

# OSICS DFB LANWDM

## Distributed Feedback Laser

The OSICS DFB LANWDM modules are based on high-performance distributed feedback laser diodes.

### Specifications

|   |                                  | SMF                    | PM13              |
|---|----------------------------------|------------------------|-------------------|
| <b>Models</b>                             | Channel 1                        | 1295.56 nm / 231.4 THz |                   |
|   | Channel 2                        | 1300.05 nm / 230.6 THz |                   |
|   | Channel 3                        | 1304.58 nm / 229.8 THz |                   |
|   | Channel 4                        | 1309.14 nm / 229.0 THz |                   |
| <b>Wavelength</b>                         | Channel center                   | Grid matched           |                   |
|   | Tuning range*1                   | 1.6 nm (1.8 nm typ.)   |                   |
|   | Accuracy*2                       | ±0.03 nm               |                   |
|   | Stability over 1 hour*2,*3,*4    | ±0.005 nm              |                   |
|   | Stability over 24 hours*2,*3,*4  | ±0.005 nm typ.         |                   |
| <b>Power</b>                              | Maximum                          | 10 mW                  |                   |
|   | Stability over 1 hour*2,*3,*4    | ±0.01 dB               |                   |
|   | Stability over 24 hours*2,*3,*4  | ±0.01 dB typ.          |                   |
|   | Optical Isolation                | > 30 dB                |                   |
|   | RIN*5                            | < -130 dB/Hz           |                   |
| <b>Spectrum</b>                           | Laser line width                 | < 10 MHz               |                   |
|   | SMSR*2                           | > 30 dB (40 dB typ.)   |                   |
| <b>Modulation</b>                         | TTL                              | Internal               | 1 Hz to 890 kHz   |
|   |                                  | External               | 16 Hz to 890 kHz  |
|   | Analog (external / front panel)  |                        | 150 Hz to 150 MHz |
|   | SBS Suppression (internal)*6     | Waveform               | sine              |
|   |                                  | Freq.range             | 10 kHz to 100 kHz |
|   | Modulation depth                 | 0 to 15%               |                   |
| <b>Interfaces on Module Front Panel*7</b> | Enable key with status LED       | Power up laser         |                   |
|   | Optical fiber                    | SMF                    | PM13              |
|   | Fiber alignment to connector key | n/a                    | Slow axis         |
|   | PER                              | n/a                    | >17 dB            |
|   | Optical connector                | FC/APC narrow key      |                   |
|   | Electrical Connector             | Coaxial SMB, 50 Ω      |                   |
| <b>Others</b>                             | Laser safety                     | Class 1 M              |                   |
|   | Dimensions (WxHxD)               | 35 x 128 x 230 mm      |                   |
|   | Weight                           | 1.1 kg                 |                   |

### Key Features

- External & Internal LF Modulation
- Stabilized lasers for LR4 & ER4 testing of Silicon Photonics chips
- +10 dBm output power from a single mode fiber with a stability of 0.01 dB over 1 hour
- 30 pm wavelength accuracy and a stability of 5 pm over one hour
- Wavelength tuning over 1.8 nm (typ.) with the internal temperature control



- \*1: Location of channel center: lower boundary of the range + 0.4 nm < channel center < upper boundary of the range - 0.4 nm.  
 \*2: After warm-up and at maximum power.  
 \*3: At a constant temperature.  
 \*4: Measured with an APC terminated jumper on a powermeter.  
 \*5: RIN within the range 100 MHz–20 GHz measured at 10 dBm output power with RBW = 30 kHz.  
 \*6: SBS = Stimulated Brillouin Scattering.  
 \*7: See OSICS Mainframe Data Sheet for details on OSICS common specifications and interfaces on the rear panel.

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