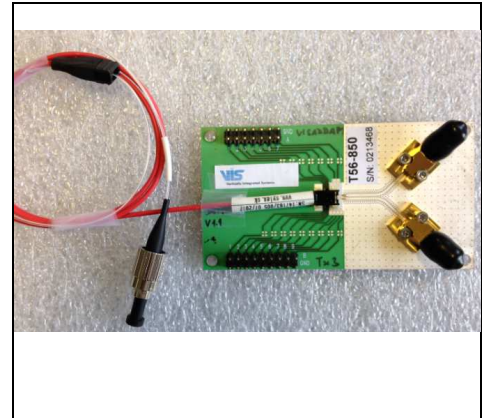


Up to 56 Gbit/s NRZ 850nm VCSEL Single channel optical transmitter



Product Code: T56-850TB

Preliminary

Product Description

The T56-850 transmitter optical subassembly combines an 850nm VCSEL and an optional driver IC integrated on a test board and fiber coupled with a 50/125 μm multimode fiber. The T56-850nm is designed for high speed data communication applications. The device is configured for differential drive and a controlled impedance circuit is available for optimum performance.

Features

- up to 56 Gbit/s data rate
- 50/125 μm fiber coupled testboard
- 1.85 mm electrical RF connectors
- FC/PC optical connector

Applications

- CEI-56G-NRZ (XSR/USR/MR/LR)
- Proprietary optical interconnects
- Research and development

Parameter	Typical (PD chips)	Notes
Emmission Wavelength	850 nm	
Data rate	up to 56 Gbit/s	
Supply Voltage	3.3V	
Power consumption	250 mW	

All product specifications and descriptions are subject to change without notice.

Electro-optical characteristics (at T_{case} = 25 °C)

Parameter VCSEL	Symbol	Test Condition	Min	Typ	Max	Unit
Peak emission wavelength	λ	P _{out} = 0.5mW	840	850	860	nm
Case operating temperature	T _{op}		10		50	°C
RMS spectral width	$\Delta\lambda$	P _{out} = 0.5mW			0.4	nm
λ_p temperature coefficient	$\Delta\lambda_p$			0.06		nm/°C
Relative intensity noise	RIN	56 Gbit/s			130	dB/Hz
Rise/Fall time	T _r	P _{out} = 0.5mW		8		psec
	T _f	56 Gbit/s		9		psec
		20-80%				
Threshold current	I _{th}			0.7		mA
I _{th} temp variation	ΔI_{th}	T = 10 °C to 50 °C		+1.0	+2.0	mA
Laser forward voltage	V _f	P _{out} = 0.5mW		2.2		V

Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit
Storage temperature	T _{st}	5	55	°C
Laser forward current 85°C	I _F		7	mA
Laser reverse voltage	V _{R_{RD}}		-2	V
ESD (Human Body Model)	T _r		Class 1	

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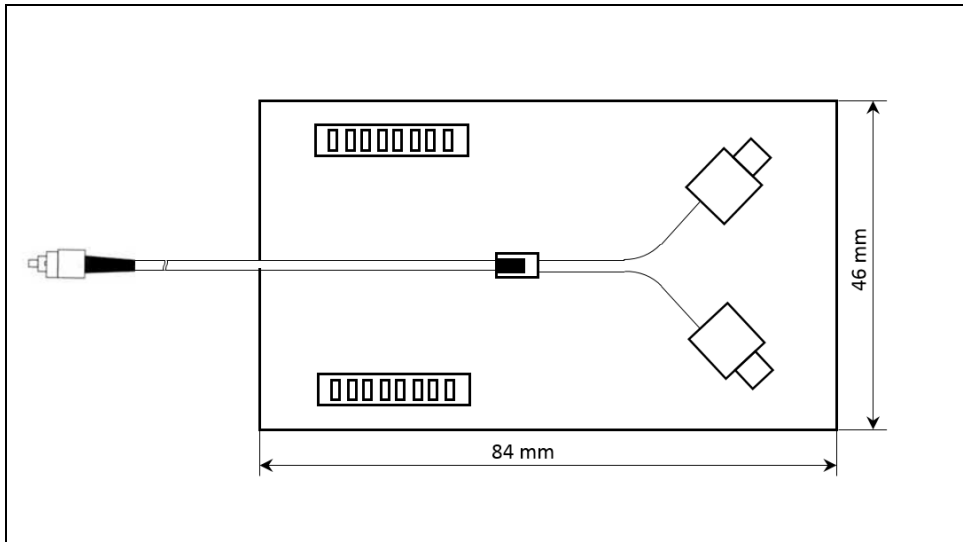
Datasheet

T56-850TB



Vertically Integrated Systems

Dimensions



Attention: As soon as supply voltage of 3.3 V is applied the laser will start lasing!

RoHS
Compliant



LASER RADIATION. DO NOT VIEW
DIRECTLY WITH OPTICAL
INSTRUMENTS
CLASS 1M LASER PRODUCT

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