

MULTI-EMITTER FIBER COUPLED LED SOURCE



Our multi-emitter fiber coupled LED light sources are built on a modular LED platform that is configurable to the customer's required spectral distribution. An integrated light mixing module ensures both spectral and spatial uniformity at the the output aperture of a 5 mm diameter fiber optic cable. The initial configuration spans the entire visible spectral range using a selection of discrete single wavelength emitters combined with high power white LEDs.

FEATURES

- Light distribution management
- Broad wavelength range
- Independently adjustable intensity tuning
- Spectral and spatial uniformity
- Computer controlled via USB



PRELIMINARY SPECIFICATIONS

- 12 emitter system
- Individual emitter control: 0-100%
- Emission wavelengths: 400 to 700 nm
- Broad band wavelength (optional): 365 to 1000 nm
- Output aperture: 5 mm

BENEFITS

- Versatile light source
- Low operating costs
- No heat related problems
- Reduced system complexity
- Low maintenance

APPLICATIONS

- Illumination
- Biomedical instrumentation
- Spectroscopy instrumentation
- Microscopy
- Medical devices
- Industrial machine vision

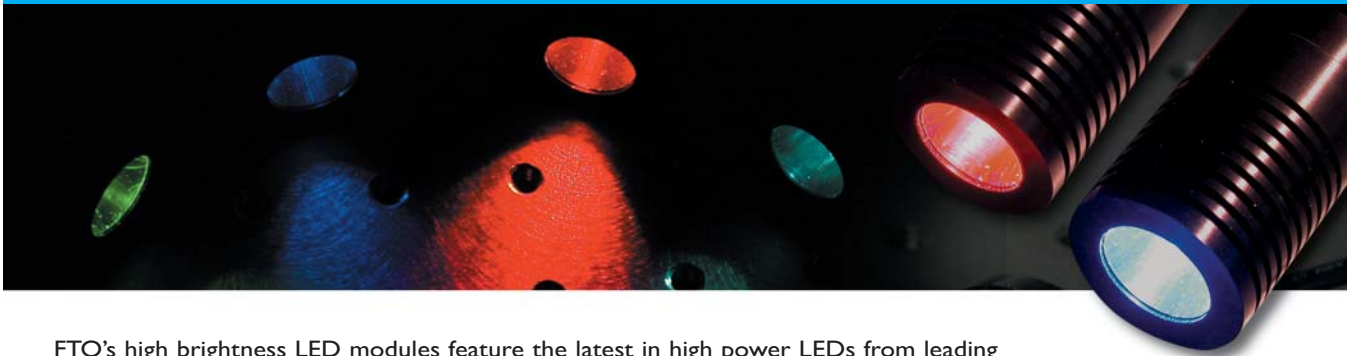


FiberTech *Optica*

info@fibertech-optica.com • www.fibertech-optica.com
519.745.2763 / 514.352.6666

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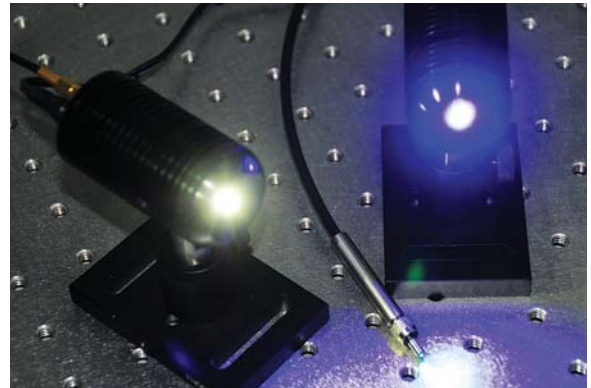
HIGH BRIGHTNESS LED MODULES



FTO's high brightness LED modules feature the latest in high power LEDs from leading manufacturers packaged with driving circuitry in a compact mechanical housing. The housing integrates a heat sink and several mounting features for ease of integration with other opto-mechanical components.

FEATURES

- Turnkey high brightness LED sources
- 1, 3 and 6 emitter modules, can be single or multiple wavelengths
- Low power consumption
- Compact and lightweight
- Can be modulated
- Can be color mixed
- Passively thermally stabilized
- Mounting features:
 - external 1.035"-40 thread for mounting in optical setups using optomechanics from popular vendors such as Thorlabs and Newport
 - 8-32 and M4 mounting holes



OUTPUT OPTIONS

Free space	light emitted in all directions directly from the LED
Lensed	using a simple lens LED output can be collimated or focused with about 25% efficiency
Reflector coupled	a custom reflector captures about 70% of emitted light and forms a hot spot at a prescribed distance, useful for coupling into light pipes and large fiber bundles
Fiber coupled	optical fiber butted against the emitter; offers flexibility at the cost of lower coupling efficiency

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APPLICATIONS

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- Spectroscopy instrumentation
- Fluorescence microscopy
- Medical devices
- Industrial machine vision



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