IMM photonics

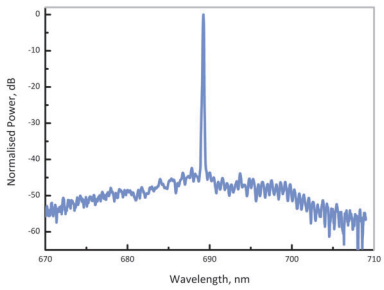
689nm DM LASER

EP689-DM-B - Preliminary

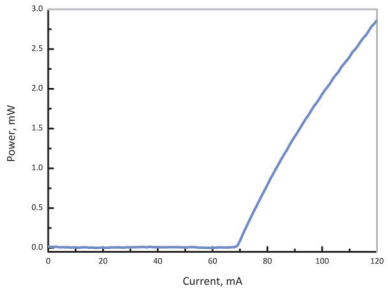
eblanaphotonics

COHERENCE AND STABILITY

Eblana Photonics EP689-DM laser diode is the perfect tool for use is frequency standards applications (Sr 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° C)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT
Available Wavelength Range	λ	688	689	691	nm
Wavelength Tolerance	λ_{spec}	λ - 1	λ	λ + 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	-	mW
Optical linewidth	Δf	-	3	-	MHz
Temperature Tuning Coefficient	T_λ	-	0.06	-	nm/°C
Current Tuning Coefficient	I_λ	-	6	-	pm/mA
Slope Efficiency	SE	-	0.016	-	mW/mA
Thermistor Resistance	R_T	9.5	10	10.5	kΩ
Thermistor Temp. Coefficient	C	-	-4.4	-	%/°C

*CW bias unless otherwise stated

©Eblana Photonics Series 689-DM-B Rev 0.1

eblanaphotonics

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Sales@eblanaphotonics.com
Dublin, Ireland

Individual. Innovative. Exceptional.

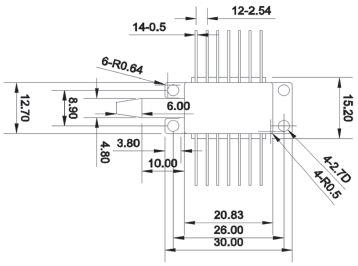
ABSOLUTE MAXIMUM RATINGS

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

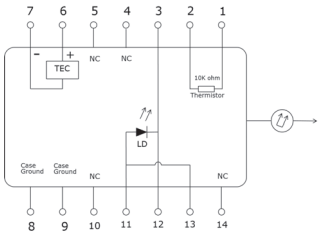
*For T_{sub} < 25°C, Max Case Temperature should be derated to $T_{Case,Max} = T_{sub} + 40°C$

PACKAGING

The EP689-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 07" 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.

EP689 – 0 – DM – B07 – FA

- EP689 – Wavelength Band
- 0 – Single Mode
- DM – Single Mode
- B07 – Package Description: B = 14 pin butterfly, 07 = pinout
- FA – Connector/Fiber: FA = FC/APC (SMF), FM = FC/APC (PM)

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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