

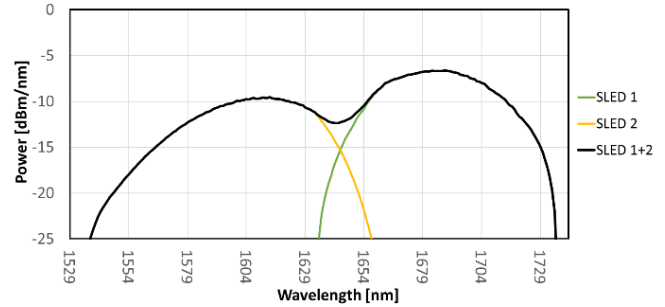
BeST-SLED®

Integrated Spectral Bench (ISB) - Product Brief

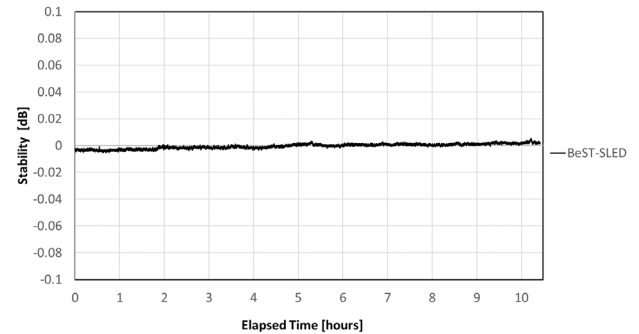


Description: Integrated Spectral Bench: 2 SLEDs: 1615nm, 1680nm, SM Fiber, Spectral Coverage: 1575nm -1725nm, FWHM: 150nm, CW: 1650nm, Fiber Output Power > 12mW

The Luxmux Broadband source (BeST-SLED®) can be configured with up to 6 light sources combined as a single spectrum product. The system provides individual control of light sources through a digitally controlled interface. The ISB is designed to offer up to 19 spectral combinations, which creates a compact and powerful unit that can widen the performance of its intended application use. Individual SLED performance dashboards are provided for optimum set up calibration as required. The light source is integrated with a high-performance SLED driver and temperature control electronics in a rugged compact package. Power meters can be added for additional monitoring capability.



Luxmux's Spectral Stitching technique of integrating multiple wavelengths into a single broad spectrum is designed for optimum coupling efficiency into a single mode fiber. This brings exceptional flexibility and usability to the sensing marketplace. The BeST-SLED® product lines can be spectrally tailored to suit specific application needs and offer excellent back reflection immunity, better than 35dB. This provides extremely high stability, making these sources ideal for:



- Optical component Testing
- Telecom Test Equipment
- Optical Coherence Tomography
- Optical Sensing
- White Light Interferometry
- Research and Development

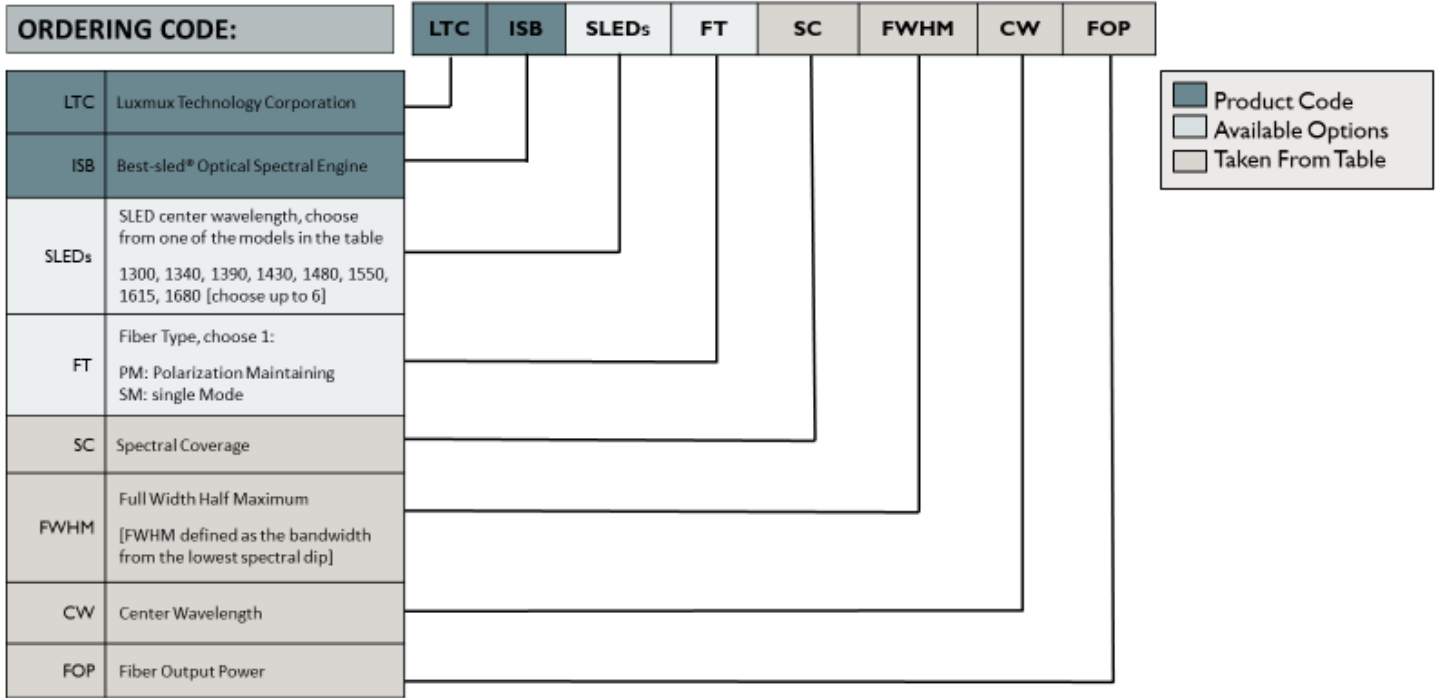
KEY FEATURES

- 2 Superluminescent Diodes (SLEDs) in a single package
- All SLEDs can be run from 0 - 100% of maximum rating
- Fiber Coupled Output Power > 12mW
- Bandwidth FWHM > 150nm, @10dB > 180nm
- The best combination of power and spectrum width in multi-SLED modules
- Each SLED comes with a built-in independent monitor photodiode
- Optional: Integrated InGaAs Power Meter
- Internally Optimized for maximum coupling efficiency with SMF-28 Fiber
- Integrated Optical Isolation (35dB)
- Light Output: FC/APC Connector (Optional FC/PC or SMA)
- CW operation (Excellent Stability < 0.1dB)
- Intensity modulation available
- Custom API available
- USB, RS-232, Ethernet communication
- Spectrum Ripple:
 - Standard Performance < 0.45dB
 - Enhanced Performance < 0.30dB
 - High Performance < 0.15dB
- RIN typical -130dB/Hz
- Operating temperature 0 to 35°C without additional Heatsink. Provides over temperature protection with internal optical bench temperature monitor
- 12 VDC powered
- Remote operation from a PC/laptop or manual dip switches

PERFORMANCE HIGHLIGHTS

| Product | Conditions | CWL [nm] | I _{OP} [mA] | P [mW] | B _{FWHM} [nm] | B _{@10dB} [nm] |
|----------|-------------------------|----------|----------------------|--------|------------------------|-------------------------|
| SLED 1 | CW | 1680 | 400 | 6 | 55 | 90 |
| SLED 2 | T _{OP} = 25°C | 1615 | 300 | 6 | 60 | 100 |
| SLED 1+2 | T _{TEC} = 21°C | 1650 | 700 | 12 | 150 | 180 |





| Ordering Code: LTC-ISB-(SLEDs)-(FT)-(SC)-(FWHM)-(CW)-(FOP) | SLEDs [nm] | FT | SC [nm] | FWHM [nm] | CW [nm] | FOP [mW] |
|--|------------------------------------|----|-------------|-----------|---------|----------|
| LTC-ISB-1615_1680-PM-1575_1725-150-1650-12 | 1615, 1680 | PM | 1575 - 1725 | 150 | 1650 | 12 |
| LTC-ISB-1480_1550_1615-PM-1435_1640-205-1538-18 | 1480, 1550, 1615 | PM | 1435 - 1640 | 205 | 1538 | 18 |
| LTC-ISB-1340_1390_1430-PM-1310_1465-155-1388-20 | 1340, 1390, 1430 | PM | 1310 - 1465 | 155 | 1388 | 20 |
| LTC-ISB-1300_1340_1390_1430-PM-1265_1465-200-1365-25 | 1300, 1340, 1390, 1430 | PM | 1265 - 1465 | 200 | 1365 | 25 |
| LTC-ISB-1480_1550_1615_1680-PM-1435_1725-290-1580-25 | 1480, 1550, 1615, 1680 | PM | 1435 - 1725 | 290 | 1580 | 25 |
| LTC-ISB-1300_1340_1390_1430_1480-PM-1265_1500-235-1383-35 | 1300, 1340, 1390, 1430, 1480 | PM | 1265 - 1500 | 235 | 1383 | 35 |
| LTC-ISB-1340_1390_1430_1480_1550-PM-1305_1605-300-1455-35 | 1340, 1390, 1430, 1480, 1550 | PM | 1305 - 1605 | 300 | 1455 | 35 |
| LTC-ISB-1300_1390_1480_1550_1615_1680-PM-1265_1725-460-1495-40 | 1300, 1390, 1480, 1550, 1615, 1680 | PM | 1265 - 1725 | 460 | 1495 | 40 |
| LTC-ISB-1480_1550-PM-1435_1605-170-1520-12 | 1480, 1550 | PM | 1435 - 1605 | 170 | 1520 | 12 |
| LTC-ISB-1340_1390_1430_1480_1550_1615-PM-1310_1640-330-1475-38 | 1340, 1390, 1430, 1480, 1550, 1615 | PM | 1310 - 1640 | 330 | 1475 | 38 |
| LTC-ISB-1300_1340_1390_1430_1480_1550-PM-1265_1605-340-1435-40 | 1300, 1340, 1390, 1430, 1480, 1550 | PM | 1265 - 1605 | 340 | 1435 | 40 |
| LTC-ISB-1430_1480_1550-PM-1410_1605-195-1508-19 | 1430, 1480, 1550 | PM | 1410 - 1605 | 195 | 1508 | 19 |
| LTC-ISB-1300_1340_1390-PM-1265_1420-155-1343-20 | 1300, 1340, 1390 | PM | 1265 - 1420 | 155 | 1343 | 20 |
| LTC-ISB-1390_1430_1480-PM-1355_1500-145-1428-19 | 1390, 1430, 1480 | PM | 1355 - 1500 | 145 | 1428 | 19 |
| LTC-ISB-1550_1615_1680-PM-1515_1725-210-1620-18 | 1550, 1615, 1680 | PM | 1515 - 1725 | 210 | 1620 | 18 |
| LTC-ISB-1300_1340-PM-1265_1365-100-1315-12 | 1300, 1340 | PM | 1265 - 1365 | 100 | 1315 | 12 |
| LTC-ISB-1390_1480_1550-PM-1340_1610-270-1475-20 | 1390, 1480, 1550 | PM | 1340 - 1610 | 270 | 1475 | 20 |
| LTC-ISB-1300_1390_1480-PM-1265_1500-235-1383-20 | 1300, 1390, 1480 | PM | 1265 - 1500 | 235 | 1383 | 20 |
| LTC-ISB-1390_1480_1550_1615_1680-PM-1340_1725-385-1533-32 | 1390, 1480, 1550, 1615, 1680 | PM | 1340 - 1725 | 385 | 1533 | 32 |