**Manufacturer:**
VIAVI

**Product Name:**
1310/1550nm SLED source SMF FC/APC

**Manufacturer Part Number:**
MSRC-C23500SL-M100-MFA-MO

Click here for more details on the 1310/1550nm SLED source SMF FC/APC

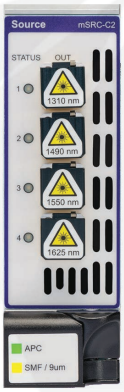
Data Sheet

# VIAVI

## Super-Luminescent Light Emitting Diode (SLED) Laser Source Module

Part of the MAP Series General Purpose mSRC-C2 family

The Multiple Application Platform (MAP) broadband light source with Super-luminescent Light Emitting Diode lasers (SLED) are stabilized, high power, fixed wavelength emitters with coverage of the key telecom wavelengths of 1310, 1490, 1550 and 1625nm.




VIAVI offers a wide range of SLED sources as part of the general purpose light source (mSRC) module in the MAP portfolio. The SLEDs are offered at nominal wavelengths of 1310nm, 1490nm, 1550nm and 1625nm, with both high power and standard power variants.

### Functional Description

VIAVI SLEDs are highly stable sources and offer (figure 1) ±0.005 dB for standard power configuration and ±0.01 dB for high-power configuration. Optical isolators inside the module remove any interference effects from external sources of reflections.

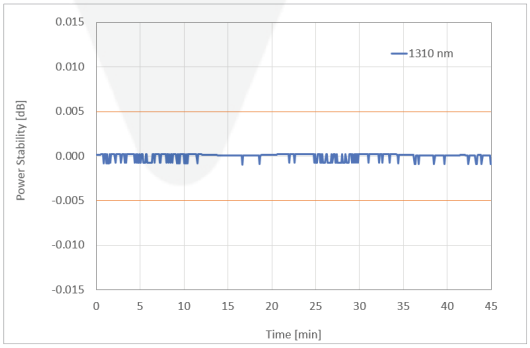



Figure 1: VIAVI High Power SLED Laser Power Stability

### Key Features

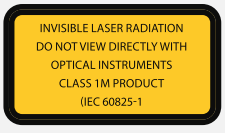
- 1310nm, 1490nm, 1550nm and 1625nm wavelengths
- High power and standard power versions
- Available in individual and multiplexed versions
- Internal optical isolator to reduce dependence on external reflections

### Applications

- Broadband sources for use with optical spectrum analyzers
- CWDM component measurements
- General purpose and interferometry applications

### Compliance

- The MAP series mSRC-C2 module, when installed in a MAP chassis, complies to CE, CSA/ UL/IEC61010–1, LXI Class C requirements, meets the requirements of Class 1M in standard IEC 60825–1 (2014), and complies with 21 CFR 1040.1 except deviations per Laser Notice No. 50



Learn More

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SLEDs have the advantages of LEDs and laser sources, with broadband output and high power (figures 2-4)

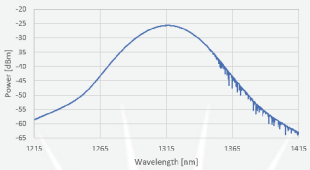

Figure 2: 1310nm SLED Spectral Width

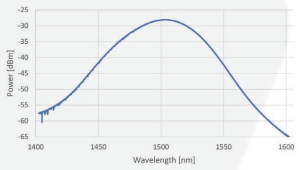

Figure 3: 1490nm SLED Spectral Width

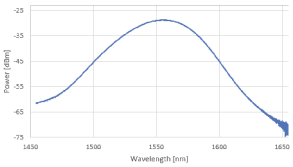

Figure 4: 1550nm SLED Spectral Width

An intuitive graphic user interface (GUI) is optimized for use in either a laboratory or a manufacturing environment. Efficient transition between summary and detailed views allows users to operate at a system level or access the full power of a module.

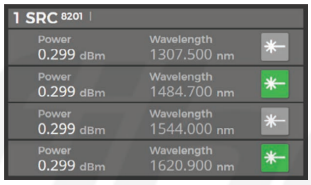

Figure 5: mSRC-C2 MAP-300 summary view GUI

## Options and Configurations

The VIAVI SLED sources are offered in standard power and high-power versions.

| SLED Variant | Available Configurations |
|---|---|
| High Power SLED | Single Output 1310 nm |
| | Dual Output 1310 nm |
| Standard Power SLED | Individual Output 1310 nm |
| | Individual Output 1550 nm |
| | Individual Output 1310 and 1550 nm |
| | Individual Output 1310, 1490, 1550 and 1625 nm |
| | Multiplexed Output 1310 and 1550 nm |
| | Multiplexed Output 1310, 1490, 1550 and 1625 nm |

## Chassis and Modular Family

The VIAVI Multiple Application Platform (MAP) is a modular, rack mountable or benchtop, optical test and measurement platform with chassis' that can host 2, 3 or 8 application modules. The LightDirect family of modules are characterized by their simple control and single function nature. Individually or together they form the foundation of a diverse array of optical test applications. The web enabled multiuser interface is simple and intuitive. LXI compliant with a full suite of SCPI based automation drivers and PC based management tools, the VIAVI MAP is optimized for both the lab to manufacturing environments.

Light Direct

The mSRC is part of the LightDirect module family. Alongside the many other modules, such as optical attenuators, polarization scramblers, power meters, and spectrum analyzers, the MAP series is the ideal, modular platform for photonic system and module testing.

The mSRC-C2 is compatible with all current MAP-300 and MAP-200 chassis.

Learn More

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## Specifications

| Single mode Source (mSRC-C21) | Standard Power SLED Sources (mSRC-C2yyyySL or mSRC-C2yyyySLX) | | | | | |
|---|---|---|---|---|---|---|
| Center Wavelength[2] | 1310 nm | 1490 nm | 1550 nm | 1625 nm | 1310/1550 nm mux3 | 1310/1490/1550/1625 nm mux3 |
| Spectral Width (FWHM)[4, 5] | > 20 nm | > 30 nm | | | As per individual specifications | |
| Output Optical Power[3, 6] | 0 dBm | | | | ≥ -4 dBm | ≥ -8 dBm |
| Optical Power Stability for 15 min[3] | ±0.005 dB | | | | ±0.01 dB | |
| Optical Power Stability for 3 hours[3] | ±0.005 dB | | | | ±0.01 dB | |
| Spectral Ripple (RB = 0.1nm) | 0.2 dB | | | | | |
| TEC Stabilized | Yes | | | | | |
| Wavelength Tolerance | ±20 nm | | | | | |
| Optical Power Tuning Range[7] | ≥ 10 dB | | | | | |
| Power Control Mode | Constant Current or Constant Power | | | | | |
| Modulation[8] | 0.15 to 2.0 kHz | | | | | |
| Modulation Accuracy | ±0.5 Hz | | | | | |
| Fiber Type | Single Mode Fiber | | | | | |
| Connector Type | FC/APC | | | | | |

1. All measurements taken after a minimum of 30 minutes warm-up time.
2. Peak wavelength defined as per IEC 61280-1-3 2010 clause 3.1.3. Measured at room temperature.
3. Combined output power. Power measured with any 1 laser on full power at a time.
4. Measured at full power at controlled environment of ΔT = ±1 °C, Constant Current mode with PC connector (MM) direct to power meter.
5. Measured with a resolution bandwidth of 0.06 nm.
6. Guarantee of 0 dBm excluding connector losses for non-muxed variant.
7. From maximum power down.
8. Modulation duty cycle is fixed at 50%. Modulation depth is fixed at 100%.

| Single mode Source mSRC-C21 | SLED High Power Source (mSRC-C23yyyHS) |
|---|---|
| Center Wavelength[2] | 1310 nm |
| Spectral Width (FWHM)[3] | < 60 nm |
| Output Optical Power[3] | ≥ 10 dBm |
| Optical Power Stability for 15 min[3] | ±0.01 dB |
| Spectral Ripple (RB = 0.1nm) | 0.40 dB |
| Optical Power Tuning Range | ≥ 10 dBm |
| Modulation | 0.15 to 2 kHz |
| Modulation Setting Resolution | 1 Hz |
| Modulation Accuracy | ±0.5 Hz |
| Power Control Mode | Constant Current or Constant Power |
| TEC Stabilized | Yes |
| Wavelength Tolerance | ±10 nm |
| Fiber Type | Single Mode Fiber |
| Connector Type | FC/APC |

1. All measurements taken after a minimum of 30 minutes warm-up time.
2. Defined as per IEC 61280-1-3 2010 clause 8.2.
3. Measured at constant temperature of 23±5°C, at full power.

### General Specifications

| Parameter | Specification |
|---|---|
| Operating Temperature | 10 to 40 °C (50 to 104 °F) |
| Storage Temperature | -30 to 60 °C (-22 to 140 °F) |
| Operating Humidity | Maximum 85% Relative Humidity, non-condensing from 10 to 40 °C/50 to 104 °F |
| Dimensions (W x H x D) | 4.06 x 13.26 x 37.03 cm (1.6 x 5.22 x 14.58 in) |
| Weight | 1.3 kg (2.86 lb) |

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## Ordering Information

| Part Number | SLED Single Mode Source | | |
|---|---|---|---|
| MSRC-C23500SL-M100-MFA | Standard SLED | Individual Output | 1310/1550nm standard power SLED source SMF with FC/APC Connectors |
| MSRC-C23456SL-M100-MFA | | | 1310/1490/1550/1625nm standard power SLED source SMF with FC/APC Connectors |

## Accessories

| Accessories (Optional) | Product and description | |
|---|---|---|
| **Inspection and cleaning tool** | CleanBlastPRO | The patented VIAVI Solutions® CleanBlast fiber end-face cleaning system provides a fast, effective, and cost-efficient solution for removing dirt and debris from connectors in most common applications. |
| | FiberChek probe microscope | One-button FiberChek Probe delivers a reliable, fully autonomous, handheld inspection solution for every fiber technician. |
| | P5000i fiber microscope | Automated Fiber Inspection & Analysis Probe provides PASS/FAIL capability to PC, laptops, mobile devices and VIAVI test solutions. |
| **Replacement Parts** | Mating sleeves | AC500; FC/PC-FC/PC Universal Connector Adapter |
| | | AC501; FC/PC-SC/PC Universal Connector Adapter |
| | | AC502; FC/APC-FC/APC Universal Connector Adapter |
| | | AC503; FC/APC-SC/APC Universal Connector Adapter |