



T85V-P-FAS52-10G

10Gbps 850nm VCSEL Pigtailed FC/APC, OM3 Patch Cord Fiber

Data Sheet

Description

The Lasermate T85V-P-FAS52-10G is an 850nm VCSEL laser module with FC/APC pigtail and OM3 multimode fiber, supporting up to 10.3125Gbps data rates. Designed for compact transceivers and high-speed optical links, it offers reliable performance for short-reach multimode communication systems.

Features

- Wavelength: 850nm
- Data Rate Support: Up to 10.3125Gbps
- Connector Type: FC/APC
- Fiber Type: OM3 patch cord multimode fiber
- Compatibility: Small form factor transceivers
- Electrical Interface: Isolation pin-out configuration
- Design Focus: Compact, flexible, and high-speed interconnects

Applications

- 850nm 10Gbps multimode fiber communication
- Optical short-reach data links
- Optical backplanes
- Small form factor pluggable transceivers
- Data center and enterprise network infrastructure

Specifications

Absolute Maximum Ratings			
Parameters	Symbol	Value	Unit
Storage temperature	Tstg	-40 to +100	°C
Operating case temperature	Top	-10 to +85	°C
Peak Continuous Forward current	I _F	10	mA
Soldering temperature	Stemp	260	°C
Soldering time	Stime	10	sec

Electro-Optical Characteristics (CW at T _c =25°C, unless otherwise noted)						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
Threshold Current	I _{th}		1.0	1.5	mA	T _a =25°C
			2.0	2.5		T _a =85°C
Slope Efficiency	η	0.09		0.17	mW/mA	I _F =6mA
Rise/Fall Time (20%-80%)	t _r /t _f		50		ps	I _F =6mA, ER=5dB
Wavelength	λ _P	840	850	860	nm	I _F =6mA ⁽²⁾
Forward Voltage	V _F	1.7		2.4	V	I _F =6mA
Spectral Bandwidth (RMS)	Δλ			0.65	nm	I _F =6mA, T _a =-10~85°C
Relative Intensity Noise	RIN			-128	db/Hz	I _F =6mA, f= 1 GHz
Monitor Current	I _m	30		500	μA	V _R =5V, P _{OC} =600μW ⁽³⁾
PD Dark Current	I _d			20	nA	V _R =5V, T _a =25°C
PD Capacitance	C _M		12		pF	V _R =3V, f= 1 MHz

Thermal Characteristics						
Parameters	Symbol	Min.	Typ.	Max.	Unit	Conditions
I _{th} Temperature Variation	ΔI _{th}			1.5	mA	T _a =-10~85°C
η Temperature Coefficient	Δη/ΔT		-0.4		%/°C	T _a =-10~85°C, I _F =6mA
λ _P Temperature Coefficient	ΔP/ΔT		0.07		nm/°C	T _a =-10~85°C, I _F =6mA
Tracking Error	TE	-1.5		1.5	dB	T _a =-10~85°C ⁽⁴⁾
Series Resistance	R _S		70	85	Ohm	T _a =25°C, I _F =6mA
			60			T _a =85°C, I _F =6mA

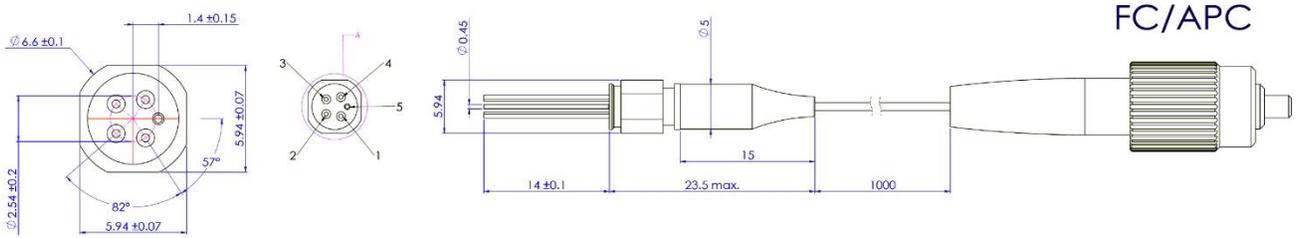
Notes:

- All parameters are measured at I_F=6mA, 25°C unless otherwise stated.
- Minimum and Maximum values are valid over the entire ambient temperature range.
- P_{OC}=Coupled Optical Power, be measured with a multi-mode 50/125μm fiber and ambient temperature 25°C.
- CW, I_m Constant (@P_o= I_{th}+4mA, 25°C), TE=10log [(P_o@T_a)/(P_o@25°C)]



Outline Dimensions (unit: mm)

Pigtailed TOSA



Pin Configuration

Number	Function
1	VCSEL Anode
2	PD Cathode
3	PD Anode
4	VCSEL Cathode
5	Case

Note: Specifications are subject to change without notice.