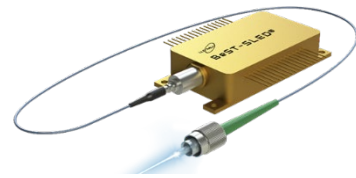


BeST-SLED®

Optical Spectral Engine (OSE) - Product Brief



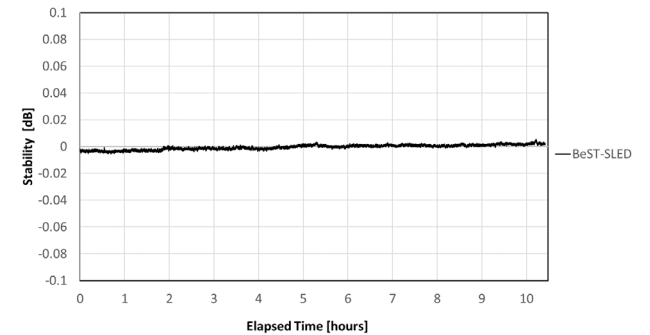
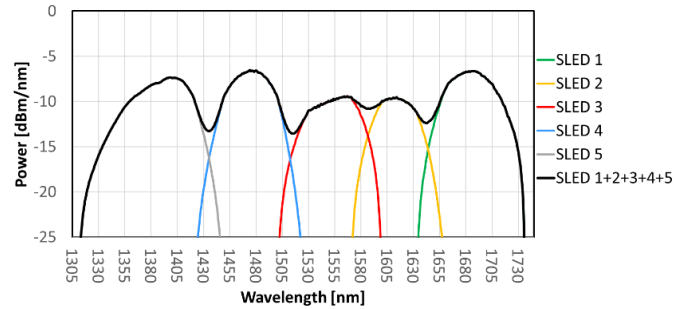
Description: BeST-SLED® Optical Spectral Engine: 5 SLEDs: 1390nm, 1480nm, 1550nm, 1615nm, 1680nm, PM Fiber, Spectral Coverage: 1340nm-1725nm, FWHM: 385nm, CW: 1533nm, Fiber Output Power > 32mW

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. The light source has an integrated Thermoelectrical Cooler (TEC) and thermistor with external readout that permits to have complete temperature control.

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. These compact, high-bandwidth modules provide the optimum power and highest optical density bandwidth in a single fiber system in the industry. This brings exceptional flexibility and usability to the sensing marketplace.

The BeST-SLED® product lines can be spectrally tailored to suit specific application needs. This provides exceptional flexibility and usability, making these sources ideal for:

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



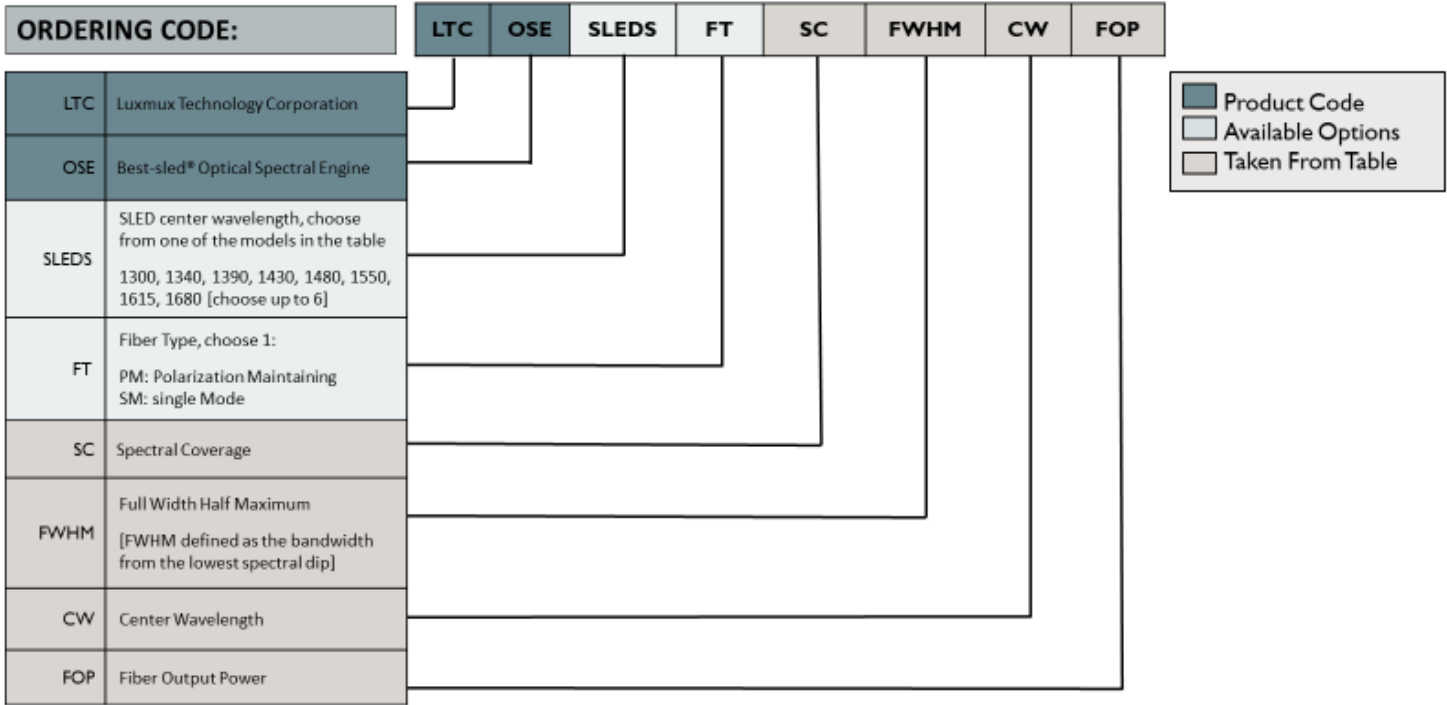
KEY FEATURES

- 5 Superluminescent Diodes (SLEDs) in a single package
- Fiber Coupled Output Power > 32mW
- Bandwidth FWHM > 385nm, @10dB > 405nm
- The best combination of power and spectrum width in multi-SLED modules
- Each SLED comes with a built-in independent monitor photodiode
- Internally Optimized for maximum coupling efficiency with PM1550-XP Fiber
- Light Output: FC/APC Connector (Optional FC/PC or SMA)
- CW operation (Excellent Stability < 0.1dB)
- Spectrum Ripple:
 - Standard Performance < 0.45dB
 - Enhanced Performance < 0.30dB
 - High Performance < 0.15dB
- RIN typical -130dB/Hz
- Operating temperature -40°C to 60°C

PERFORMANCE HIGHLIGHTS

| Product | Conditions | CWL [nm] | I _{OP} [mA] | P [mW] | B _{FWHM} [nm] | B _{@10dB} [nm] |
|----------------|---|----------|----------------------|--------|------------------------|-------------------------|
| SLED 1 | CW T _{OP} = 25°C T _{TEC} = 21°C | 1680 | 400 | 7 | 55 | 85 |
| SLED 2 | | 1615 | 300 | 5 | 45 | 70 |
| SLED 3 | | 1550 | 500 | 6 | 55 | 85 |
| SLED 4 | | 1480 | 350 | 7 | 50 | 75 |
| SLED 5 | | 1390 | 400 | 7 | 65 | 110 |
| SLED 1+2+3+4+5 | | 1533 | 1950 | 32 | 385 | 405 |





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