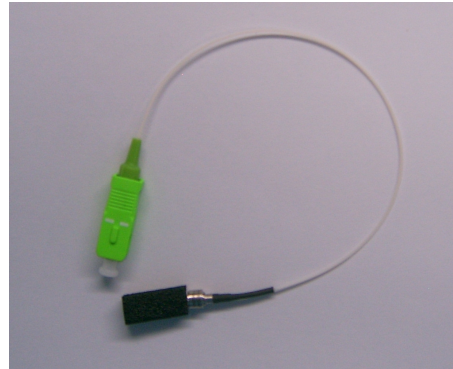


GPDP-2022ESAMG

Technical Specification of Long Wavelength PIN Photodiode Module for Wide Frequency-range CATV Receiver

Features

- ◆ Low Return Loss
- ◆ Low Dark Current
- ◆ Quick Pulse Response
- ◆ Suitable for CATV Application
- ◆ High Responsivity at 1310nm and 1550nm, High Linearity
- ◆ RoHS Compliant Products Available



Applications

- ◆ Analog Optical Receiver
- ◆ Test Equipments

General

GPDP-2022ESAMG are InGaAs/InP PIN photodiode modules designed for fiber optic CATV receiver and other high-speed analog receiver. These modules have low inter-modulation distortion and high responsivity at 1310nm and 1550nm, and are ideally suitable for wide frequency range receiver up to 1GHz.

A photodiode is mounted into a low capacitance coaxial package integrated with a single mode fiber pigtail.

Absolute maximum ratings^{Note1}

Parameter	Symbol	Min	Max	Unit
Storage Temperature	T _{ST}	-40	100	□
Operating Temperature	T _{OP}	-40	85	□
Reverse Voltage	VR		20	V
Forward Current	I _{FD}		10	mA
Saturation Input Power	P _{IN}		10	dBm
Soldering Temperature / Time	Ts/t		260/10	°C/s

*Note1: For more ordering information, please refer the nomenclature and contact EPOTOLINK sales.

Ordering Information (Standard version)

Part No.	Wavelength (nm)	Explore Area (um)	Bandwidth (GHz)	Package	Pin Type
GPDP-2022ESAMG	1310~1550	75	3.2	E	M

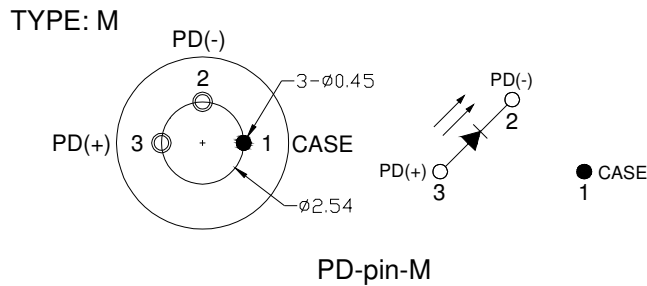
Electrical and optical characteristics

($V_R=12V$, $T_C=+25^\circ C$, unless otherwise noted.)

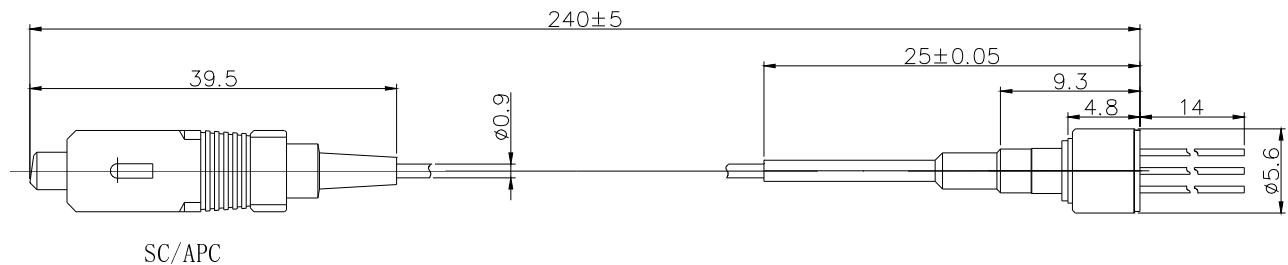
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Detection Wavelength Range	λ	-	1100		1650	nm
Active Diameter	DA	-		75		μm
Responsibility	R	$V_R=-5V@1310nm$	0.8	0.85	-	A/W
		$V_R=-5V@1550nm$	0.9	0.95	-	A/W
Return Loss	RL		-	-55	-	dB
Dark Current	I_d	$V_R = 5V$	-	0.1	1	nA
Capacitance	C_p	$V_R = 5V$	-	0.6	0.7	pF
Bandwidth	BW	$V_R=5V$		2.7		GHz
IMD2	CSO	$\lambda=1310nm$ (Note 1)	-	-75	-70	dBc
IMD3	CTB		-	-85	-80	dBc

Notes1:IM2 measured at $V_R=12V$, $\lambda=1310nm$, $P_{avg}=0dBm$, $M_i=0.7$, $R = 50 \Omega$, $f_1+f_2=850MHz$, $f_1-f_2=50MHz$ (Test frequency: $f_1=450MHz$, $f_2=400MHz$). All are measured at $25^\circ C$.

Pin Assignment



Pigtail Package dimension ^{Note2}



*Note2:PIN orientation can be customized, Standard SC/APC connector and SMF pigtail, length is $17.5\pm 0.5cm$.

Ordering Information

G P D P — □ □ □ □ □ □ □ □ □ □
 A B C D E F G H I

A	Wavelength	20=1100~1610nm			
B	Explore Area	2=75μm			
C	RF Bandwidth	2≤3.2GHz			
D	Package Series	E			
E	Connector	SA=SC/APC			
F	Pin Type	M=PD-pin-M			
G	TO Type	G			
H	Pass Band Wavelength	Blank=1310/1550nm	3=1310nm	5=1550nm	
I	Fiber Type	Blank=SM		M=MM	
J	Fiber diameter	BLANK=0.9mm	1=0.25mm	2=2.0mm	3=3.0mm

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	Release Date
Va-4	Zore.Zhao	Jacky.Cheng		2009-12-22

Notice:

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