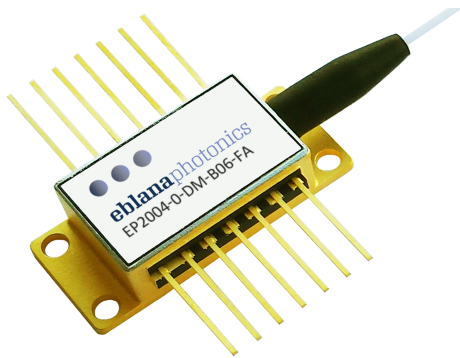


2004nm DM LASER

EP2004-DM-B

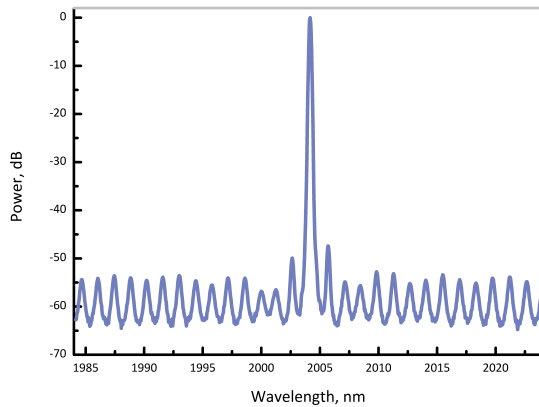


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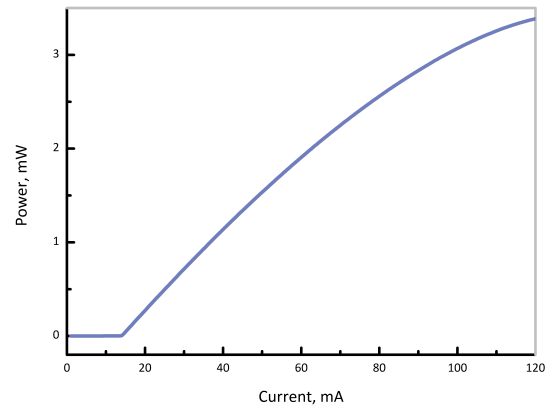


SUPERIOR CO₂ SENSING

Eblana Photonics EP2004-DM-B laser diode 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.



Typical optical spectrum at 25° C



Output power as a function of bias current

ELECTRO-OPTICAL CHARACTERISTICS* (T_{SUB} = 25° C)

| PARAMETER | SYMBOL | MIN | TYP | MAX | UNIT |
|--------------------------------|-------------------------|---------------|-----------|---------------|------------|
| Available Wavelength Range | λ | 1970 | 2004 | 2051 | nm |
| Wavelength Tolerance | λ_{spec} | $\lambda - 1$ | λ | $\lambda + 1$ | nm |
| Side Mode Supression Ratio | SMSR | 30 | 40 | - | dB |
| Threshold Current | I_{th} | - | 20 | 40 | mA |
| Output Power in fiber | P_f | - | 3 | - | mW |
| Optical linewidth | Δf | - | - | 2 | MHz |
| Temperature Tuning Coefficient | T_λ | - | 0.1 | - | nm/°C |
| Current Tuning Coefficient | I_λ | 3 | 7 | - | pm/mA |
| Slope Efficiency | SE | 0.02 | 0.03 | - | mW/mA |
| Thermistor Resistance | R_T | 9.5 | 10 | 10.5 | k Ω |
| Thermistor Temp. Coefficient | C | - | -4.4 | - | %/°C |

*CW bias unless otherwise stated

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Kokyo

株式会社 光響

Email : info@symphotony.com
Web : <https://www.symphotony.com/>

www.eblanaphotonics.com

Sales@eblanaphotonics.com

Dublin, Ireland

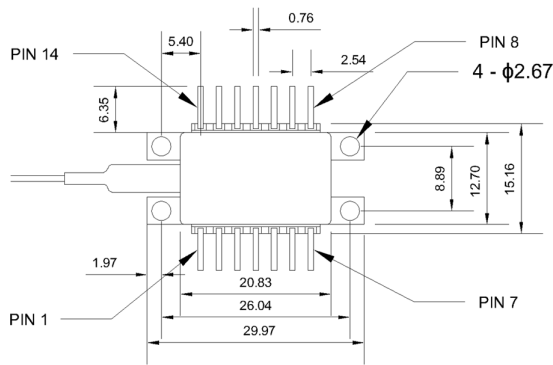
ABSOLUTE MAXIMUM RATINGS

| 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 |

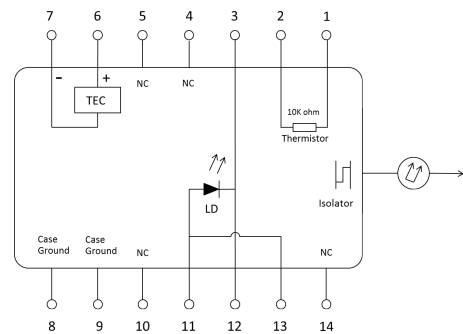
*For $T_{sub} < 25^{\circ}C$, Max Case Temperature should be derated to $T_{Case,Max} = T_{sub} + 40^{\circ}C$

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.



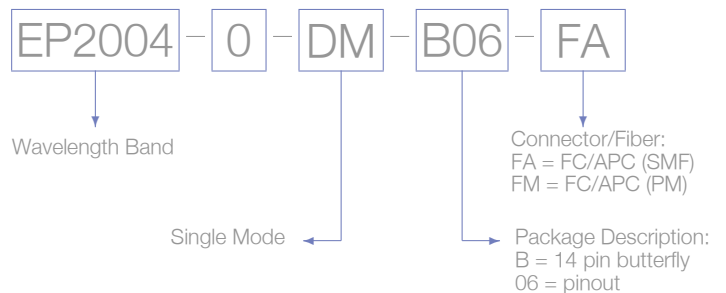
14-pin butterfly schematic



Standard "Pinout 06" option

HOW TO ORDER

Construct your part number using the following example and email your order to sales@eblanaphotonics.com, or call +353 1 675 3228.



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. Laser safety labels are not attached to the module due to space limitations but instead are affixed to the outside of the shipping carton.

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