



Coaxial-Pigtailed DFB-LD Module for Analog Application

LDM5S514-400-C10

Features

- *Operating wavelength: 1550nm*
- *High-stability MQW-DFB laser chip*
- *Built-in InGaAsP monitor photodiode*
- *4-pin coaxial-pigtailed package, single mode coupling, FC/PC connector*
- *Built-in optical isolator*

Application

- *Mobile communication systems*
- *CATV transmission systems*
- *Other analog transmission applications*

Absolute Maximum Ratings

Parameter	Symbol	Unit	Min	Max
Optical output power from fiber end	Pf	mW	-	10
Optical isolation	ISO	dB	40	-
Fiber yield strength	-	kgf	-	1
Fiber bend radius	-	mm	30	-
Storage Temperature Range	Ts	°C	-40	85
Relative Humidity	RH	%	-	85
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		85
Power Supply Voltage	Vcc		-	1.1	1.5

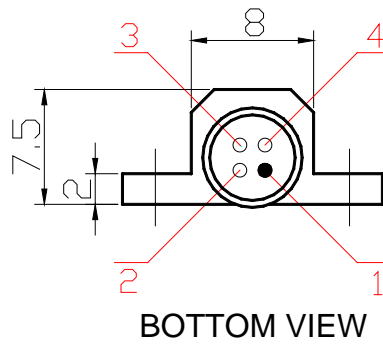
Specifications (Tc=25 °C, unless otherwise noted)

Parameter	Symbol	Unit	Min	Typ	Max	Condition
Electrical Characteristics						
Threshold Current	Ith	mA	-	8	15	CW
			-	-	50	CW, over temperature
Operating Current	Iop	mA	-	-	50	Tc=25 °C
			-	-	100	Tc=85 °C
Monitor PD Current	Im	uA	50	-	1000	CW, VrPD=5V
Monitor PD Dark Current	Id	nA	-	-	10	CW, VrPD=5V
			-	-	100	CW, VrPD=5V over temperature
Photodiode Capacitance	C	pF	-	-	10	f=1MHz, VrPD=5V
Analog bandwidth	BW	MHz	2300			-3dB
Third order distortion	IMD3	dBc			-60	f1=872MHz, f2=874MHz
Relative intensity noise	RIN	dB/Hz		-150		CW
Optical Characteristics						
Optical Output Power	Po	mW	1.4	-	-	
Slope Efficiency	η	W/A	0.07	-	-	CW

Optical Wavelength	λ_c	nm	1535	1550	1565	CW
Wavelength/Temperature Coefficient	$d\lambda/dT$	nm/C	-	0.1	0.12	Over temperature range
Side Mode Suppression Ratio	SMSR	dB	30	-	-	CW
Spectral Width	$\Delta\lambda$	nm	-	-	1	CW, -20dB
Optical isolation	ISO	dB	30	-	-	
Tracking Error	TE	dB	-1	-	+1	CW, P0=2mW, Note1

Note1: $TE=10\log(P_T/P_f)$

Pin Description



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

Package Outline

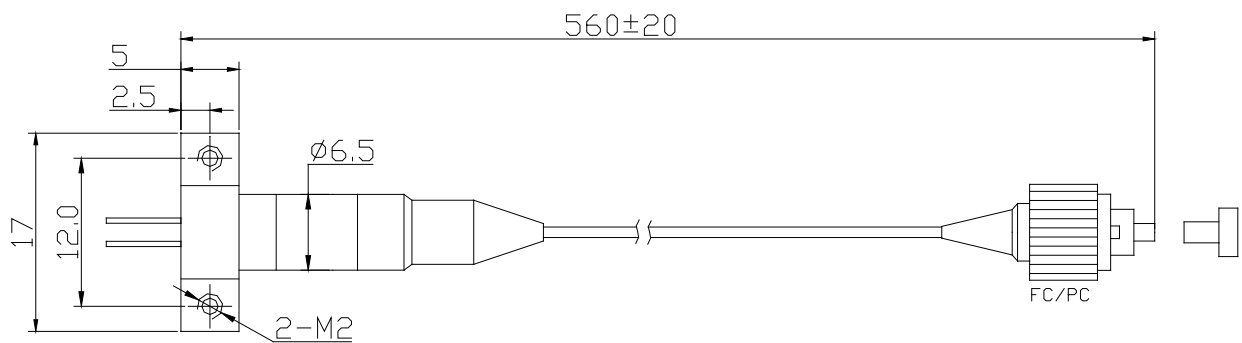


Figure.1 Tabs with 0.9mm pigtail jacket

NOTE: All dimension are in mm.

Ordering Information

Part.No.	Specifications				
	Package	Tx	Pout	Top	PIN Description
LDM5S514-400-C10	Coaxial-pigtailed	1550nm DFB	1.4mW	-20~85°C	A Version

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