

OPNF85TP-LCP1N-xx

850nm 2.5Gbps VCSEL LC-TOSA

Anwendungen / Application

Features

- Multi-mode 850nm VCSEL
- 2.5 Gbps data rates
- Low drive current and voltage
- Common cathode / anode Type
- Other configurations available on request



Applications

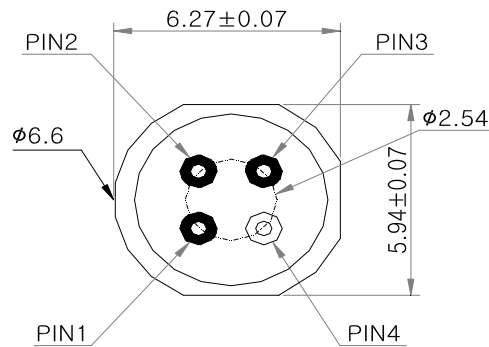
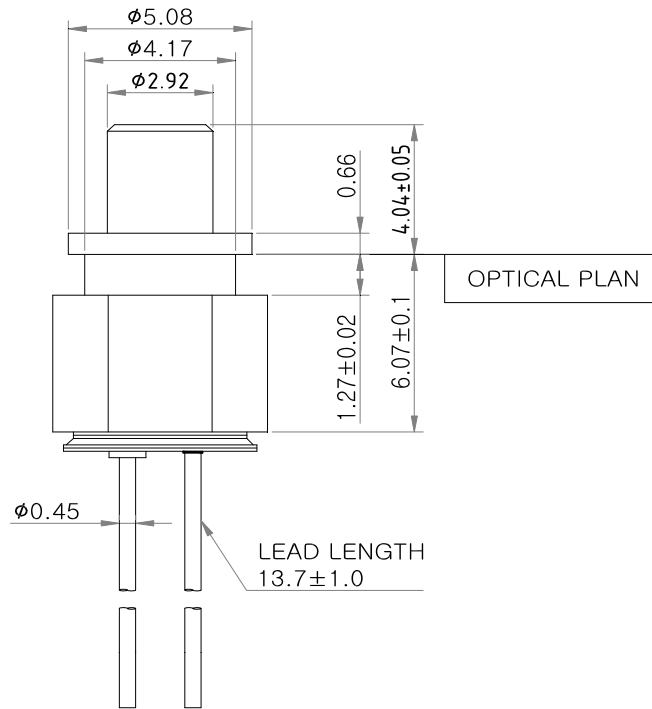
- High speed Data Communications
- Gigabit Ethernet
- Fiber Channel

Absolute Maximum Ratings

Parameter	Rating
Storage Temperature	-40 to 100° C
Operating Temperature	-20 to 85° C
Lead Solder Temperature	260° C , 10 sec
Continuous Forward Current	12mA
Continuous Reverse Voltage	5V (@10µA)

Dimensions

Unit :mm



Bottom View

PIN OUT

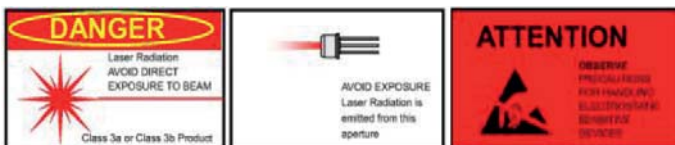
OPNF85TP-LCP1N-KC		OPNF85TP-LCP1N-AC	
Number	Function	Number	Function
1	A_{VCSEL}	1	K_{VCSEL}
2	K_{VCSEL}, A_{m-PD}	2	A_{VCSEL}, K_{m-PD}
3	K_{m-PD}	3	A_{m-PD}
4	Case(NC)	4	Case(NC)

Electro-Optics Characteristics (Ta=25° C unless otherwise stated)

Parameters	Symbol	Specified			Unit	Test Conditions
		Min.	Typ.	Max.		
Peak Fiber Coupled Optical Output Power (See threshold current And slope efficiency which Control power output)	P_{OC}		500		μW	$I_f = 7 \text{ mA}, 50/125 \mu\text{m fiber NA}=0.20$
Threshold Current	I_{th}		1.5	2.5	mA	CW
I_{th} Temperature Variation	ΔI_{th}		1.5	2	mA	$T_a = -20 \text{ to } 85 \text{ }^\circ\text{C}$
Slope Efficiency	η	0.04		0.16	W/A	$I_f = 7 \text{ mA}$
η Temperature Variation	$\Delta\eta / \Delta T$		-5000		PPM/°C	$T_a = -20 \text{ to } 85 \text{ }^\circ\text{C}$ at 7 mA
Peak Wavelength	λ_p	840	850	860	nm	$I_f = 7 \text{ mA}$
λ_p Temperature Coefficient	$\Delta\lambda / \Delta T$		0.06		nm/°C	$T_a = -20 \text{ to } 85 \text{ }^\circ\text{C}$ at 7 mA
Spectral Bandwidth (RMS)	$\Delta\lambda$			0.85	nm	$I_f = 7 \text{ mA}$
Forward Voltage	V_f		1.7	2.1	V	$I_f = 7 \text{ mA}$
Breakdown Voltage	V_b		-10		V	
Rise and Fall Times	t_R			130	ps	Prebias Above Threshold, 20%~80%
	t_F			150		
Relative Intensity Noise	RIN		-130	-122	db/Hz	1 GHz BW, $I_f = 7 \text{ mA}$
Series Resistance	R_s	20	35	55	Ohm	$I_f = 7 \text{ mA}$
R_s Temperature Coefficient	dR_s / dT		-3000		PPM/°C	
Monitor Current	I_{PD}	0.2		0.7	mA	$P_{OC} = 0.5 \text{ mW}$
Dark current	I_D			10	nA	$P_0 = 0 \text{ mW}, V_R = 5 \text{ V}$
PD Reverse Voltage	BVR_{PD}	40			V	$P_0 = 0 \text{ mW}, I_R = 100 \mu\text{A}$
PD Capacitance	C			50	pF	$V_R = 0 \text{ V}, \text{Freq} = 1 \text{ MHz}$
				20		$V_R = 5 \text{ V}, \text{Freq} = 1 \text{ MHz}$

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.