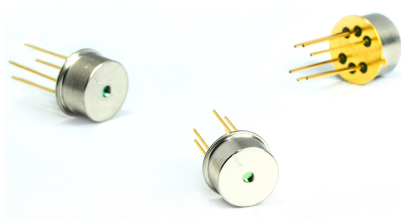


# 760nm VCSEL LASER

EP760-VC-TP39 - Preliminary

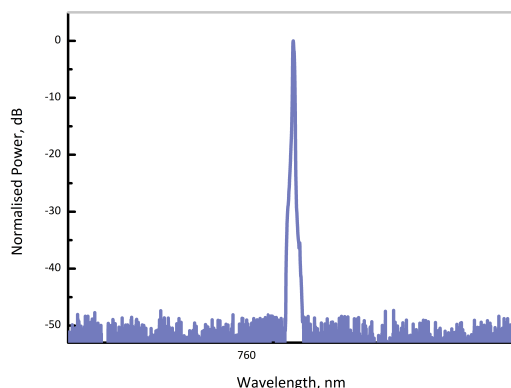


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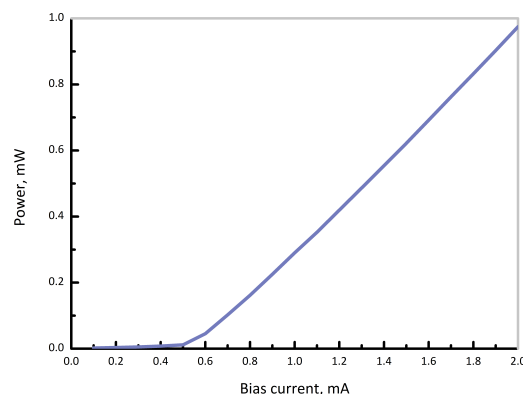


## ADVANCED O<sub>2</sub> DETECTION

Eblana Photonics EP760-VC laser diode is the perfect tool for TDLAS-based O<sub>2</sub> sensing. Eblana's advanced VCSEL platform is used to design a cost effective, highly coherent and stable single mode laser.



Representative optical Spectrum at 25°C



Representative LIV plot

## ELECTRO-OPTICAL CHARACTERISTICS (T<sub>SUB</sub> = 25° C)

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT
Centre Wavelength (25°C, 1.5mA)	$\lambda$	-	760	-	nm
Side Mode Supression Ratio*	SMSR	25	30	-	dB
Threshold Current	I <sub>th</sub>	-	0.5	-	mA
Output Power*	P <sub>f</sub>	-	0.5	-	mW
Temperature Tuning Coefficient	T <sub>λ</sub>	-	0.05	-	nm/°C
Current Tuning Coefficient	I <sub>λ</sub>	-	0.38	-	nm/mA
Slope Efficiency	SE	-	0.55	-	mW/mA
Thermistor Resistance	R <sub>T</sub>	9.7	10	10.3	kΩ
Beta Coefficient (25°C/85°C)	Beta	-	3930	-	K
Beam divergence - perpendicular	θ <sub>L</sub>	-	11	-	degrees
Beam divergence - parallel	θ <sub>  </sub>	-	11	-	degrees

\*At operating current of 1.5mA



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[www.eblanaphotonics.com](http://www.eblanaphotonics.com)

[Sales@eblanaphotonics.com](mailto:Sales@eblanaphotonics.com)

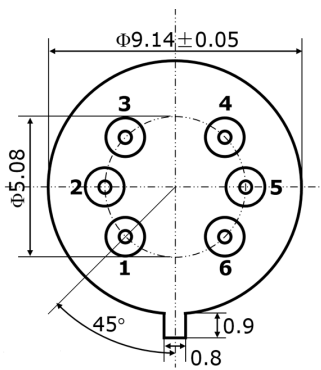
Dublin, Ireland

## ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	MIN	MAX	UNIT
Forward Current	$I_f$	-	2	mA
Forward Voltage	$V_f$	-	2	V
TEC Current	$I_{TEC}$	-	0.7	A
Case Temperature	$T_{Case}$	-20	60	°C
Storage Temperature	$T_{storage}$	-40	85	°C

### PACKAGING

The EP760-VC-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.



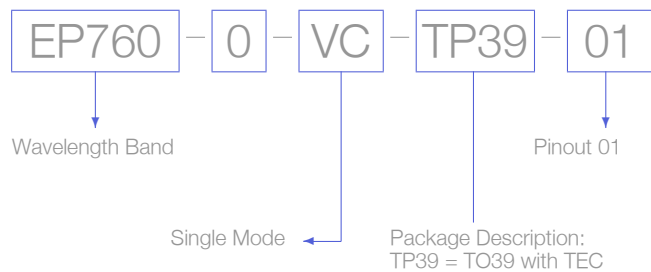
TO39 schematic - outside bottom view

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

Standard "Pinout 01" option

### 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 3220.



#### 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.

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