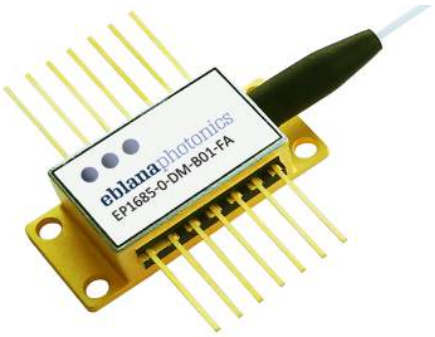
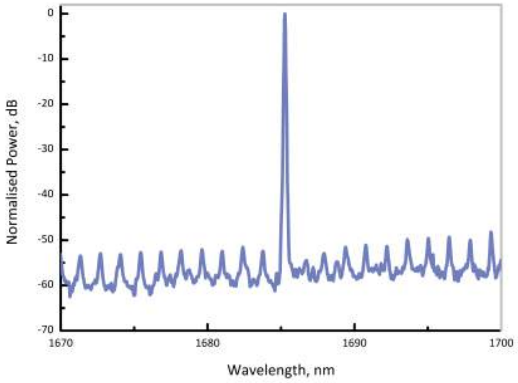
1685nm DM LASER

EP1685-DM-B - Preliminary

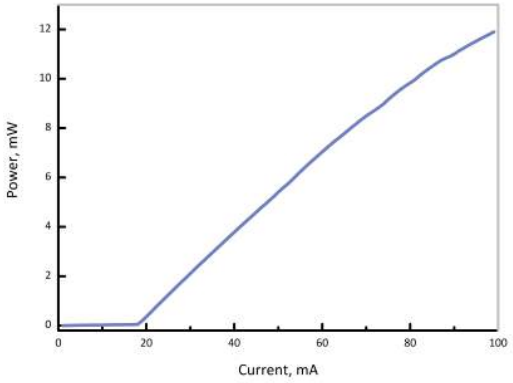


SUPERIOR PERFORMANCE

Eblana Photonics EP1685-DM-B laser diode, designed using Eblana's proprietary Discrete-Mode (DM) technology, will leverage years of experience providing single mode lasers for the gas sensing and comms industries, and will feature mode-hop free tunability and excellent SMSR.



Typical optical spectrum at 25° C



Representative LIV from bar test at 25° C

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

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT
Available Wavelength Range	λ	1680	1685	1730	nm
Wavelength Tolerance	λ_{spec}	λ -1	λ	λ +1	nm
Side Mode Supression Ratio	SMSR	30	40	-	dB
Threshold Current	I_{th}	-	20	25	mA
Output Power in fiber	P_f	2	5	-	mW
Optical linewidth	Δf	-	2	-	MHz
Temperature Tuning Coefficient	T_λ	-	0.1	-	nm/°C
Current Tuning Coefficient	I_λ	-	10	-	pm/mA
Slope Efficiency	SE	0.03	0.08	-	mW/mA
Thermistor Resistance	R_T	9.5	10	10.5	kΩ
Thermistor Temp. Coefficient	C	-	-4.4	-	%/°C

*CW bias unless otherwise stated

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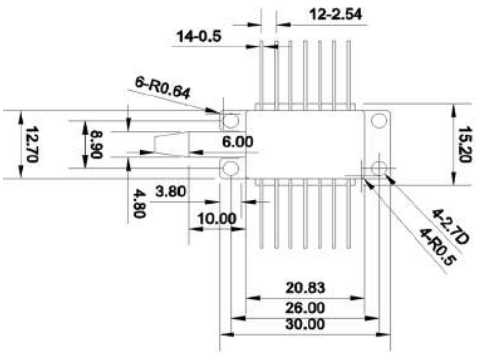
ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	MIN	MAX	UNIT
Forward Current	I_f	-	120	mA
Forward Voltage	V_f	-	2	V
TEC Current	I_{TEC}	-	1.2	A
Reverse Voltage LD	V_r	-	2	V
Reverse Voltage PD	V_{rev}	-	20	V
Case Temperature*	T_{Case}	-20	65	°C
Chip Submount Temperature	T_{Sub}	0	50	°C
Storage Temperature	$T_{storage}$	-40	85	°C

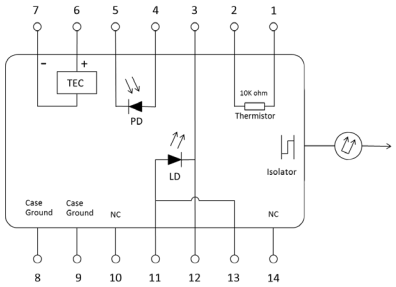
*For T_{sub} < 25°C, Max Case Temperature should be derated to $T_{Case,Max} = T_{sub} + 40°C$

PACKAGING

The EP1685-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.



14-pin butterfly schematic



Standard "Pinout 01" option

EP1685 – 0 – DM – B01 – FA

- EP1685 → Wavelength Band
- 0 → Single Mode
- DM → Single Mode
- B01 → Package Description: B = 14 pin butterfly, 01 = 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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