1877nm DM LASER

EP1877-DM-TP39

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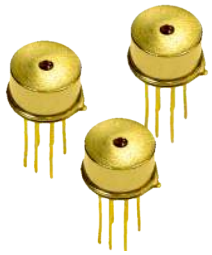
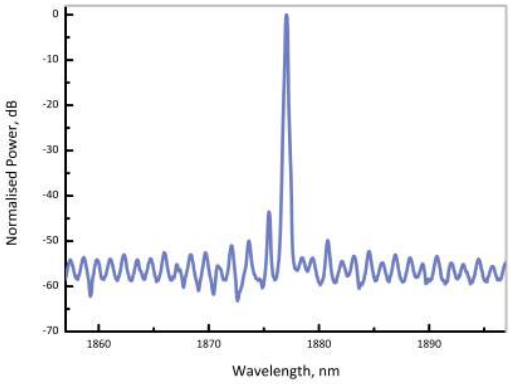
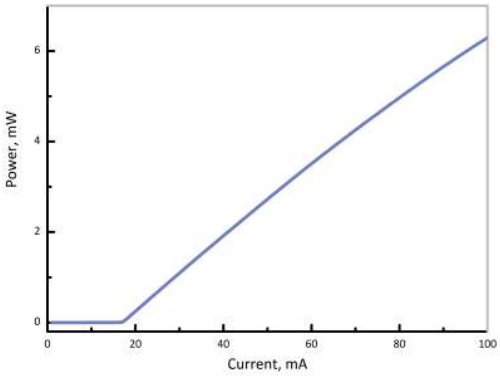


PRECISION MOISTURE DETECTION

Eblana Photonics EP1877-DM-TP39 laser, available in a range from 1845 - 1920nm, is designed for highly sensitive H_2O detection. Eblana's patented Discrete-Mode (DM) technology enables mode-hop free tuning and excellent SMSR, while at the same time maintaining cost effectiveness.



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
Centre Wavelength Range	λ	1845	1877	1920	nm
Wavelength specification	λ_{spec}	λ -1	λ	λ +1	nm
Side Mode Supression Ratio	SMSR	30	40		dB
Threshold Current	I_{th}		20	30	mA
Output Power (facet)	P_f	4	5	6	mW
Optical linewidth	Δf	-	-	2	MHz
Temperature Tuning Coefficient	T_λ	0.07	0.1	0.14	nm/°C
Current Tuning Coefficient	I_λ	0.008	0.01	0.03	nm/mA
Slope Efficiency	SE	0.03	0.05	-	mW/mA
Thermistor Resistance	R_T	9.7	10	10.3	kΩ
Thermistor Temp. Coefficient	C	-	-4.4	-	%/°C
Beam divergence - perpendicular	$\theta\perp$	-	44	-	degrees
Beam divergence - parallel	$\theta\|\|$	-	29	-	degrees

*CW bias unless otherwise stated

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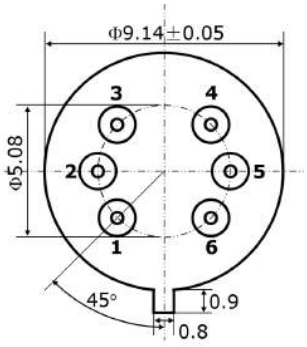
ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT
Forward Current	I_f	-	-	140	mA
Forward Voltage	V_f	-	1.3	1.6	V
TEC Current	I_{TEC}	-	-	0.7	A
Reverse Voltage LD	V_{rev}	-	-	2.0	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 EP1877-DM-TP39 product series is offered in an industry-standard TO39 package - Inquire for other packaging options. The standard package pinout is shown below, variations may be requested.



TO39 schematic outside bottom view

PIN NO	DESCRIPTION
1	TEC+
2	LD+
3	Thermistor
4	Thermistor
5	LD-
6	TEC-

Standard "Pinout 01" option

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EP1877 – 0 – DM – TP39 – 01

- EP1877: Wavelength Band
- 0: Single Mode
- DM: Package Description: TP39 = TO39 with TEC
- 01: Pinout 01

Laser Safety

This is a Class 3R Laser Product as defined by International Standard IEC 60825-1,Edition 2. 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.