

High-sensitivity 10Gbps APD TO

WPAPB100SNNCNF1

Features

- Standard TO-46 package with hermetic sealing
- Application: IEEE 802.3av 10G-EPON ONU

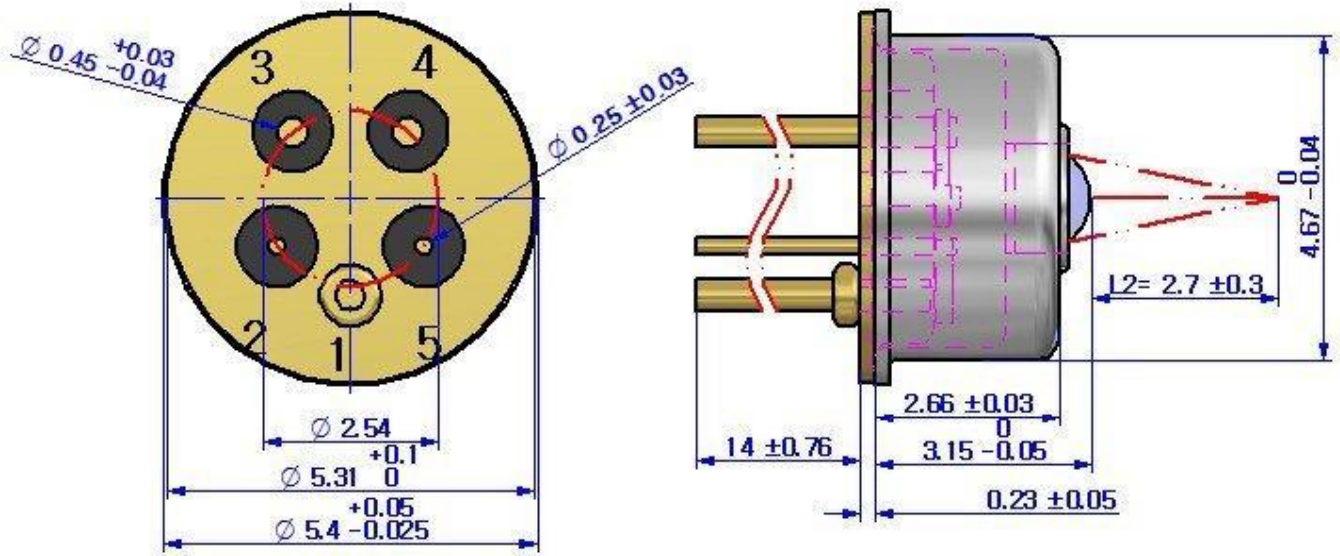
Absolute Maximum Ratings

Parameters	Symbol	Rating	Unit
TIA supply voltage	V_{CC}	-0.5 to +3.8	V
APD supply voltage	V_{APD}	0 to V_{BR}	V
APD reverse current	I_{APD}	2.5	mA
APD damage level	L_D	-5	dBm
Operating case temperature range	T_C	-40 to +85	°C
Storage temperature range	T_{STG}	-40 to +85	°C

Electro-Optical Characteristics (Typical values are at 25 °C)

Parameters	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Responsivity	R	@ M=1, 1550nm	0.70	0.80		A/W
Optical Wavelength Range	λ	-	1250		1650	nm
Sensitivity	P_S	10.3125Gbps NRZ, PRBS=2 ³¹ -1, BER=1×10 ⁻¹² , ER=10dB, λ =1550nm		-27.5	-27	dBm
Maximum Overload	P_{MAX}	10.3125Gbps NRZ, PRBS=2 ³¹ -1, BER=1×10 ⁻¹² , ER=6dB, λ =1550nm	-5			dBm
TIA Supply Voltage	V_{CC}	-	2.97	3.3	3.63	V
TIA Supply Current	I_{CC}	-	-	32	47	mA
Transimpedance	Z_T	Differential(50Ω on each output), f=100MHz	1.5	2.0	2.5	kΩ
Breakdown Voltage	V_{BR}	Dark current, I_d =10μA	23	27	31	V
Low Frequency Cut-off	f_{CL}	-		15		kHz
Maximum Output Voltage	V_{OUT}	Differential		300		mV _{p-p}
Output Impedance	Z_O	Single-ended		50		Ω
Temperature Coefficient of V_{BR}	γ	Operating case temperature		15		mV/°C

Mechanical Dimension (unit: mm)



Pin Configuration

No.	Pin name	Type	Description
1	GND	Ground	Ground
2	DATA	RF+ output	TIA positive output
3	V _{CC}	Power	TIA supply voltage
4	V _{APD}	Power	APD supply voltage
5	$\overline{\text{DATA}}$	RF- output	TIA negative output

Ordering information

WPAPB100SNNCF1

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Specifications described here are subject to change without notice