

Datasheet

High Speed Photodetector Module



Vertically Integrated Systems

High Speed (up to 56 Gbit/s) Multi-Mode Fiber-Coupled Photodetector Module (840–1650 nm)

WITH FC CONNECTORIZED FIBER PIGTAIL

Product Code: [D30-850M](#)

Product Description

These high speed photodetector modules consist of an InP pin photodetector integrated with a 50 μm -core diameter multimode fiber for optical input. The responsivity is greater than 0.4 A/W at 850 nm. The modules are engineering samples and use an optional external DC bias-T.

Current module version has [D40-SWDM-C1](#) PD chip inside.

Features

- MMF Pigtail (50 μm core, 1 m length);
- Anritsu V electrical connector;
- FC/PC optical output connector;
- 3 dB bandwidth ≥ 30 GHz

Applications

- Fiber optics systems tests
- Research and development
- VCSEL testing



Actual product may vary in appearance.

Parameter	Typical	Notes
Operating Wavelength	840 ~ 1650 nm	
3 dB Bandwidth	≥ 30 GHz	
Dark Current	< 10 pA	
Reverse bias voltage	-2 to -4 volts	
Maximum input power	2 mW @ 850 nm	

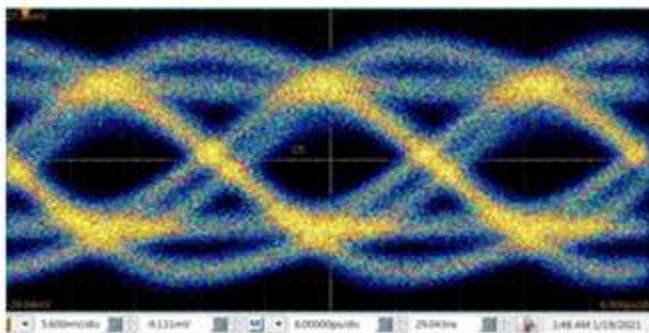
All product specifications and descriptions are subject to change without notice.

Electro-Optical Specifications (based on D40 SWDM) (T = 0 to 85°C)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Dark current	I_d	$V_{Bias} = -2.5 V$			4	nA
S_{21} 3 dB Bandwidth	$BW_{f_{3dB}}$	-2.5V 50Ω load	30		40	GHz
Operating wavelength	λ		840		960	nm
Responsivity	R	850 nm		0.4		A/W
	R	880 nm		0.4		A/W
	R	910 nm		0.4		A/W
	R	940 nm		0.4		A/W
	R	1310 nm*			0.6	A/W
	R	1550 nm*			0.6	A/W

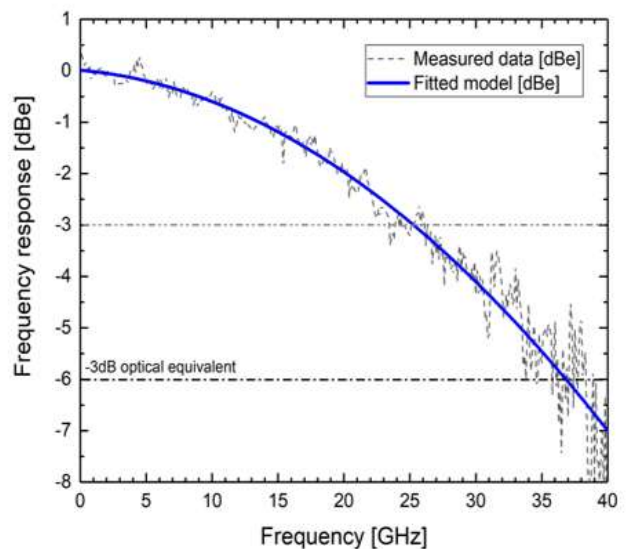
*anti-reflection coating on the PD chip is optimized for <1% reflectivity within the range 840 nm - 960 nm

NRZ application performance



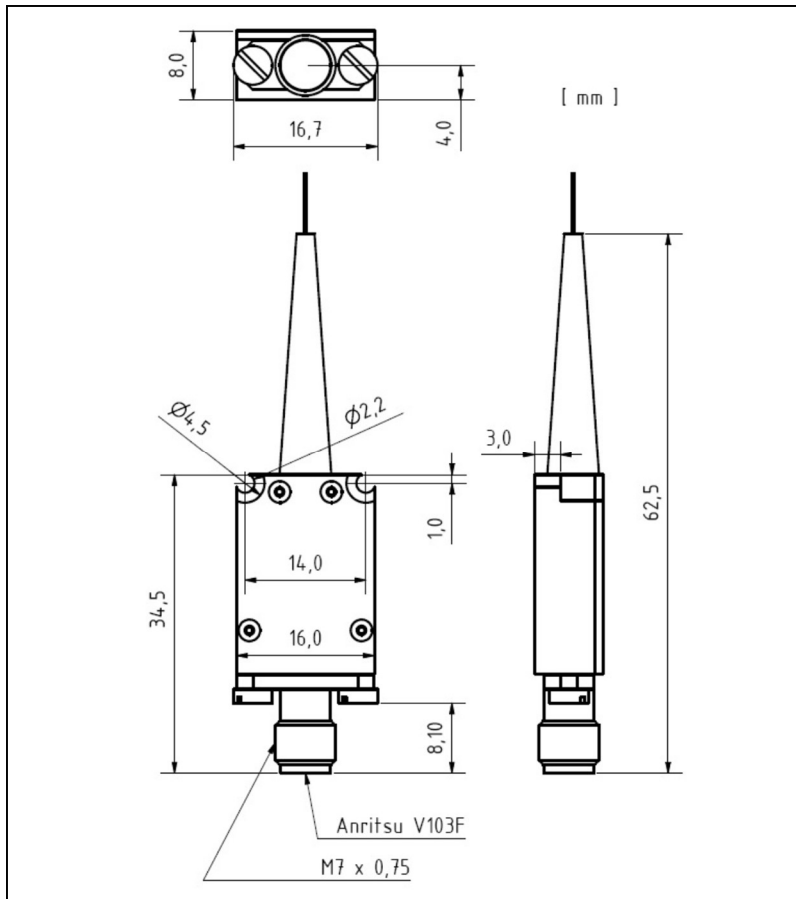
50 Gbit/s -3V PRBS15
w/o amplification, equalization or DSP
850nm VCSEL Transmitter used: VIS T56-850

Frequency response graph (20 μm)

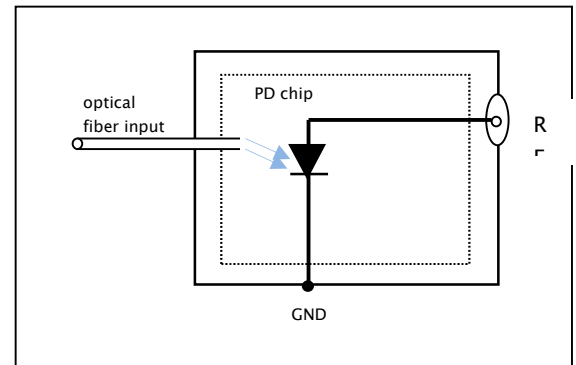


S21 and S11 measurements can be supplied upon request

Mechanical dimensions



Schematic Diagram



VI Systems GmbH
Hardenbergstrasse 7
10623 Berlin
Tel.: +49 30 3083143 30
Fax: +49 30 3083143 59
sales@v-i-systems.com
www.v-i-systems.com

All product specifications and descriptions are subject to change without notice.
Please contact our sales department for additional information and to receive a quotation: sales@v-i-systems.com