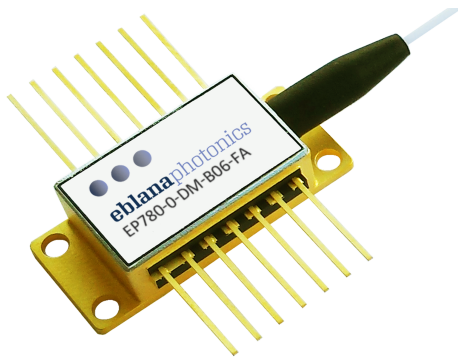


# 780nm DM LASER

EP780-DM-B

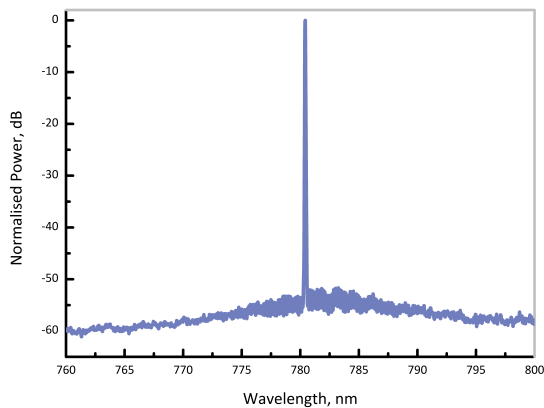


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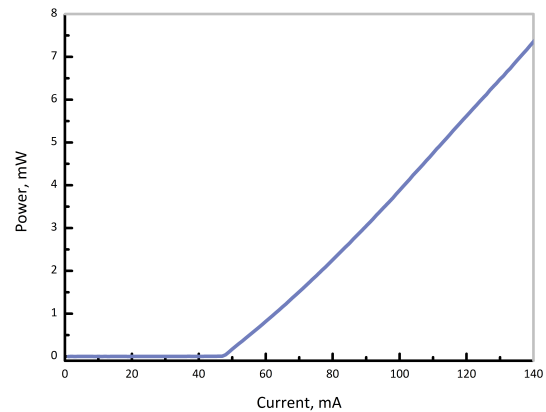


## COHERENCE AND STABILITY

Eblana Photonics EP780-DM laser diode is the perfect tool for use in frequency standards applications (Rb atomic clocks) and interferometry. Eblana's patented Discrete-Mode (DM) technology is used to design a cost effective, highly coherent and stable single mode laser.



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	$\lambda$	776	780	784	nm
Wavelength Tolerance	$\lambda_{spec}$	$\lambda - 1$	$\lambda$	$\lambda + 1$	nm
Side Mode Supression Ratio	SMSR	30	40	-	dB
Threshold Current	$I_{th}$	-	60	-	mA
Output Power in fiber (at $I_{op}$ )	$P_f$	2	4	-	mW
Optical linewidth	$\Delta f$	-	3	4	MHz
Temperature Tuning Coefficient	$T_{\lambda}$	-	0.06	-	nm/°C
Current Tuning Coefficient	$I_{\lambda}$	-	6	-	pm/mA
Slope Efficiency	SE	0.05	0.07	-	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

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Dublin, Ireland

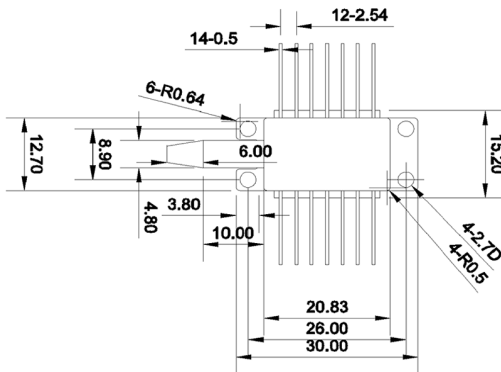
# ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	MIN	MAX	UNIT
Forward Current	$I_f$	-	150	mA
Forward Voltage	$V_f$	-	2.5	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

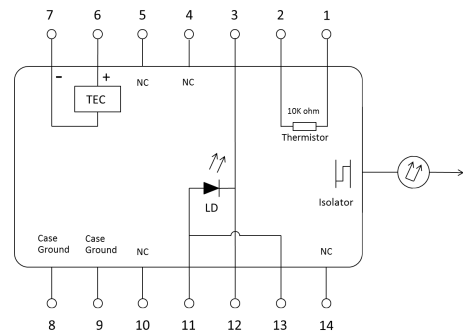
\*For  $T_{sub} < 25^{\circ}C$ , Max Case Temperature should be derated to  $T_{Case,Max} = T_{sub} + 40^{\circ}C$

## PACKAGING

The EP780-DM-B product series is offered in a 14-pin Butterfly package - Please inquire for other packaging options. Standard package pinout is shown below, variations may be requested.



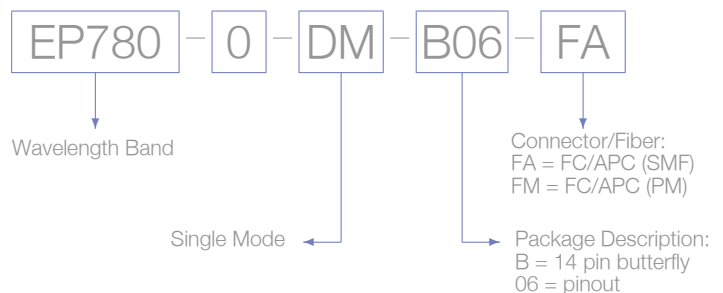
14-pin butterfly schematic



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.

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