust that their data reflects true biological signals—not variability introduced by lab equipment.

MORE EFFICIENT DELIVERY

Improved beam quality and coupling efficiency maximize usable output while minimizing loss. Seamless integration with a wide range of microscopy systems makes for a flexible, future-ready solution for life sciences, biomedical, and clinical research.

LDI-G2 FAMILY PRODUCT LINE OVERVIEW

We offer a full range of LDI products, including laser lines at 488nm, 577nm, and into the NIR. Other laser lines are available upon request.

	405nm	445nm	CHOOSE BETWEEN		520nm	528nm	CHOOSE BETWEEN		640nm	730nm
	470nm	488nm					555nm	577nm		
LDI-G2-4 Series	300		1000	900-1000			700	450-500	500	
LDI-G2-5 Series	450		1000	900-1000			700	450-500	1000	750
LDI-G2-7 Series	300	1000	1000	900-1000	500	450	700	450-500	500	
LDI-G2-NIR Series	450	1000	1000	900-1000	500		700	450-500	1000	750

Units shown in the interior of the table above are milliwatts (mW).

LDI-G2: POWERFUL. STABLE. EFFICIENT.

Designed for researchers pushing the limits of fluorescence and live-cell imaging.

WHO BENEFITS?

- Cell biologists studying dynamic or delicate processes where signal consistency is critical.
- Neuroscientists performing optogenetics or calcium imaging requiring precise, stable illumination.
- Microscopists whose research demands both high power density & stability (STORM, PALM, SIM).
- Core facilities supporting diverse multi-user imaging workflows.

SPECIFICATIONS

Source Type	Laser Diodes									
Laser Line (nm)	405	445	470	488	520	528	555	577	640	730
Width; Average FWHM (nm)	1.1	1.0	1.1	1.8	3.1	2.6	0.4	0.4	1.5	1.2
Centroid Wavelength Range (nm) ¹	397-408	438-450	463-470	482-494	514-524	526-535	552-557	574-580	632-644	722-738
Continuous Wave Stability ²	< 0.2%	< 0.2%	< 0.2%	< 0.2%	< 0.2%	< 0.2%	< 0.2%	< 0.2%	< 0.2%	< 0.2%
Max Rise Time ¹	< 5 μ s	< 5 μ s	< 5 μ s	< 5 μ s	< 5 μ s	< 5 μ s	< 2 ms	< 2 ms	< 5 μ s	< 5 μ s
Max On/Off Frequency (Hz) ³	> 1000	> 1000	> 1000	> 1000	> 1000	> 1000	100	100	> 1000	> 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									
Warranty	2 Years									

1. Typical values measured at 100% intensity, 23°C $\pm$ 2°C

2. Typical CW stability value, calculation based on QUAREP LiMi WG 1 Illumination stability measurement at 100% intensity, 23°C $\pm$ 2°C

3. Measured at 100% intensity, 50% duty cycle

4. Recommended output fiber is a 400 μ m, 0.39 NA or 0.26 NA fiber, depending on LDI-G2 model.

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

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