

# PS78-F1P0N

2.5Gbps 780nm Single mode VCSEL TO-46 Can Package

*Preliminary*

## Features

- : 780nm wavelength range
- : High data rate > 2.5Gbps
- : Single mode
- : Symmetric emission profile
- : Flat window Type TO-46 Can Package
- : Other configurations available on request

## Applications

- : High speed Data Communications
- : Gigabit Ethernet
- : Fiber Channel

## Description



## Absolute Maximum Ratings

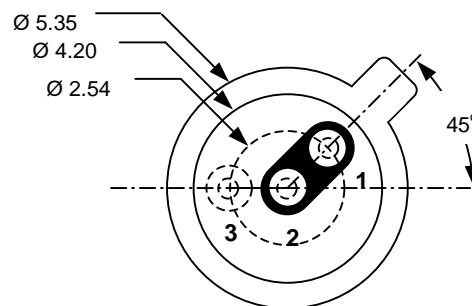
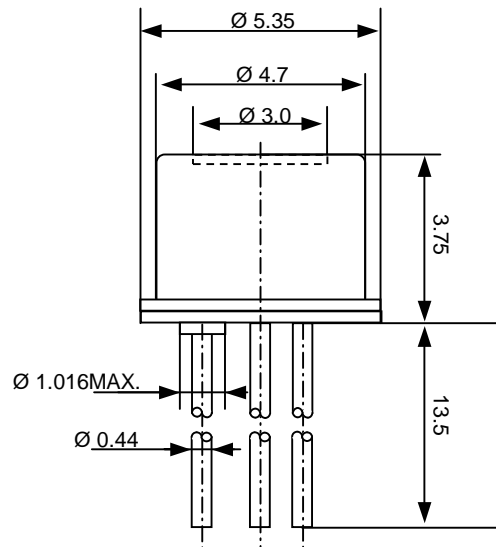
Parameter	Rating
Storage Temperature	-40 to 100 °C
Operating Temperature	0 to 70 °C
Lead Solder Temperature	260 °C, 10 sec
Continuous Forward Current	8 mA
Continuous Reverse Voltage	5V (@10µA)

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## Dimensions



Bottom view

### PINOUT

Number	Function
1	A <sub>LD</sub>
2	K <sub>LD</sub>
3	NC

Unit:mm

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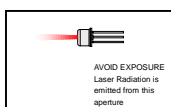
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## Electro-Optics Characteristics ( $T_a=25^{\circ}\text{C}$ unless otherwise stated)

Parameters	Symbol	Specified			Unit	Test Conditions
		Min.	Typ.	Max.		
Threshold Current	$I_{th}$		2.5	4	mA	CW
Slope Efficiency	$\eta$	0.1	0.2		W/A	$I_f = 5\text{mA}$
Optical Output Power	$P_o$		0.5		mW	$I_f = 5\text{mA}$
Peak Wavelength	$\lambda$	770	780	790	nm	$I_f = 5\text{mA}$
$\lambda$ Temperature Variation	$\Delta \lambda / \Delta T$		0.06			$T_a=0$ to $70^{\circ}\text{C}$ at $5\text{mA}$
Beam Divergence	$\Theta$		15		$^{\circ}$	$I_f = 5\text{mA}$ , ( Full Width, $1/e^2$ )
Operating Voltage	$V_f$	1.6	1.9	2.2	V	$I_f = 5\text{mA}$
Breakdown Voltage	$V_b$		-10		V	
Dynamic Resistance	$R_d$		50		Ohm	$I_f = 5\text{mA}$
Side mode suppression ratio	SMSR	15	25		dB	$I_f = 5\text{mA}$

## Notes

\* These specifications are subject to change without notice



### NOTICE

The inherent design of this component causes it to be sensitive to electrostatic discharge(ESD). To prevent ESD-induced damage and/or degradation to equipment, take normal ESD precautions when handling this product

### DANGER

The VCSEL is a class IIIb laser and should be treated as a potential eye hazard. Due to the size of the component, the applicable warning logotype, aperture label, and certification / identification label cannot be placed on the component itself.

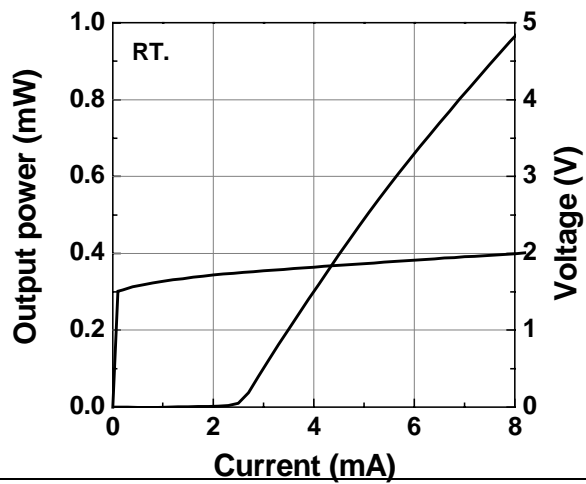
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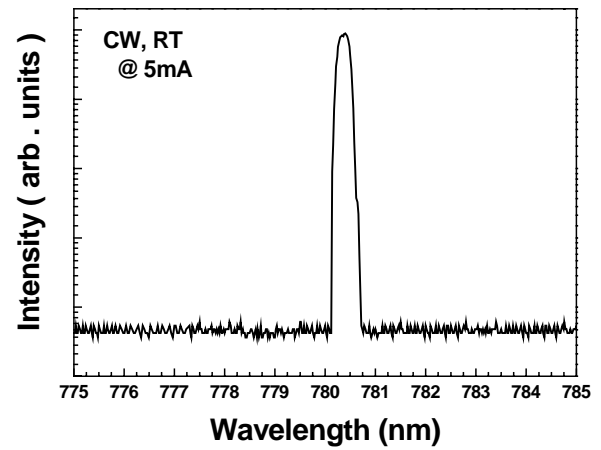
*Preliminary*

## Characteristics Curves

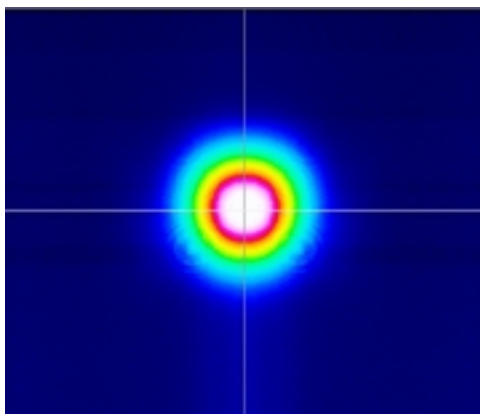
LIV Curve



EL Spectrum



FFP(2D)



FFP(3D)

