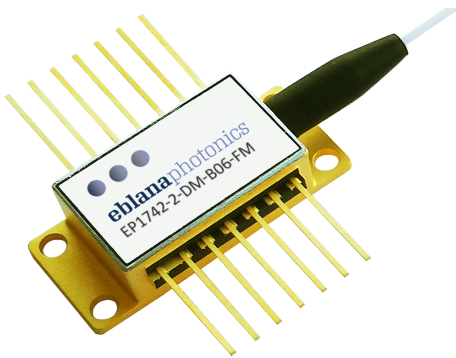


# 1742nm DM LASER

EP1742-DM-B

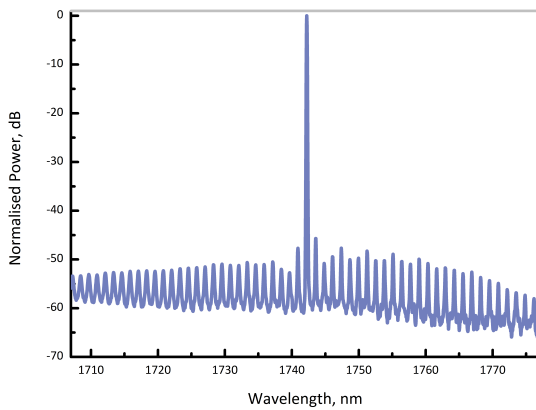


**eblana**photonics

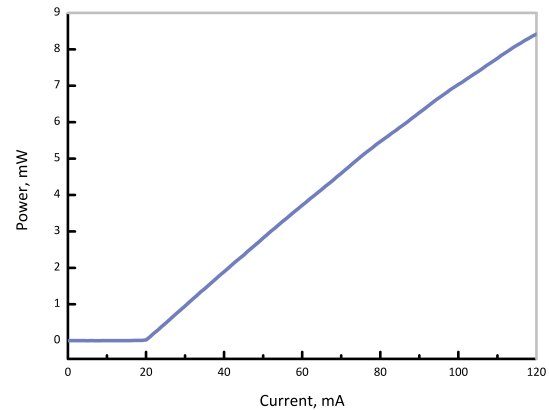


## ACCURATE HCL MONITORING

Eblana Photonics EP1742-DM-B laser is a new product addition, in the range from 1735-1770nm, enabling sensitive detection of Hydrogen Chloride (HCl). Eblana's Discrete-Mode (DM) technology enables mode-hop free tunability and excellent SMSR, while ensuring cost effectiveness.



Typical optical spectrum at 25° C



Output power as a function of bias current

## ELECTRO-OPTICAL CHARACTERISTICS\* ( $T_{SUB} = 25^{\circ} C$ )

| PARAMETER                      | SYMBOL           | MIN           | TYP       | MAX           | UNIT       |
|--------------------------------|------------------|---------------|-----------|---------------|------------|
| Available Wavelength Range     | $\lambda$        | 1735          | 1742.2    | 1770          | nm         |
| Wavelength Tolerance           | $\lambda_{spec}$ | $\lambda - 1$ | $\lambda$ | $\lambda + 1$ | nm         |
| Side Mode Suppression Ratio    | SMSR             | 30            | 40        | -             | dB         |
| Threshold Current              | $I_{th}$         | -             | 20        | 25            | mA         |
| Output Power in fiber          | $P_f$            | 3             | 5         | -             | mW         |
| Optical linewidth              | $\Delta f$       | -             | -         | 2             | MHz        |
| Temperature Tuning Coefficient | $T_{\lambda}$    | 0.07          | 0.1       | -             | nm/°C      |
| Current Tuning Coefficient     | $I_{\lambda}$    | 10            | 15        | -             | pm/mA      |
| Slope Efficiency               | SE               | 0.05          | 0.08      | -             | 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 1742-DM-B Rev 2.1



**eblana**photonics

[www.eblanaphotonics.com](http://www.eblanaphotonics.com)

[Sales@eblanaphotonics.com](mailto:Sales@eblanaphotonics.com)

Dublin, Ireland

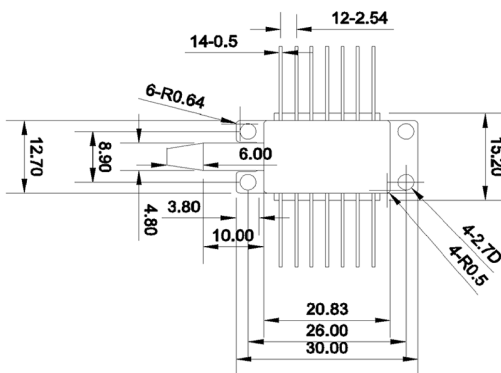
# ABSOLUTE MAXIMUM RATINGS

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

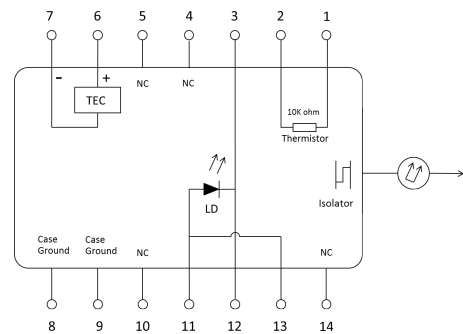
\*For  $T_{sub} < 25^{\circ}C$ , Max Case Temperature should be derated to  $T_{Case,Max} = T_{sub} + 40^{\circ}C$

## PACKAGING

The EP1742-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.



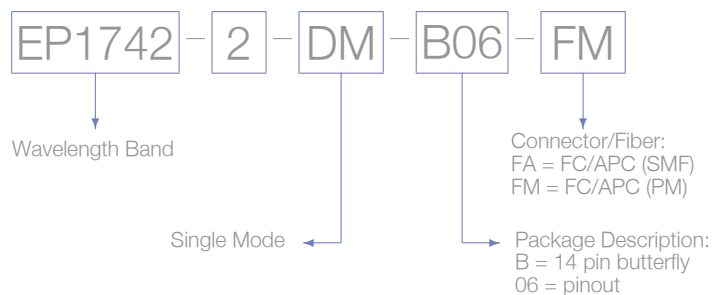
14-pin butterfly schematic



Standard "Pinout 06" option

## HOW TO ORDER

Construct your part number using the following example and email your order to [sales@eblanaphotonics.com](mailto: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.

©Eblana Photonics 2016. Eblana Photonics Reserves the right to amend this document at any time, without prior warning. ©Eblana Photonics Series 1742-DM-B Rev 2.1

