

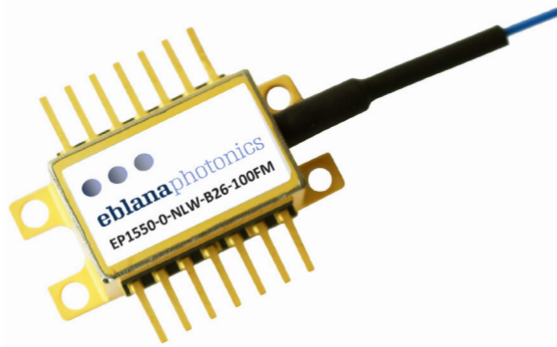
0.6 - 1.2  $\mu\text{m}$  1.2 - 1.8  $\mu\text{m}$  1.8 - 2.4  $\mu\text{m}$

# 1550 nm NLW LASER

Model EP1550-0-NLW-B-100



**eblanaphotonics**



## MONOLITHIC COHERENCE

Eblana Photonics EP1550-0-NLW-B laser diode features an ultra-narrow linewidth making it ideal for coherent comms and metrology applications. Eblana's Discrete-Mode (DM) technology enables excellent SMSR and tunability at a highly competitive price.

Fig. 1 Typical linewidth measurement at 25 °C

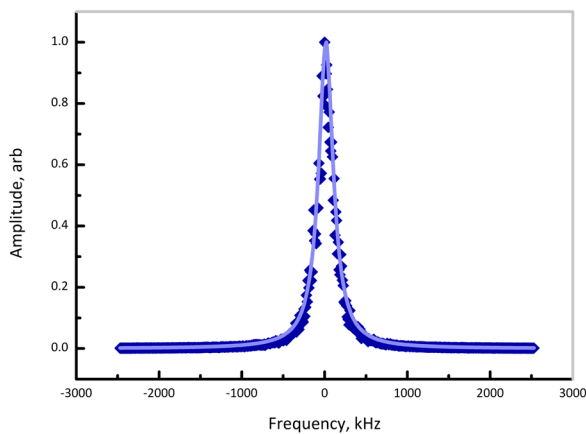
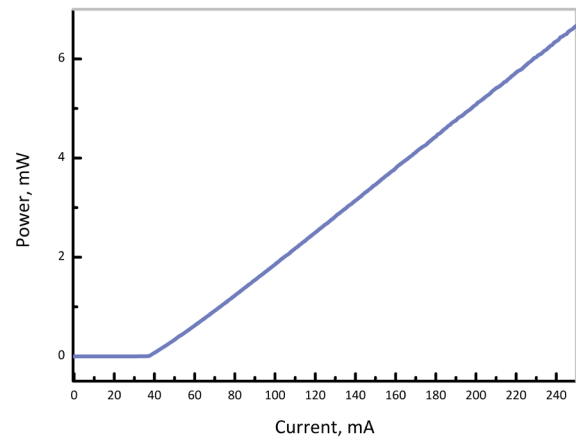


Fig. 2 Output power as a function of bias current



## Electro-Optical Characteristics\* ( $T_{\text{SUB}} = 25\text{ }^{\circ}\text{C}$ , $I_{\text{OP}} = 200\text{ mA}$ )

Parameter	Symbol	Min	Typ	Max	Unit
Available Wavelength Range	$\lambda$	1547	1550	1553	nm
Wavelength Tolerance	$\lambda_{\text{spec}}$	$\lambda - 1$	$\lambda$	$\lambda + 1$	nm
Output Power in Fiber	$P_f$	4.5	6.5	-	mW
Slope Efficiency	SE	0.03	0.04	-	mW/mA
Threshold Current	$I_{\text{th}}$	-	35	45	mA
Side Mode Supression Ratio	SMSR	40	50	-	dB
Optical Linewidth	$\Delta f$	-	100	-	kHz
Temperature Tuning Coefficient	$T_{\lambda}$	-	0.10	-	nm/ $^{\circ}\text{C}$
Current Tuning Coefficient	$I_{\lambda}$	-	3	-	pm/mA
Thermistor Resistance	$R_T$	9.5	10	10.5	k $\Omega$
$\beta$ Coefficient (25 $^{\circ}\text{C}/85^{\circ}\text{C}$ )	$\beta$	-	3892	-	K

\*CW bias unless otherwise stated



# Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Operating Current	$I_{op}$	-	300	mA
Forward Voltage	$V_f$	-	2.5	V
TEC Current	$I_{TEC}$	-	1.2	A
TEC Voltage	$V_{TEC}$	-	3.3	V
Reverse Voltage LD	$V_r$	-	2	V
Reverse Voltage PD	$V_{rev}$	-	N/A	V
Case Temperature*	$T_{Case}$	-20	65	°C
Storage Temperature	$T_{Storage}$	-40	85	°C

\*For  $T_{sub} < 25\text{ °C}$ , Max Case Temperature should be derated to  $T_{Case,Max} = T_{sub} + 40\text{ °C}$

## PACKAGING

The EP1550-0-NLW-B product series is offered in a 14-pin Butterfly package, shown in Figure 3 - Inquire for other packaging options. The standard package pinout is shown below in Figure 4, variations may be requested.

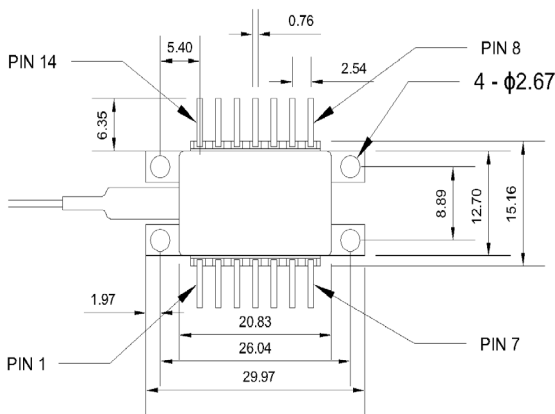


Fig. 3 Schematic of 14-pin butterfly

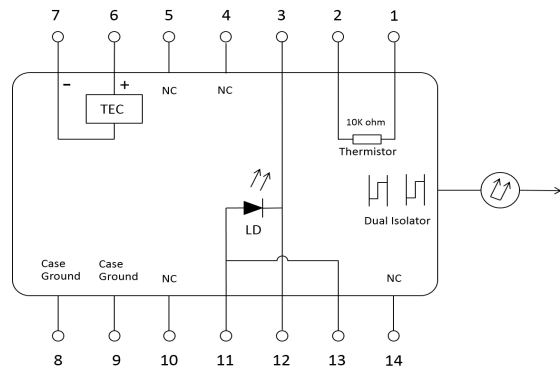
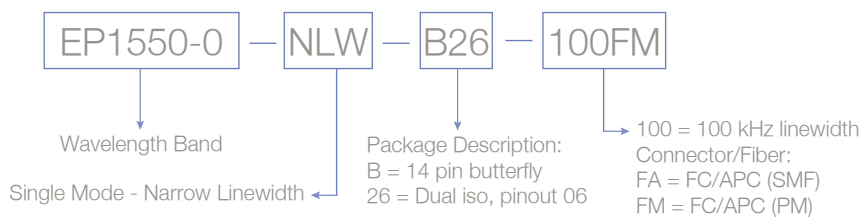


Fig. 4 Standard "Pinout 26" option

## HOW TO ORDER

Construct your part number using the following example and email your order to [sales@eblanaphotonics.com](mailto:sales@eblanaphotonics.com), or call +353 1 675 3220. Eblana's sales team are delighted to answer any questions you may have.



### Laser Safety

This is a Class 3R Laser Product as defined by International Standard IEC 60825-1, Edition 3. Invisible Laser radiation is emitted from the end of the fiber or connector. Avoid direct eye exposure to the beam. Ensure appropriate Personal Protective Equipment (PPE) is worn. Laser safety is based on specifications stated in this brochure. Laser safety labels are not attached to the module due to space limitations but instead are affixed to the outside of the shipping carton. If laser is modified, classification must be re-evaluated by user.

