



Constellation Series

Single Frequency Narrow Line Width Lasers

Plug & Play Modules

The **DL-BF9C** Constellation product series uses DenseLight's proprietary 14-pin butterfly package manufacturing process, enabling improved performance of the external cavity laser to give high PER performance, high stability line width, low RIN < -155 dB/Hz & low phase noise performance

This series features a narrow linewidth of < 50 KHz, & < 200 KHz. option & a minimum output power of 10 mW. The Constellation ILM is suitable for embedded designs or stand alone uses in a wide range of communication and sensing application. When using the Constellation series, the fiber optic systems will operate at a premium performance level

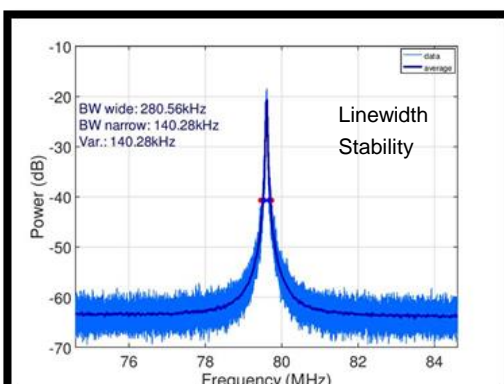
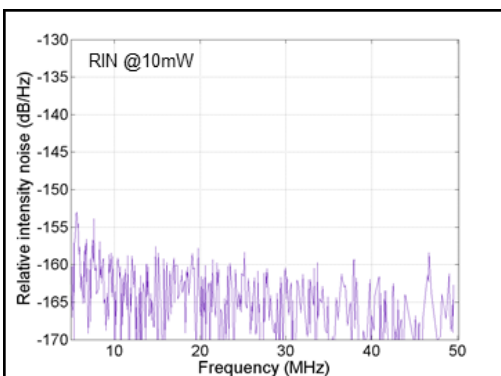


APPLICATIONS

- Acoustic Sensing
- Defence and Security
- Oil & Gas
- LIDAR
- Interferometric Sensing
- Metrology
- Coherent communication

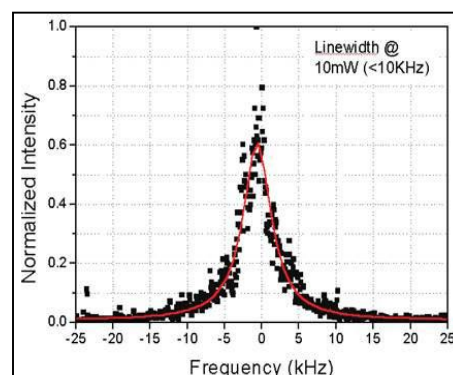
FEATURES & PERFORMANCE

- Ultra-Narrow Linewidth < 50 KHz & < 200 KHz options.
- Excellent RIN < -155 dB/Hz
- High Frequency stability within ± 1 pm after 15 minutes warm-up
- Excellent Typical SMSR
- Typical PER > 18 dB (For PMF Option)
- CW > 10 mW
- Mode-Hop-Free over 0°C to 50°C
- Integrated optical isolator, Proprietary Laser Driver and temperature controller
- Over-temperature protection and internal PCB temperature monitor

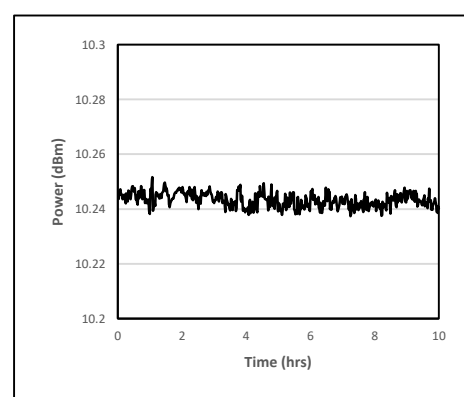


PRODUCT PERFORMANCE

Optical Parameters	Min	Max	Units
Output Power	10	-	mW
Centre Wavelength	1548	1552	nm
PER (PMF)	15		dB
Power Stability (8 hrs)	-0.05	+0.05	dB
Operating Temperature Range	0	50	Deg. C
Optical Isolation	45		dB



Noise Performance	Frequency Range		Typical Performance
RIN (Relative Intensity Noise)	0 Mhz	0.5 Mhz	-145 dB/Hz
	0.5 Mhz	10 Mhz	-150 dB/Hz
	10 Mhz	50 Mhz	-160 db/Hz
Phase Noise	10 Hz		190 uRad/sqrt-Hz
	200 Hz		22 uRad/sqr-Hz



PRODUCT OFFERING

Output Fiber Type	Line Width $\Delta\lambda$ (kHz)	Ordering Information
SM	< 50	DL-BF9C-CLS101B-S1550-LW050
	< 200	DL-BF9C-CLS101B-S1550-LW200
PM	< 50	DL-BF9C-CLS101B-FP-S1550-LW050
	< 200	DL-BF9C-CLS101B-FP-S1550-LW200

SPECIFICATIONS

- Dimension: L120 x W93 x H36.5 mm
- Enclosure: Metal Case
- Cooling: Air-Cooled
- Optical Output: Receptacle
- Connector Type: FC/APC
- Electronic Interface: 8-pin terminal block
- Power Supply: 5V DC