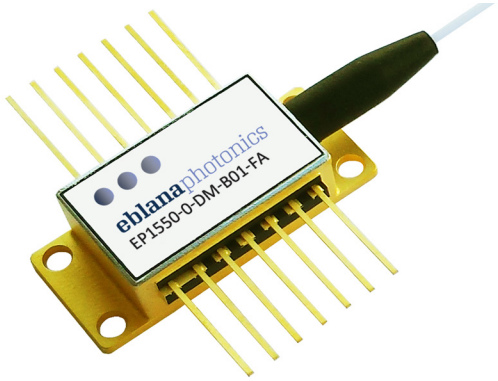
0.6 - 1.2 µm 1.2 - 1.8 µm 1.8 - 2.4 µm

# 1550 nm DM LASER

## Model EP1550-0-DM-B

eblanaphotonics




## ADVANCED PERFORMANCE

Eblana Photonics EP1550-0-DM-B laser diode, available in the 1533-1562 nm range, is the perfect choice for telecoms applications and LIDAR. Eblana's Discrete-Mode (DM) technology platform enables DFB-like performance at a more competitive price.

Fig. 1 Typical optical spectrum at 25 ˚C

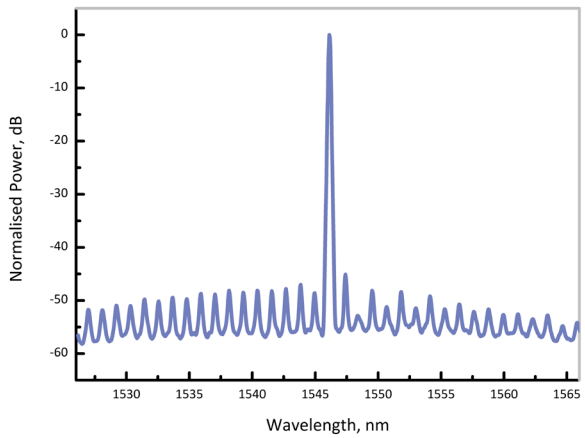
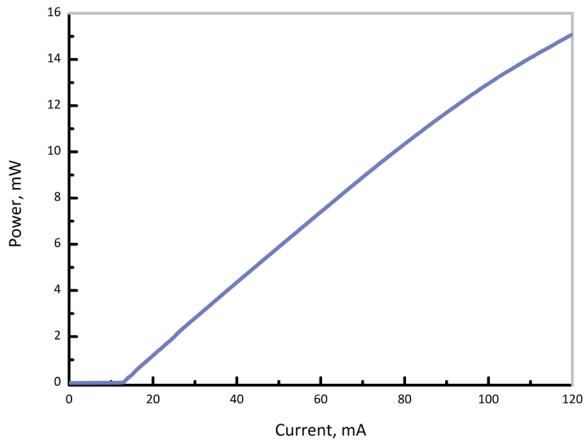



Fig. 2 Output power as a function of bias current




## Electro-Optical Characteristics* ($T_{SUB}$ = 25 ˚C, $I_{OP}$ = 80 mA )

| Parameter | Symbol | Min | Typ | Max | Unit |
|---|---|---|---|---|---|
| Available Wavelength Range | λ | 1533 | 1550 | 1562 | nm |
| Wavelength Tolerance | $\lambda_{spec}$ | λ - 1 | λ | λ + 1 | nm |
| Output Power in Fiber | $P_f$ | 6 | 10 | - | mW |
| Slope Efficiency | SE | 0.09 | 0.15 | - | mW/mA |
| Threshold Current | $I_{th}$ | - | 12 | 18 | mA |
| Side Mode Supression Ratio | SMSR | 35 | 40 | - | dB |
| Optical Linewidth | $\Delta f$ | - | 1 | - | MHz |
| Temperature Tuning Coefficient | $T_\lambda$ | - | 0.10 | - | nm/°C |
| Current Tuning Coefficient | $I_\lambda$ | - | 21 | - | pm/mA |
| Thermistor Resistance | $R_T$ | 9.5 | 10 | 10.5 | kΩ |
| β Coefficient (25°C/85°C) | β | - | 3930 | - | K |

*CW bias unless otherwise stated



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## Absolute Maximum Ratings

| Parameter | Symbol | Min | Max | Unit |
|---|---|---|---|---|
| Operating Current | $I_{op}$ | - | 120 | 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 | $V_{rev}$ | - | 20 | V |
| Case Temperature* | $T_{Case}$ | -20 | 65 | °C |
| Storage Temperature | $T_{Storage}$ | -40 | 85 | °C |

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

## PACKAGING

The EP1550-0-DM-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.

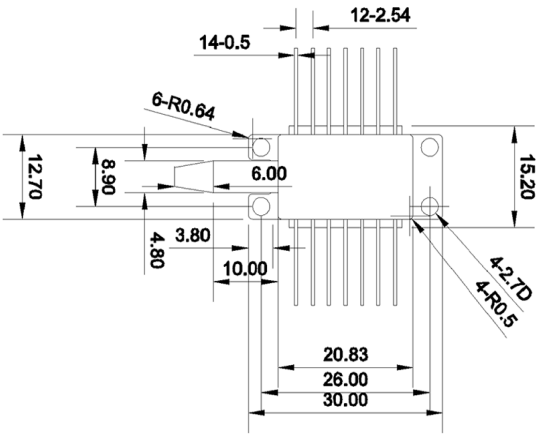



Fig. 3 Schematic of 14-pin butterfly (Dimensions in mm)

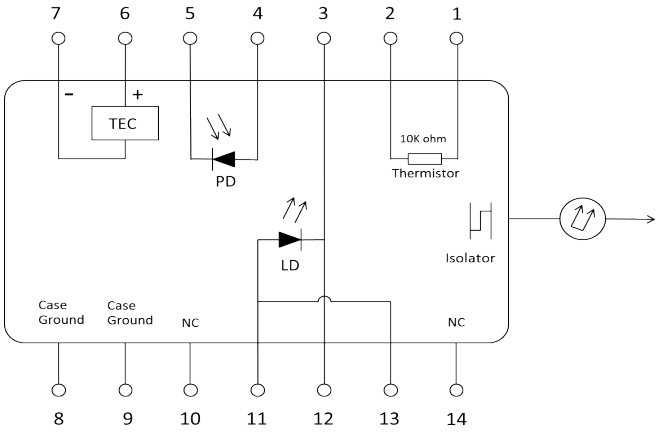
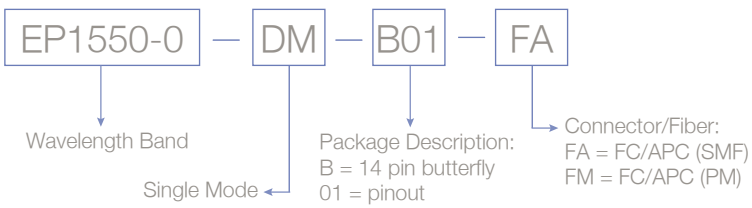



Fig. 4 Standard “Pinout 01” option

## HOW TO ORDER

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



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