



5 Key Technical Details you should consider when choosing a Diode Laser source for Fluorescence Microscopy

- 1. Active Temperature Control -**
By using active temperature control of the Laser the laser wavelength and pointing stability are increased significantly.
- 2. Beam quality -**
Many applications require coupling the laser light into a singlemode fiber optic. The efficiency of the fiber coupling is increased with improved beam quality.
- 3. Modularity –**
Lasers that can be combined into a complete Light engine solution provide a more flexible approach to meeting requirements. No matter what new techniques or fluorophores come up, a modular LED source can always be configured to match.
- 4. Electronic Control and Modulation –**
Fast and accurate analogue intensity control and fast, exact switching is a key for repeatable results. A Laser source should offer minimum 100 times the switching speed of your shortest camera shutter time. Additionally there should not be any variation in signal-to-light latency at different acquisition times.
- 5. Filtering –**
Many laser diode modules have additional emission outside of the primary laser band. Lasers with high performance clean up filters can address the spurious lines that can interfere with excitation of fluorophores.

All of these key technical issues are addressed in the OMICRON LuxX Plus and Light HUB products. The Omicron LightHUB is a high power Laser light source for Biotech, industrial and analytical applications. With up to 6 different wavelengths between 375 and 840nm it can be used in applications like widefield microscopy, optogenetics, chemical analysis, forensics and many more. The modular principle of the LightHUB® provides the possibility to start with only one or two wavelengths initially and user-upgradeability to further wavelengths at a later stage. The capability of fast switching between the wavelengths and high speed analogue modulation of the intensity is a key feature for demanding applications.

Contact us for more information.

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