Features

: 2 channel -1 fiber form (Tx,Tx)

: 850nm VCSEL / 980nm VCSEL

: High data rate > 2.5Gbps

: LC Receptacle Type

: Other configurations available on request

Description

Applications

: High speed Data Communications

: Gigabit Ethernet

: Fiber Channel

Absolute Maximum Ratings

Parameter	Rating
Storage Temperature	-40 to 100℃
Operating Temperature	0 to 70℃
Lead Solder Temperature	260℃, 10sec
Continuous Forward Current (Tx)	12mA
Continuous Reverse Voltage (TX)	5V

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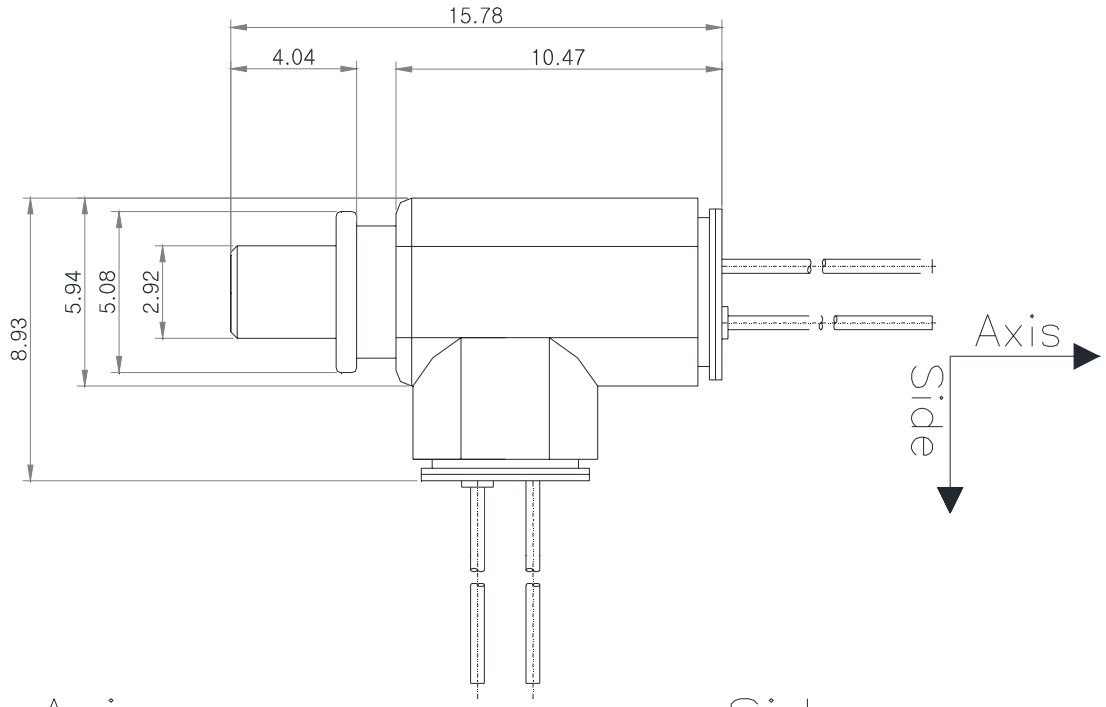
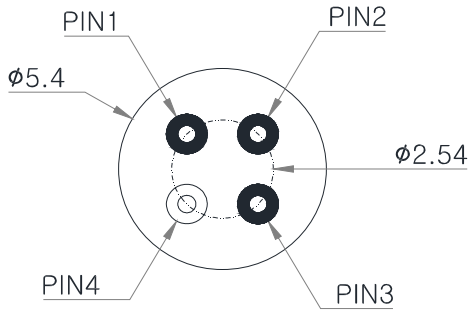
Dimensions

Unit :mm



Axis

Transmitter :850nm



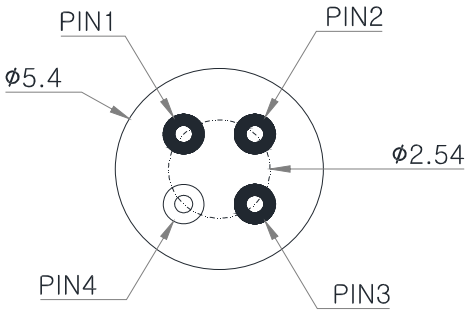
Bottom View

PIN OUT

Number	Function
1	A_{LD}
2	K_{LD} , A_{PD}
3	K_{PD}
4	NC(Case)

Side

Transmitter : 980nm



Bottom View

PIN OUT

Number	Function
1	A_{LD}
2	K_{LD} , A_{PD}
3	K_{PD}
4	NC(Case)

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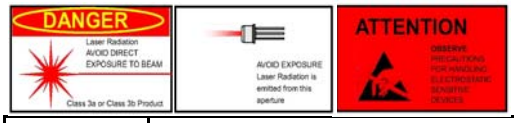
Tx (850nm VCSEL) : Electro-Optics Characteristics (T_a=25℃)

Parameters	Symbol	Specified			Unit	Test Conditions
		Min.	Typ.	Max.		
Peak Fiber Coupled Optical Output	P_{OC}		500		μW	I_f = 7 mA, 62.5/125 μm fiber NA=0.20
Threshold Current	I_{th}		1.5	3	mA	CW
Ith Temperature Variation	ΔI_{th}		1.5		mA	T_a=0~70℃
Slope Efficiency	η	0.04	0.07		W/A	If =7mA
η Temperature Variation	Δη/ΔT		-0.5		%/℃	T_a=0~70℃ (@7mA)
Peak Wavelength	λ_p	840	850	860	nm	If =7mA
λp Temperature Coefficient	Δλ/ΔT		0.06		nm/℃	T_a=0~70℃ (@7mA)
Spectral Bandwidth (RMS)	Δλ			0.85	nm	I_f =7mA
Rise and Fall Times	t_R		150		ps	Prebias Above Threshold, 20%~80%
	t_F		150			
Forward Voltage	V_f		1.7	2.2	V	I_f =7mA
Breakdown Voltage	V_b		-10		V	-
Series Resistance	R_S	20	35	55	Ohm	I_f =7mA
Parameters	**Symbol**	**Min.**	**Typ.**	**Max.**	**Unit**	**Test Conditions**
Monitor current	I_{PD}		0.4		mA	I_f =7mA
Dark Current	I_D			20	nA	P_o=0mW, V_r=3V
PD Reverse Voltage	BVR_{PD}	30	115		V	P_o=0mW, I_R=10μA
PD Capacitance	C			100	pF	V_R=0V,Freq=1MHz
				55		V_R=3V,Freq=1MHz

Tx (980nm VCSEL) : Electro-Optics Characteristics (Ta=25℃)

Parameters	Symbol	Specified			Unit	Test Conditions
		Min.	Typ.	Max.		
Peak Fiber Coupled Optical Output	P_{OC}		400		μW	I_f = 7 mA, 62.5/125 μm fiber NA=0.20
Threshold Current	I_{th}		1.0	2.5	mA	CW
Ith Temperature Variation	ΔI_{th}		1.5		mA	T_a=0~70℃
Slope Efficiency	η	0.04	0.07		W/A	If =7mA
η Temperature Variation	Δη/ΔT		-0.5		%/℃	T_a=0~70℃ (@7mA)
Peak Wavelength	λ_p	970	980	860	nm	If =7mA
λp Temperature Coefficient	Δλ/ΔT		0.06		nm/℃	T_a=0~70℃ (@7mA)
Spectral Bandwidth (RMS)	Δλ			0.85	nm	I_f =7mA
Rise and Fall Times	t_R		150		ps	Prebias Above Threshold, 20%~80%
	t_F		150			
Forward Voltage	V_f		1.7	2.1	V	I_f =7mA
Breakdown Voltage	V_b		-10		V	-
Series Resistance	R_S	20	40	60	Ohm	I_f =7mA
Parameters	**Symbol**	**Min.**	**Typ.**	**Max.**	**Unit**	**Test Conditions**
Monitor current	I_{PD}		0.3		mA	I_f =7mA
Dark Current	I_D			20	nA	P_o=0mW, V_r=3V
PD Reverse Voltage	BVR_{PD}	30	115		V	P_o=0mW, I_R=10μA
PD Capacitance	C			100	pF	V_R=0V,Freq=1MHz
				55		V_R=3V,Freq=1MHz

* 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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