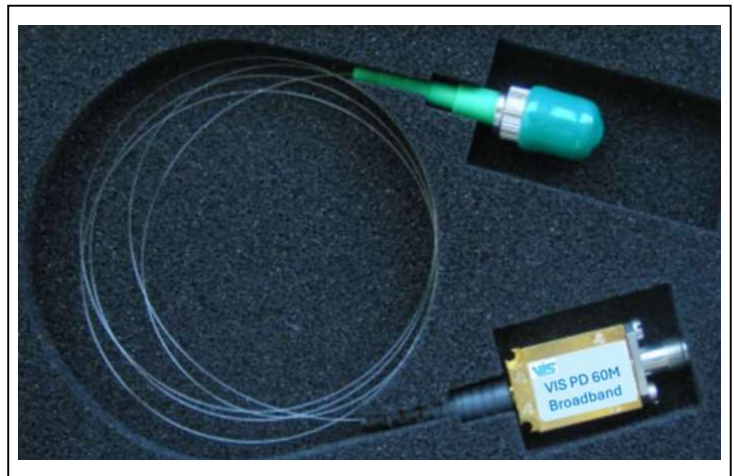


60GHz Fiber-Coupled Photodetector Module (400-1600 nm)

Product Code: D60M FC



Sample image. Actual product may vary.

Product Description

Top-illuminated InP-based pin photodetector chip sensitive in the 400 – 1600nm range. In the SWDM spectral range 840-960 nm the device offers 60GHz modulation bandwidth. 50Ω-matched HF modules are coupled to single mode or multimode fiber.

Features

- High responsivity
- Optional:
 - MMF Pigtail (50 μm core, 1 m length)
 - SMF Pigtail (9μm core, 1 m length)
- FC/PC optical output connector
- Anritsu V electrical connector; ·
- f_{-3dB0} bandwidth ≥ 60 GHz

Applications

- Fiber optics system tests
- Research and Development
- PAM-N 200G-400G VCSEL test

Parameter	Typical	Notes
Operating Wavelength*	840 - 960 nm*	400-1600nm**
Data Rate	up to 200 Gbaud	PAM-4
Responsivity	min 0.4 A/W	at 850 nm
Small signal f_{-3dB0} bandwidth	> 60 GHz	typ.

*reflectivity < -20dB

**Outside of the 840-960nm range the reflectivity is above > -20dB, and the bandwidth may deviate

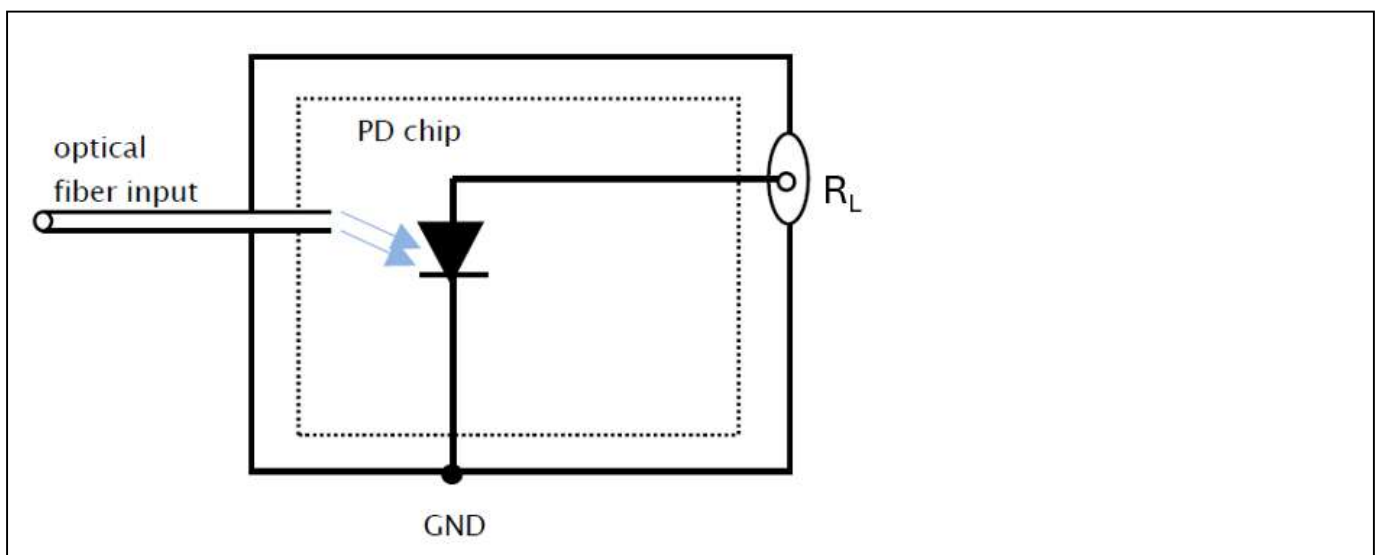
Electro-Optical Specifications (module based on D400G-C1)

Parameter	Symbol	Condition	Min	Typ	Max	Unit
Dark current	I_d	$V_{Bias} = -2.5\text{ V}$			1	nA
S_{21} (f_{-3dB0}) Bandwidth*	$BW_{f_{3dB0}}$	50Ω load		60		GHz
Operating wavelength	λ		840		960	nm
Responsivity**	R	850 nm	0.35	0.4	0.6	A/W
	R	880 nm		0.4		A/W
	R	910 nm		0.6		A/W
	R	940 nm		0.6		A/W
	R	1310nm		0.6		A/W
	R_s	1550nm		0.6		A/W
Maximum power					4mW	mW

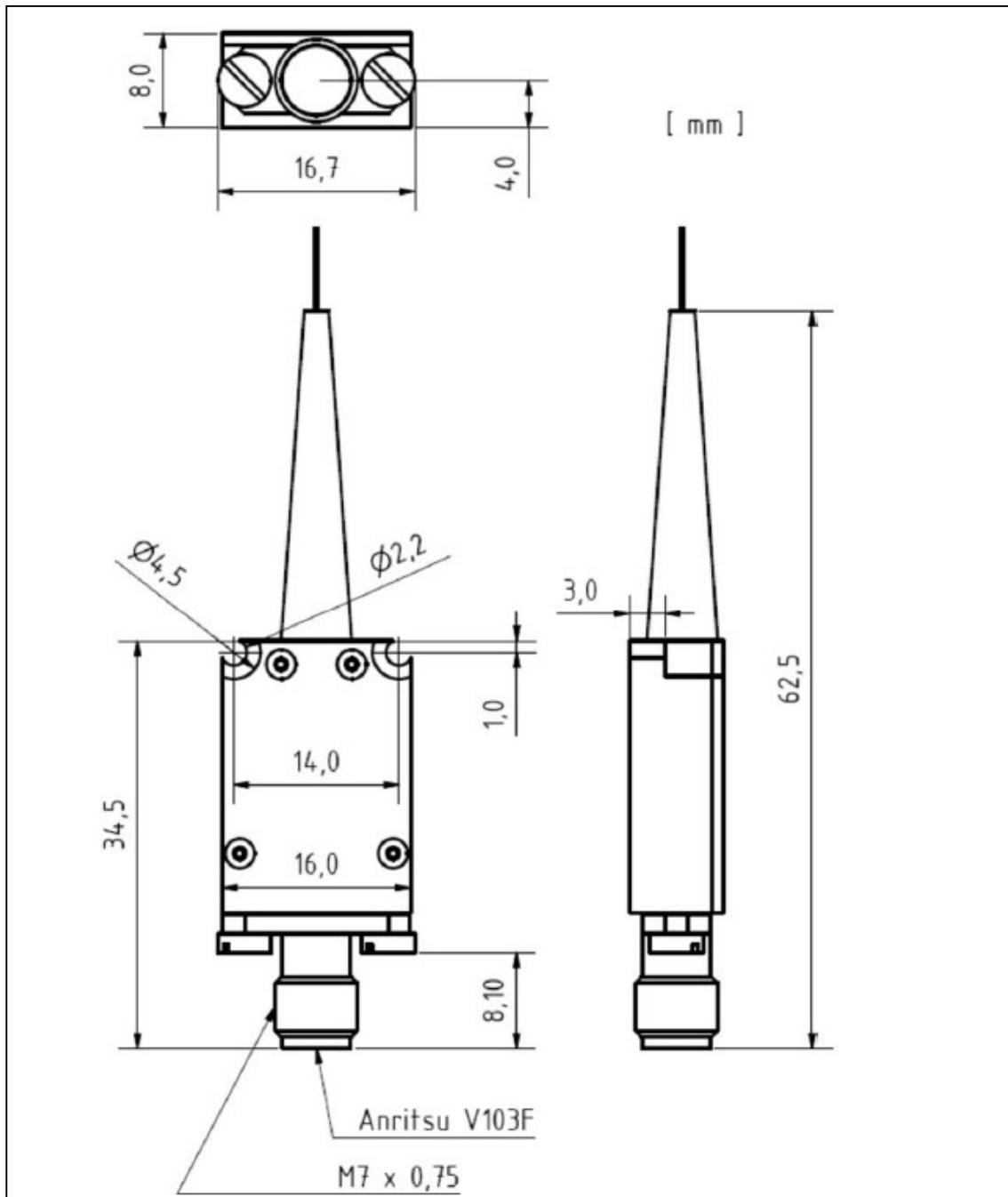
* At -1V bias. The optimal bandwidth depends on the bias voltage. At -4V $f_{-3dB0} \sim 40\text{GHz}$

** for single mode fiber, coupling to $50\mu\text{m}$ core multimode fiber can result in lower responsivity

Schematic Diagram



Mechanical Dimensions



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

Qualification Notification

The D60M FC photodetector module is based on D400G PIN chips which have been tested to meet the specifications outlined in this datasheet. A reliability assessment report for the PD chip material is available as a separate document.



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