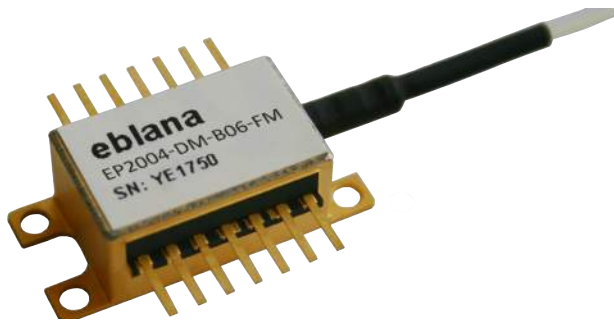


# 2004nm DM LASER

EP2004-DM-B

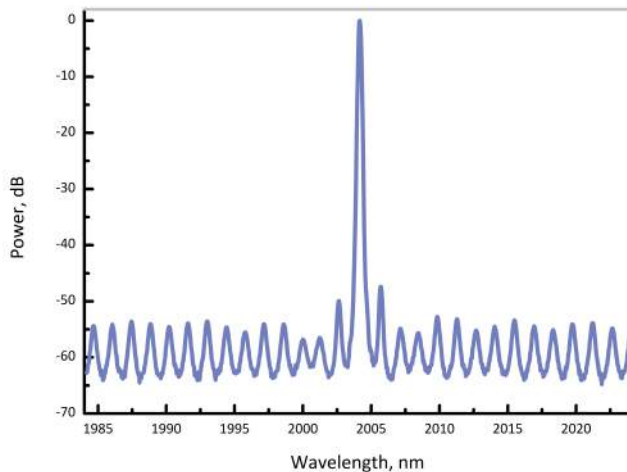


**eblana**photonics

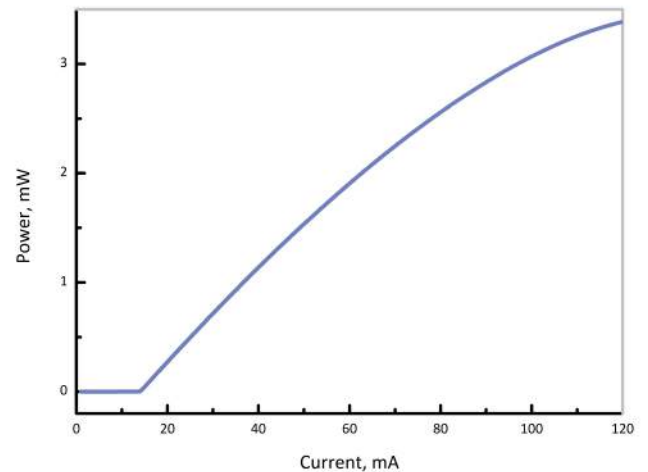


## SUPERIOR CO<sub>2</sub> SENSING

Eblana Photonics EP2004-DM-B laser diode, available in a range from 1950-2150nm, has been developed for precision sensing of Carbon Dioxide. Eblana's Discrete-Mode (DM) technology enables excellent SMSR performance and mode-hop free tuning at a highly competitive price.



Optical Spectrum at 25°C



Output power vs bias current characteristics

## ELECTRO-OPTICAL CHARACTERISTICS\* (T<sub>SUB</sub> = 25° C)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT
Available Wavelength Range	$\lambda$	1950	2004	2140	nm
Wavelength Tolerance	$\lambda_{\text{spec}}$	$\lambda - 1$	$\lambda$	$\lambda + 1$	nm
Side Mode Supression Ratio	SMSR	30	40	-	dB
Threshold Current	$I_{\text{th}}$	-	20	40	mA
Output Power in fiber	$P_f$	-	2.5	-	mW
Optical linewidth	$\Delta f$	-	-	2	MHz
Temperature Tuning Coefficient	$T_\lambda$	-	0.1	-	nm/°C
Current Tuning Coefficient	$I_\lambda$	-	3	-	pm/mA
Slope Efficiency	SE	0.02	0.03	-	mW/mA
Thermistor Resistance	$R_T$	9.5	10	10.5	k $\Omega$
Thermistor Temp. Coefficient	C	-	-4.4	-	%/°C

\*CW bias unless otherwise stated

©Eblana Photonics Series 2004-DM-B Rev 2.02

**Cybel**

1195 Pennsylvania Ave. Bethlehem, PA 18018 USA  
Sales: [contact@cybel-llc.com](mailto:contact@cybel-llc.com)

Phone: ( 610 ) 691 7012  
Website: [www.cybel-llc.com](http://www.cybel-llc.com)

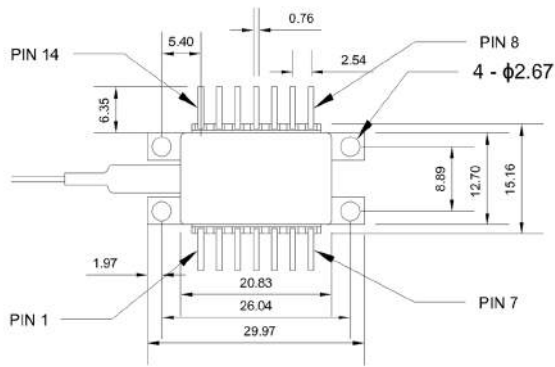
# ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	MIN	MAX	UNIT
Forward Current	$I_f$	-	140	mA
Forward Voltage	$V_f$	-	1.6	V
TEC Current	$I_{TEC}$	-	1.2	A
Reverse Voltage LD	$V_r$	-	2	V
Case Temperature*	$T_{Case}$	-20	65	°C
Chip Submount Temperature	$T_{Sub}$	0	50	°C
Storage Temperature	$T_{storage}$	-40	85	°C

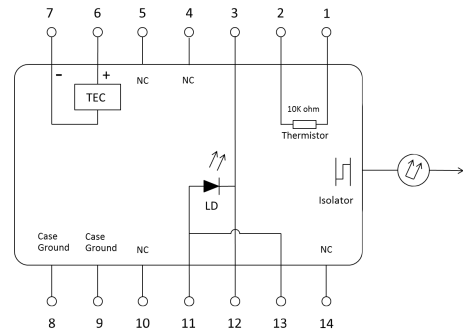
\*For  $T_{sub} < 25^{\circ}C$ , Max Case Temperature should be derated to  $T_{Case,Max} = T_{sub} + 40^{\circ}C$

## PACKAGING

The EP2004-DM-B product series is offered in a 14-pin Butterfly package - Inquire for other packaging options. The standard package pinout is shown below, variations may be requested. mPD not included as standard.



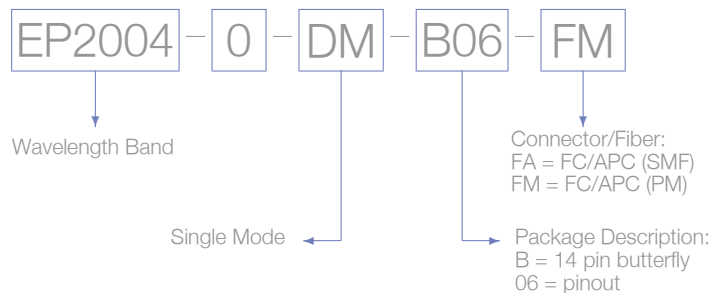
14-pin butterfly schematic



Standard "Pinout 06" option

## HOW TO ORDER:

Construct your part number using the following example and email your order to [contact@cybel-llc.com](mailto:contact@cybel-llc.com).



### Laser Safety

This is a Class 3R Laser Product as defined by International Standard IEC 60825-1, Edition 2. Invisible Laser radiation is emitted from the end of the fiber or connector. Avoid direct eye exposure to the beam. Laser safety labels are not attached to the module due to space limitations but instead are affixed to the outside of the shipping carton.

©Eblana Photonics 2015. Eblana Photonics Reserves the right to amend this document at any time, without prior warning. ©Eblana Photonics Series 2004-DM-B Rev 2.02