

SC-TOSA91DV058MW

850nm VCSEL laser diode receptacle module

Features

- ◆ Coaxial package
- ◆ High coupling efficiency for multi-mode fibers.
- ◆ High performance of noise and jitter characteristics.
- ◆ Maximum soldering temperature/time: 260°C/10s
- ◆ Operating case temperature: -10°C to +85°C
- ◆ RoHS compliant products available

Applications

- ◆ Optical transmitter of data Signal
- ◆ Optical transmitter of analog Signal
- ◆ Test equipments

General

SC-TOSA91DV058MW are 850nm VCSEL laser diode modules designed for fiber communication systems. These modules are transmitter optical sub-assembly with low threshold current and High performance of noise and jitter characteristics, which are ideally suitable for short reach applications, data rates from 155Mbps to 2.5Gbps.

A laser diode is mounted into a coaxial package integrated with an InGaAs monitor PD and a Ø2.5mm ferrule.

Absolute maximum ratings ^{*Note1}

Parameter	Symbol	Ratings	Unit
Storage temperature	Tstg	-40~+100	°C
Operating case temperature	Top	-10~+85	°C
Forward current (LD)	IFD	12	mA
Reverse voltage (LD)	VrL	5	V
Reverse voltage (PD)	VrP	15	V
Reverse current (PD)	IrP	10	mA
Soldering temperature (<10s)	Stemp	260	°C

*Note1: Exceeding any one of these values may destroy the device immediately.

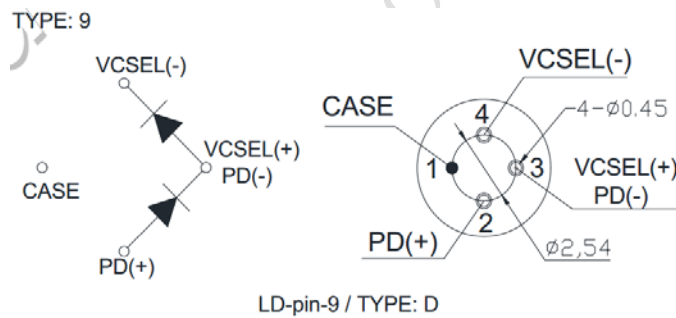
Electrical and optical characteristics*Note2

(MMF 62.5/125, minimum and maximum values are valid over the entire ambient temperature range.)

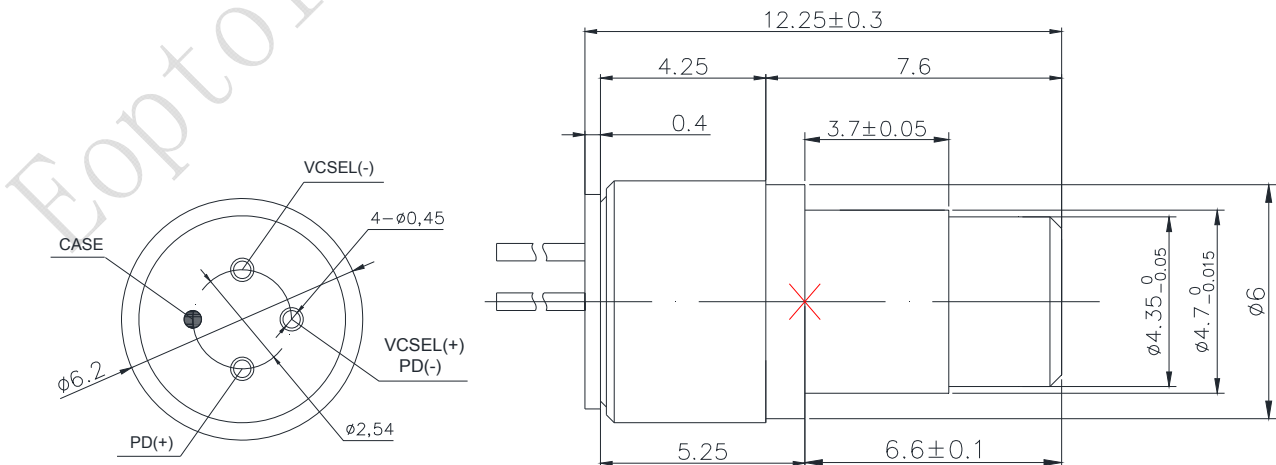
Parameter	Symbol	Min	Typ	Max	Unit	Condition
Threshold current	Ith	—	2	2.75	mA	CW
Output power	Po	0.2	0.5	0.99	mW	CW, If=6mA
Operating voltage	Vf	1.6	1.8	2.1	V	CW, If=6mA
Breakdown voltage	VBD	5	14	—	V	IR=10 uA
Slope efficiency	Se	0.01	—	0.05	mW/mA	CW, If=6mA
Peak wavelength	λ_c	830	850	860	nm	CW, If=6mA
Spectral width(RMS)	$\Delta\lambda$	—	—	0.85	nm	CW, If=6mA
Rise time(20%~80%)	tr	—	0.10	0.15	ns	Ibias=6mA
Fall time(20%~80%)	tf	—	0.13	0.15	ns	Ibias=6mA
Series resistance	RS	30	45	60	Ω	CW, If=6mA
Monitor current	Im	200	—	800	uA	CW, If=6mA
Monitor capacitance	C	—	6	10	pF	VR=3V @1MHz
Relative intensity noise	RIN	---	-130	-122	dB/Hz	IF =6 mA, f=1 GHz

*Note2: All parameters except mentioned are measured at IF=6 mA, 25°C, CW.

Pin assignment



Receptacle package series



Ordering information

SC — TOSA

A B C D E F G H

Order	Parameter	Detailed description
A	Connector type	9=ST-LD
B	Data rate	1=1.25G
C	Pin type	D=LD-pin-9
D	LD type	V= VCSEL
E	Power	05=0.2~0.99mW
F	Wavelength	8=850nm
G	Fiber type	M= MM Fiber
H	Receptacle type	W

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	George.Zhong	Kelly.cao Zore.Zhao		The initial	2019-03-15

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