

Multi-Channel Superluminescent Diode Light Source (Multi-SLED) Integrated Spectral Bench (ISB2)

DAYY's Multi-SLED® (superluminescent diode) is a compact broadband light source that operates within the near-infrared region. The product itself is a fully enclosed Integrated Spectral Bench (ISB2) containing DAYY's proprietary 32-pin butterfly package that uses a set of superluminescent diodes, one monitor diode for each SLED (enabling better power control and monitoring capabilities), an integrated isolator, a thermoelectric cooler (TEC), and a driver circuit to provide overlapping spectral coverage. This user-controlled box enables complete control of up to six light sources enclosed.



The ISB2 includes various spectral coverages with SLED's ranging from 770nm to 1680nm, with up to 40mW of optical power. Users operate with complete control of the temperature from a remote device (e.g., PC or laptop) or from the dip switches on the side of the bench. The bench includes six monitor diodes, and is capable of USB, RS-232, or Ethernet connection. The ISB2 is compact and easy to use, making it a great fit for manufacturer assemblies requiring light power.

The Multi-SLED uses DAYY's technology of spectral stitching to provide extensive spectral coverage. This technology integrates multiple wavelengths into a single spatially coherent beam with low temporal coherence and broad spectral coverage. The Multi-SLED product lines can be spectrally tailored to suit specific application needs. This provides exceptional flexibility and usability, making these sources ideal for the applications included below:

KEY FEATURES

- Between two and six superluminescent diodes (SLEDs) in a single unit
- All SLEDs can be run from 0-100% of maximum rating
- Fiber-coupled output power from 10mW to 40mW, Free Space output power from 30mW to 130mW
- Bandwidth FWHM from 40nm to 460nm
- DAYY's technology for spectral stitching provides optimum power and bandwidth
- Multiple communication interfaces: USB, RS-232, Ethernet
- Each SLED comes with a built-in independent monitor photodiode and one common thermoelectric cooler (TEC) for all SLEDs
- Internally optimized for maximum coupling efficiency with Single mode or PM fiber
- Monolithic integration of a Broadband Dual Stage PMF Isolator (35dB)
- Light output: AR Coated Sapphire Window
- User friendly GUI and custom API available for test automation

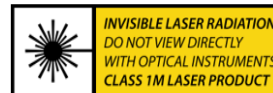
APPLICATIONS

- Optical Component Testing
- Telecom Test Equipment
- Medical Optical Coherence Tomography
- Industrial Optical Coherence Tomography
- Industrial and Biomedical Imaging Systems
- Optical Sensing
- Test and Measurement
- Research and Development

LIGHT TYPE ORDERING OPTION

- Low-Degree of Polarization (DOP): the ISB2 provides under 5% DOP across entire spectral range. This minimizes polarization sensitivity of fiber sensors, and reduces the effects of polarization dependent loss
- Free Space: for higher-power applications that do not require fiber optics, this selection results in a direct laser beam

Fibre-Coupled Products



Free-Space Products

