

# 1890nm FP LASER

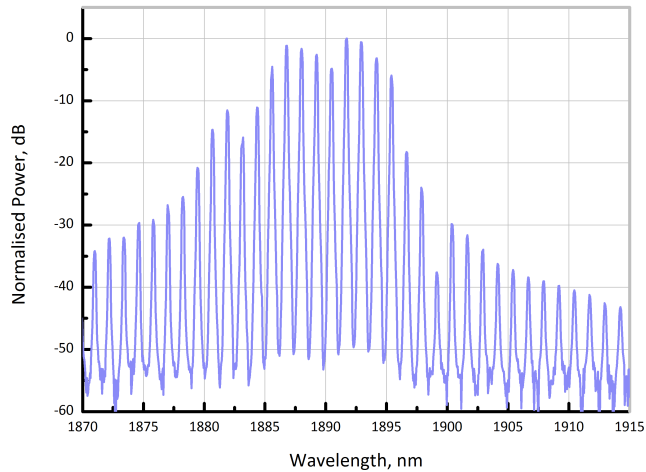
EP1890-FP-TP39



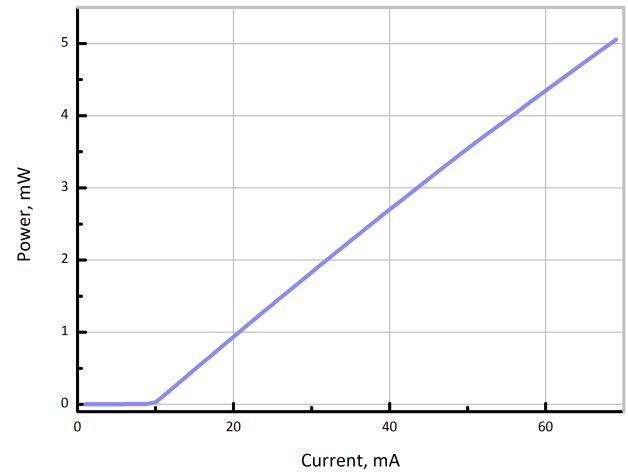
**eblana**photonics

## SUPERIOR PERFORMANCE

Eblana Photonics EP1890-FP-TP39 laser diode, available in range from 1845-1920nm, is a cost effective, highly coherent laser source. Eblana's advanced epistructure design is used to deliver an InP-based strained quantum-well FP laser with low threshold current and excellent spectral characteristics.



Optical Spectrum at 25°C



Output power as a function of bias current

## ELECTRO-OPTICAL CHARACTERISTICS\* ( $T_{SUB} = 25^{\circ} C$ )

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT
Centre Wavelength Range	$\lambda$	1950	2020	2150	nm
Side Mode Supression Ratio	SMSR	-	N/A	-	dB
Threshold Current	$I_{th}$	-	10	20	mA
Facet output power	$P_f$	8	12	-	mW
Forward Voltage	$V_f$	-	1.3	1.6	V
Temperature Tuning Coefficient	$T_{\lambda}$	-	0.1	-	nm/°C
Current Tuning Coefficient	$I_{\lambda}$	-	0.01	-	nm/mA
Slope Efficiency	SE	0.1	0.12	-	mW/mA
Thermistor Resistance	$R_T$	9.7	10	10.3	k $\Omega$
Thermistor Temp. Coefficient	C	-	-4.4	-	%/°C
Beam divergence - perpendicular	$\theta_{\perp}$	-	44	-	degrees
Beam divergence - parallel	$\theta_{\parallel}$	-	29	-	degrees

\*CW bias unless otherwise stated



**eblana**photonics

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

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

Dublin, Ireland

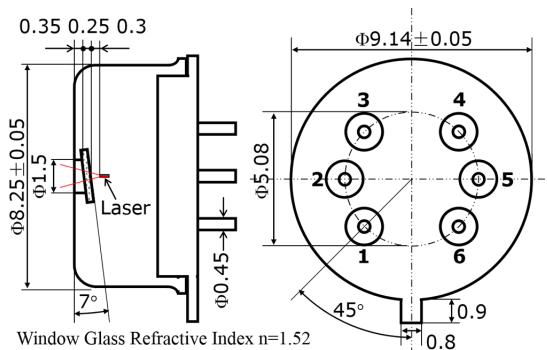
## ABSOLUTE MAXIMUM RATINGS

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT
Forward Current	$I_f$	-	-	220	mA
TEC Current	$I_{TEC}$	-	-	0.7	A
Reverse Voltage LD	$V_r$	-	-	2.0	V
Case Temperature*	$T_{Case}$	-20	-	65	°C
Chip Submount Temperature	$T_{Sub}$	0	-	40	°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 EP2020-FP-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. mPD not included as standard.



Window Glass Refractive Index  $n=1.52$

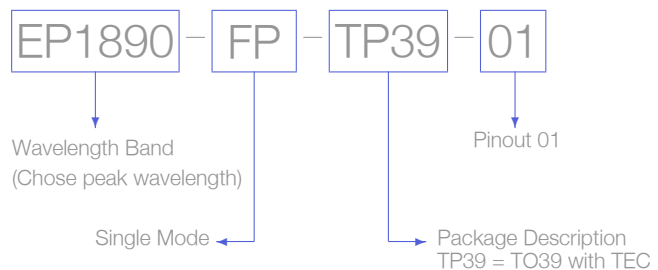
TO39 schematic

Pin No.	Description
1	LD+
2	Thermistor
3	Thermistor
4	LD-
5	TEC+
6	TEC-

Standard "Pinout 01" option

## HOW TO ORDER

Construct your order using the following example and email to [sales@eblanaphotonics.com](mailto:sales@eblanaphotonics.com), or call +353 1 675 3228.



### 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.

©Eblana Photonics 2014. Eblana Photonics Reserves the right to amend this document at any time, without prior warning. ©Eblana Photonics Series 1890-DM-TP39 Rev 2.01