LC-TOSA7WWDxxGEO-x

Technical Specification of 25G CWDM MQW-DFB Laser Diode Module (Transmitter Optical Sub-assembly)

Features

♦Coaxial Package

♦MQW-DFB laser Diode

♦Very Low Threshold Current

♦Capable of transmission up to 25Gb/s per channel

♦Operating Case temperature: -40℃ to +90℃

♦RoHS Compliant Products Available

Applications

♦ SFP28

♦ High speed Data Communication

Ordering information (Standard version *Note1)

Part No.	Pin Type	Power（mW）	Wavelength(nm)	Isolator
LC-TOSA7WWD0831GEO-5	LD-Pin-20	0.5～0.9	1310	Single Stage
LC-TOSA7WWD0831GEO-6	LD-Pin-20	0.5～0.8	1310	Single Stage
LC-TOSA7WWD0831GEO-8	LD-Pin-20	0.4～0.8	1310	Single Stage

*Note1: For more ordering information, please refer the nomenclature and contact EOPTOLINK sales.

Absolute maximum ratings *Note2

Parameter	Symbol	Ratings	Unit
Storage temperature	T_{STG}	-40~+90	℃
Operating case temperature	T_{OP}	-40~+90	℃
Forward current (LD)	I_{FLD}	100	mA
Reverse voltage (LD)	V_{RLD}	2	V
Reverse voltage (MPD)	V_{RMPD}	20	V
Reverse current (MPD)	I_{RMPD}	2	mA
Soldering temperature (<10s)	S_{TEMP}	260	℃

*Note2: Exceeding any one of these values may destroy the device immediately.

Electrical and optical characteristics

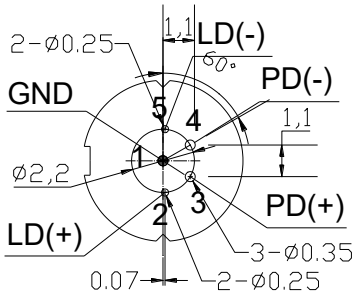
(Pf=1.5mW, SMF(9/125μm), Tc=+25℃, unless otherwise noted.)

Parameter	Symbol	Min	Typ	Max	Unit	Condition
Threshold current	Ith	—	8	15	mA	CW
Fiber Coupling Power	Pf	0.4	—	0.99	mW	CW, If=Ith+30mA
Operating voltage	Vf	—	1.3	1.7	V	CW,
Slope Efficiency	Se	0.02	—	0.05	mW/mA	CW, Average(Ith to Ith+30mA)
Peak wavelength	λp	1262.5	1270	1277.5	nm	CW
		1282.5	1290	1297.5		
		1302.5	1310	1317.5		
		1322.5	1330	1337.5		
		1342.5	1350	1357.5		
		1362.5	1370	1377.5		
Wavelength/Temperature	dλ/dT	—	0.09	—	nm/℃	Coefficient T=--40~+90℃
Side mode suppression ratio	SMSR	35	40	—	dB	CW
Bandwidth	BW	21	—	—	GHz	at-3dB
Rise time	tr	—	—	13	ps	Ib=Ith, 20-80%,ER=6dB
Fall time	tf	—	—	20	ps	Ib=Ith, 80-20%, ER=6dB
Tracking error	ΔPf	-1.5	—	1.5	dB	Im hold(@Pf=1.5mW CW, Tc=-40~+90℃
Monitor current*Note3	Imo	0.1	—	1.0	mA	CW, V_{RP}=5V Tc=-40~+90℃
Monitor dark current	Id	—	—	10	nA	V_{RP}=5V
Monitor capacitance	C	—	10	20	pF	V_{RP}=5V, f=1MHz
Connector repeatability	—	-1	—	1	dB	
Optical Isolation	—	30	—	—	dB	Single Stage

*Note3:Imo test error ≤±10%

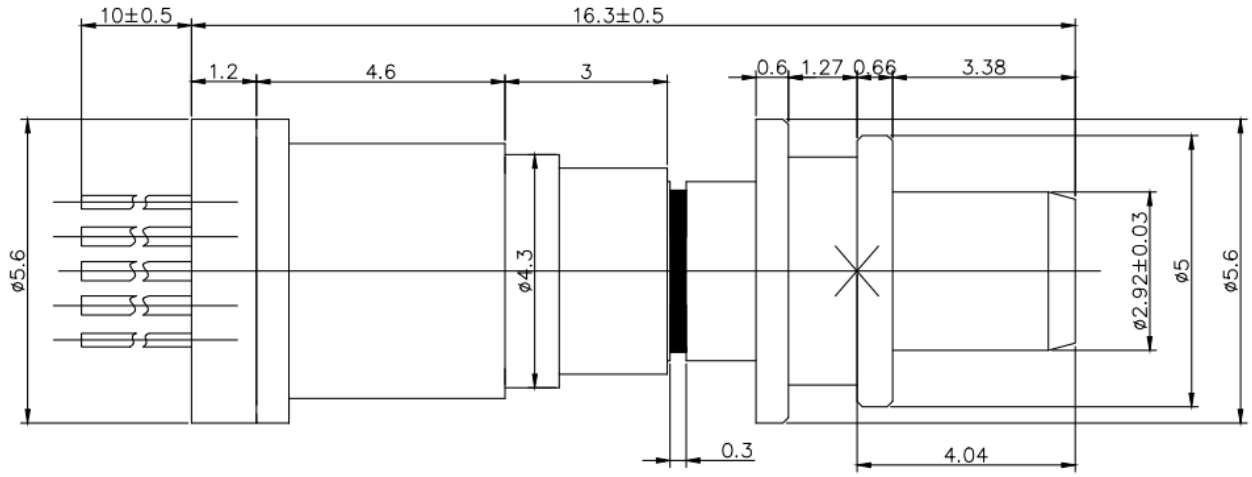
Pin Assignment

TYPE: 20



LD-pin-20 / TYPE: W

TOSA Package series *Note4



LC-TOSA7

*Note4:Laser mark can be customized.

Ordering Information

L C -TOSA ☐ ☐ ☐ ☐ ☐ ☐ ☐ ☐ - ☐

A B C D E F G H I

Order	Parameter	Detailed Description		
A	Connector Type	7=Insulated transition ring		
B	Data rate	W=25G		
C	Pin Type	W=LD-pin-20		
D	LD Type	D=DFB LD		
E	Power	08=0.4~0.99mW		
F	Wavelength	3=1310nm（±20nm）		
		27=1270nm	29=1290nm	31=1310nm
		33=1330nm	35=1350nm	37=1370nm
G	Isolator	G= Single Stage		
H	TO type	EO	CO	
I	Solution	Blank= None	x=1～9	

Precaution

(1) The modules should be handled in the same manner as ordinary semiconductor devices to prevent the electro-static damages. For safe keeping and carrying, the modules should be packaged with ESD proof material. To assemble the modules on PCB, the workbench, the soldering iron and the human body should be grounded.

(2) Please pay special attention to the atmosphere condition because the dew on the module may cause some electrical damages.

(3) Under such a strong vibration environment as in automobile, the performance and reliability are not guaranteed.

Obtaining Document

You can visit our website:

http://www.eoptolink.com

Or contact Eoptolink Technology Inc., Ltd. listed at the end of the documentation to get the latest documentation.

Revision History

Verision	Initiated	Reviewed	Approved	Revision History	Release Date
Va-1	Yinchun.Zhao	James.liu	Vincent.yu		2019.12.25
Va-2	Yinchun.Zhao	James.liu	Vincent.yu	Remove 15 power band, add F pin, add1310±20nm,add TO type CO	2020.06.16
Va-3	Yinchun.Zhao	James.liu	Vincent.yu	The lower limit of power is adjusted from 0.6mW to 0.4 mw	2020.06.28
Va-4	Yinchun.Zhao	James.liu	Vincent.yu	Update Threshold current	2020.12.03
Va-5	Yinchun.Zhao	James.liu	Vincent.yu	Update power range	2021.01.08

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Contact:

Add:IOT Industrial Park, Southwest Airport Economic Development Zone, Shuangliu County, Chengdu, Sichuan, China.
Tel: +86-28-67087999 ext.8081
Fax:+86-28-67087979
Postal: 610213
E-mail:sales@eoptolink.com
http://www.eoptolink.com