



Analog 1310nm FP Coaxial Pigtail LD

LDM3S504-406

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.*

Application

- *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	Pf	mW	-	10
Fiber yield strength	-	kgf	-	1
Fiber bend radius	-	mm	30	-
Storage Temperature Range	Ts	°C	-40	85
Relative Humidity	RH	%	5	95
Laser Diode Reverse Voltage	VRL	V	-	2
Laser Diode Forward Current	IFL	mA		150
Monitor PD Reverse Voltage	VRPD	V		15
Monitor PD Reverse Current	IRPD	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	Tc	°C	-20	25	80
Operating Voltage	Vop	V	-	1.2	1.5

Specifications (Tc=25 °C, unless otherwise note)

Parameter	Symbol	Unit	Min	Typ	Max	Test condition
Electrical Characteristics						
Operating Voltage	Vop	V	-	-	1.5	
Threshold Current	Ith	mA	-	6	15	CW
			-	-	40	CW, over temperature
Operating Current	Iop	mA	-	30	50	Tc=25 °C
			-	-	100	Tc=80 °C
Series Resistance	Rs	Ω	-	-	10	IFL=30mA
Analog bandwidth	BW	MHz	1000	-	-	IFL=30mA
3rdorder distortion	CTB	dBc	-	-	-60	f1=872MHz,f2=874MHz Tc= -20~ 80 oC
Optical Characteristics						
Optical Output Power	Po	mW	1	1.5	2.5	IFL=Ith+20mA
Slope Efficiency	η	mW/mA		0.075		CW
Central Wavelength	λ c	nm	1290	1310	1330	IFL= 30mA
Spectral Width(-3dB)	Δ λ	nm			3	IFL=30mA
Tracking Error	*TE	dB	-1.5		1.5	Tc= -20~80 °C; Po=2mW

Note1: *TE=10log (PT/Pf)

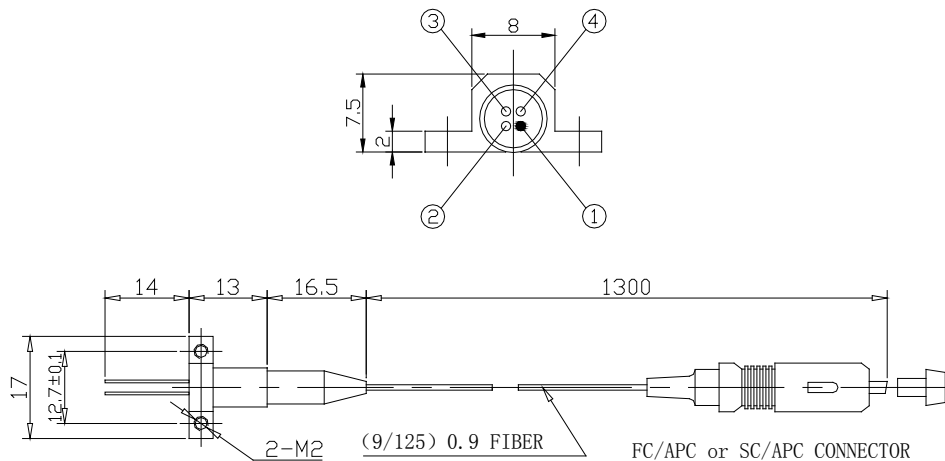
Photodiode Specifications (Tc=25 °C unless otherwise noted)

Parameter	Symbol	Unit	Min	Type	Max	Test Condition
Monitor PD Current	I _m	uA	100	-	1000	Po=1.5mW
Monitor PD Dark Current	I _d	nA	-	-	10	Po=0mW, -5V
Photodiode Capacitance	C	pF	-	-	20	f=1MHz, VrPD=5V

Pin Description

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

Package Outline



Ordering Information

Part No.	Specifications				
	Package	Bandwidth	Laser	Optical Power	Temp
LDM3S504-406	Coaxial Pigtail	>1000MHz	1310nm FP	1.5mW	-20~80°C

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