



Analog 1310nm FP Coaxial Pigtail LD Module

LDM3S504-ZZ

Features

- *Analog bandwidth $\geq 1000\text{MHz}$*
- *Operating wavelength 1310nm*
- *High-reliability FP laser chip*
- *Built-in InGaAs monitor photodiode*
- *4pin Coaxial-pigtailed package, single mode FC/APC, SC/APC connector.*

Applications

- *Mobile communication systems*
- *fiber-optical repeater*
- *CATV transmission systems return paths*
- *Other analog applications*

Absolute Maximum Ratings

Parameter	Symbol	Unit	Min	Max
Optical output power from fiber end	P _f	mW	-	10
Fiber yield strength	-	kgf	-	1
Fiber bend radius	-	mm	30	-
Storage Temperature Range	T _s	°C	-40	85
Relative Humidity	RH	%	5	95
Laser Diode Reverse Voltage	V _{RL}	V	-	2
Laser Diode Forward Current	I _{FL}	mA	-	150
Monitor PD Reverse Voltage	V _{RPD}	V	-	15
Monitor PD Reverse Current	I _{RPD}	mA	-	2
Lead Solder Temperature	-	°C	-	260
Lead Soldering Time	-	s	-	10

Recommended Operating Conditions

Parameter	Symbol	Unit	Min	Typ	Max
Case Operating Temperature Range	T _c	°C	-20	25	80
Operating Voltage	V _{op}	V	-	1.2	1.5

Specifications *(T=25°C, unless otherwise noted)*

Parameter	Symbol	Unit	Min	Typ	Max	Test condition
Electrical Characteristics						
Operating Voltage	V _{op}	V	-	-	1.6	
Threshold Current	I _{th}	mA	-	-	25	CW
			-	-	40	CW, over temperature
Operating Current	I _{op}	mA	-	-	50	T _c =25 °C
			-	-	100	T _c =85 °C
Series Resistance	R _s	Ω	-	-	10	I _{FL} =30mA
Analog bandwidth	BW	MHz	1000	-	-	I _{FL} =30mA
3 rd order distortion	CTB	dBc	-	-	-60	f1=872MHz, f2=874MHz Tc= -20 °C ~ 85 °C
Optical Characteristics						
Optical Output Power	P _o	mW		1.5		I _{FL} =I _{th} +20mA
Slope Efficiency	η	mW/mA		0.075		CW
Central Wavelength	λ _c	nm	1280	1310	1340	I _{FL} = 30mA
Spectral Width(-3dB)	Δλ	nm			3	I _{FL} =30mA
Tracking Error	*TE	dB	-1		1	Tc= -20 ~ 85 °C; P _o =2mW

Note1: *TE=10log (P_T/P_r)

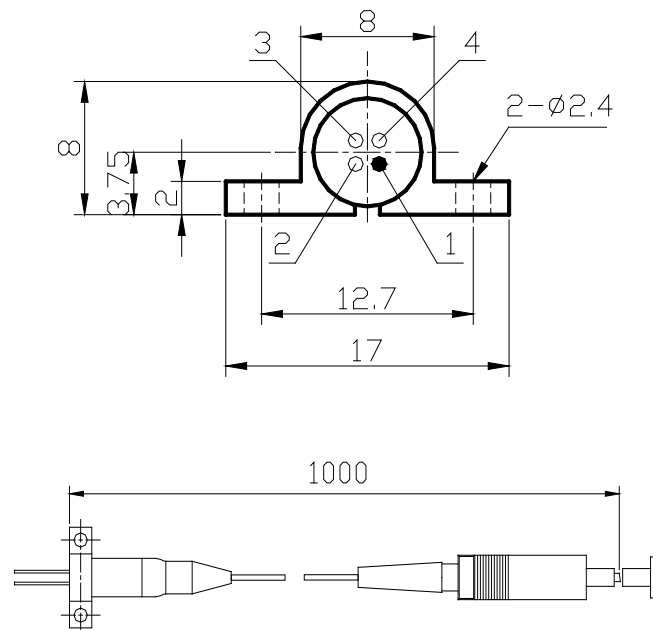
Photodiode Specifications ($T_c=25\text{ }^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Unit	Min	Type	Max	Test Condition
Monitor PD Current	I_m	μA	100	-	800	$P_o=1.5\text{mW}$
Monitor PD Dark Current	I_d	nA	-	-	10	$P_o=0\text{mW}, -5\text{V}$
Photodiode Capacitance	C	pF	-	-	20	$f=1\text{MHz}, V_{rPD}=5\text{V}$

Pin Description

Pin	Description
1	LD anode (case)
2	LD cathode
3	PD cathode
4	PD anode

Package Outline



Updated Information

correct a fault in V3.0, and the version is updated to V3.1

- in "others" column, "Ordering Information", page4. the product is described to be "Common Anode", indeed it's not.

Ordering Information

Part No.	Specification					
	Package	Bandwidth	Laser	Optical Power	Temp	Others
LDM3S504-ZZ	Coaxial Pigtail	>1000MHz	1310nm FP	1.5mW	-20~80°C	

**: The product marked with * is not available at present.*

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