

# 760nm VCSEL LASER

EP760-VC-TP46- Preliminary

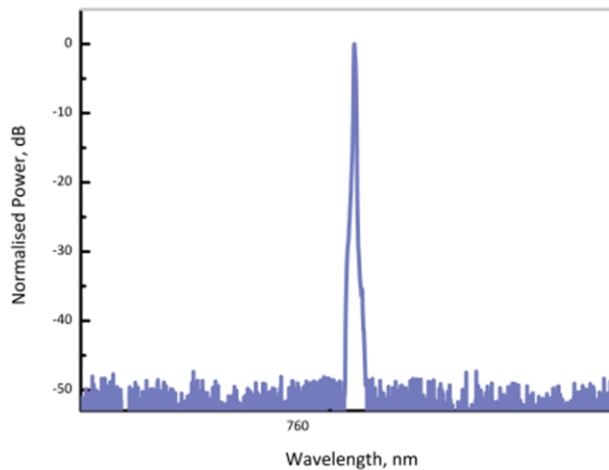


eblanaphotonics

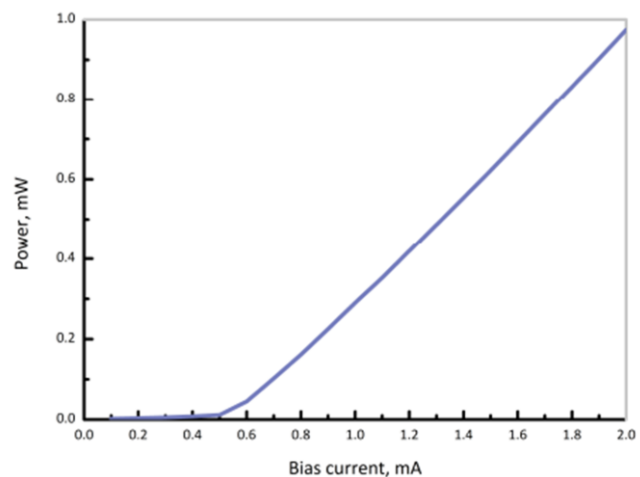


## ADVANCED O<sub>2</sub> DETECTION

The EP760-VC VCSEL, marketed by IMM Photonics, is the perfect tool for TDLAS-based O<sub>2</sub> sensing. The advanced VCSEL structure is used to design a cost effective, highly coherent and stable single mode laser.



Representative optical spectrum at 25 °C



Representative LI curve (ex-fiber - estimated)

## 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 Suppression Ratio	SMSR	25	30	-	dB
Threshold Current	$I_{th}$	-	0.5	-	mA
Output Power (at $I_{op}$ )	$P_f$	-	0.5	-	mW
Optical linewidth	$\Delta f$	-	100	-	MHz
Temperature Tuning Coefficient	$T_\lambda$	-	0.05	-	nm/°C
Current Tuning Coefficient	$I_\lambda$	-	0.38	-	nm/mA
Slope Efficiency	SE	-	0.55	-	mW/mA
Thermistor Resistance	$R_T$	9.7	10	10.3	k $\Omega$
Beta Coefficient (25°C /85°C)	Beta	-	3930	-	K
Beam divergence – perpendicular	$\theta_\perp$	-	11	-	degrees
Beam divergence – parallel	$\theta_\parallel$	-	11	-	degrees

\*CW bias unless otherwise stated

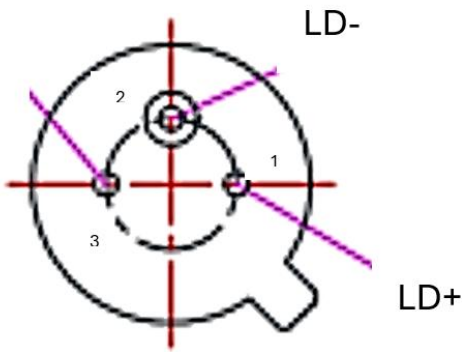
## ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	MIN	MAX	UNIT
Forward Current	$I_f$	-	2	mA
Forward Voltage	$V_f$	-	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 EP760-VC-T46 product series is offered in a TO46 can package - Please inquire for other packaging options. Standard package pinout is shown below, variations may be requested.



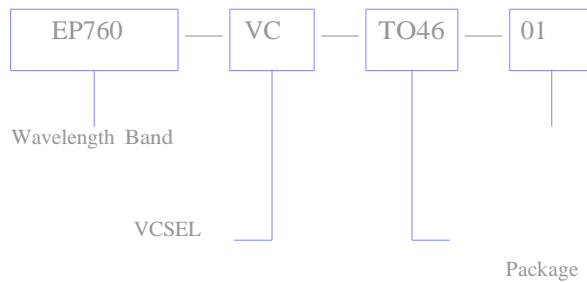
TO46 schematic - header top view

PIN NO	DESCRIPTION
1	LD +
2	LD - /Case Ground
3	NC

TO46 pinout

### HOW TO ORDER

Contact your local distributor



#### 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.

760-DM-B Rev 0.2