



NuPhotonics

Rev. 1.01 – Oct. 2025

Part Number: P35-TO-X-XX

Product State: Production Build

35G InGaAs Photodiode ROSA Package

Description

35 GHz InGaAs photodiode built in a TO-Can package. This delivers great performance with broad temperature operating range. Offering multiple mounting bracket options as well as different optical connectors to meet your specific criteria.

Features

- TO-Can Package
- Single mode Pigtail cable
- Low Dark current
- High Bandwidth



Applications

- 5G
- Datacenters
- RF over Fiber (RToF)



IMPORTANT NOTICE: more Information on warranty, changes, rights, notices, and other information are presented at the end of this data sheet. If the sheet is not present, refer to www.nuphotonics.com for the company issued data sheet.

Electro-Optical Characteristics ($T_{op} 23 \pm 3^{\circ}C$, unless otherwise specified)

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Conditions
Response Spectrum	λ	1100		1650	nm	
Dark Current	I_d		0.05	4.0	nA	$V_r = 5.0 V$
Reverse Breakdown Voltage	V_{BR}	20			V	$I = 10 \mu A$
Responsivity	R_e		0.5		A/W	$\lambda = 1310 P_{in} 0.5 mW V = 1.0v$
Bandwidth	BW	35		50	GHz	$\lambda = 1550 P_{in} 0.5 mW V = 3.0v$ $R_L = 50\Omega$ at - 3 dB
Capacitance	C_p		60	70	fF	$F = 1 MHz V = 4.0 v$
Saturation power	P			3	dBm	$V_r = 5V$

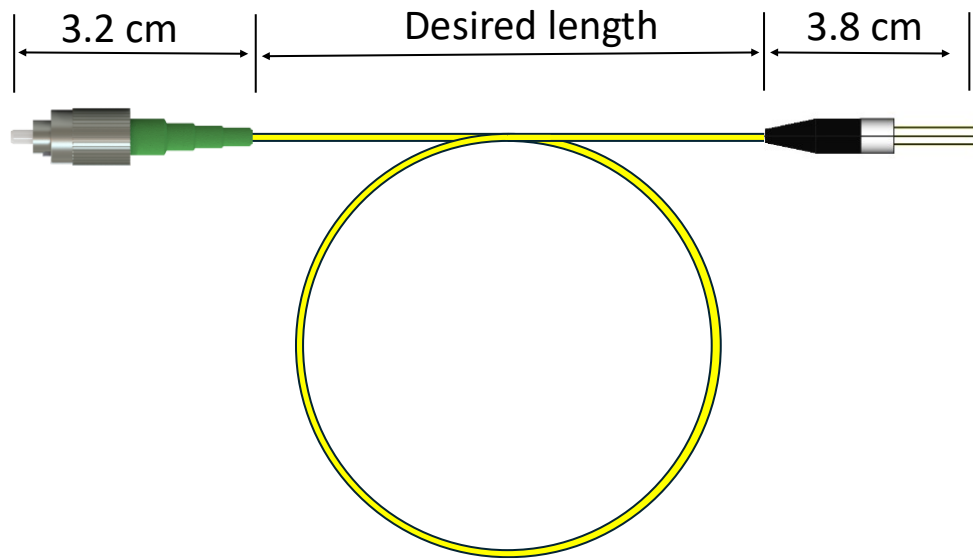
Absolute Maximum Ratings

Parameter	Symbol	Condition	Min.	Max.	Unit
Reverse Voltage	V_r			10	V
Forward Current	I_F			10	mA
Reverse Current	I_R			5	mA
Optical Input power	P_{in}			10	mW
Storage Temperature	T_{stg}		-25	90	$^{\circ}C$
Storage Humidity	H_{stg}			85	% r.H.
Operating Temperature	T_{op}		-10	80	$^{\circ}C$
Soldering Temperature	T_{st}	60 sec		200	$^{\circ}C$
ESD Susceptibility		HBM	100		V

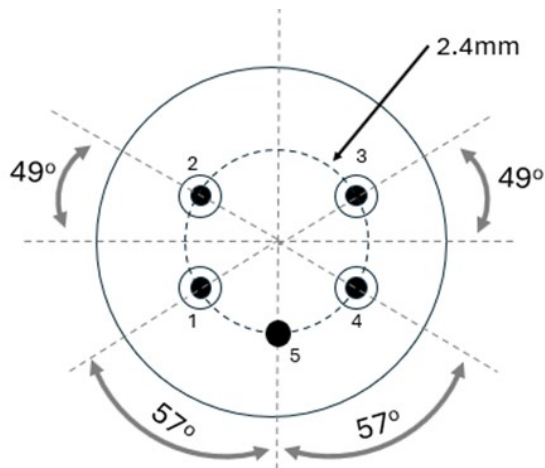
Operating at maximum operating specs for prolong periods of time will damage the device.



Device Dimensions



Device Pin Configuration (Bottom View)

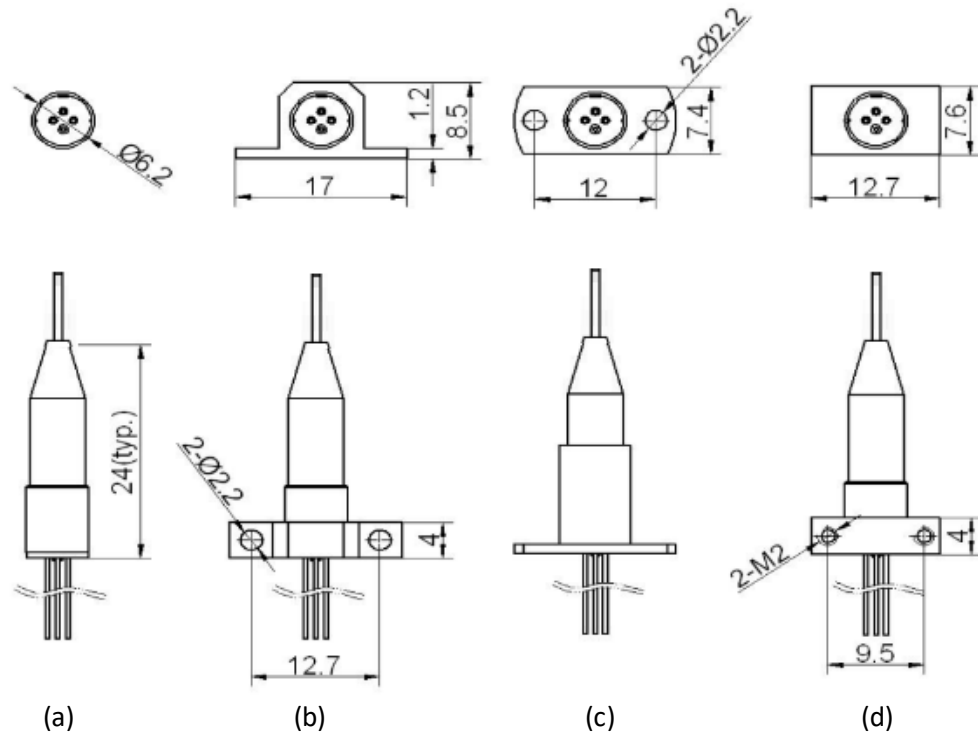


Pin Number	Function
1	PD (+)
2	NC
3	NC
4	PD (-)
5	GND

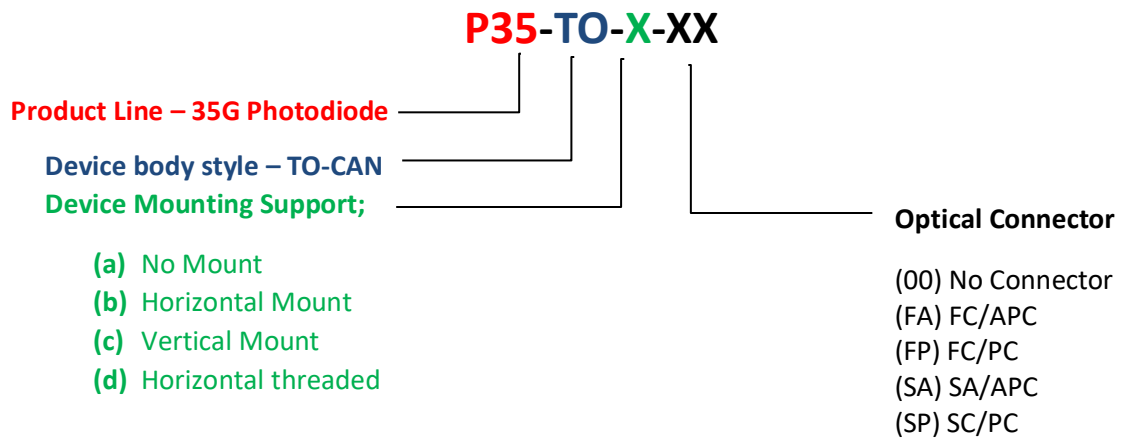
Table 1: Device Pin out



Build Configurations – Mounting Support



Device Nomenclature



Inquiry Information

Sales: All inquiries regarding sales please contact Sales@NuPhotonics.com

General: If you are interested in a custom solution, general information, or engineering related information please contact Inquiry@NuPhotonics.com



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Definitions: Product State

Alpha Build: Devices in Alpha build are in internal engineering build and testing stages. Major changes may happen for production build.

Beta Build: Devices in Beta build are for external customer and engineering sample testing stages. Minor changes may happen for production build.

Production Build: Customer ready devices. Small appearance changes may occur between devices.

Obsolete: Currently not supported.