1000um 900-1700nm TO46 package InGaAs Photodiode with TEC



Description

SIN-1TE-TO46-1000 series unit InGaAs detector is mainly composed of P-I-N structure InGaAs photosensitive chip, transition electrode plate, temperature sensor and Single Stage thermoelectric cooler (1TE), in the form of TO46 package. This user manual only describes the product series.

Features

- 1000um Active diameters
- TO-46 package with flat window cap
- Operating temperature -40°C to 70°C
- High Responsibility
- Electrically cooled with TEC and thermistor
- Low dark current
- RoHS compliant

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E/O Characteristics

Electrical and optical characteristics (Tc=25°C, unless otherwise noted)

Parameter	Symbol	Min	Typ	Max	Unit	Test Condition
Active Area	ϕ	---	1000	---	um	
Optical Wavelength Range	λ	900	---	1700	nm	
Terminal capacitance	Ct	---	45	60	pF	VR=-5V,f=1MHz
Dark Current	Id	---	1.0	10.0	nA	VR= - 5V
Responsibility	Resp	0.8	0.9	---	A/W	VR= - 5V，λ=1310nm
		0.9	1.0	---		VR= - 5V，λ=1550nm

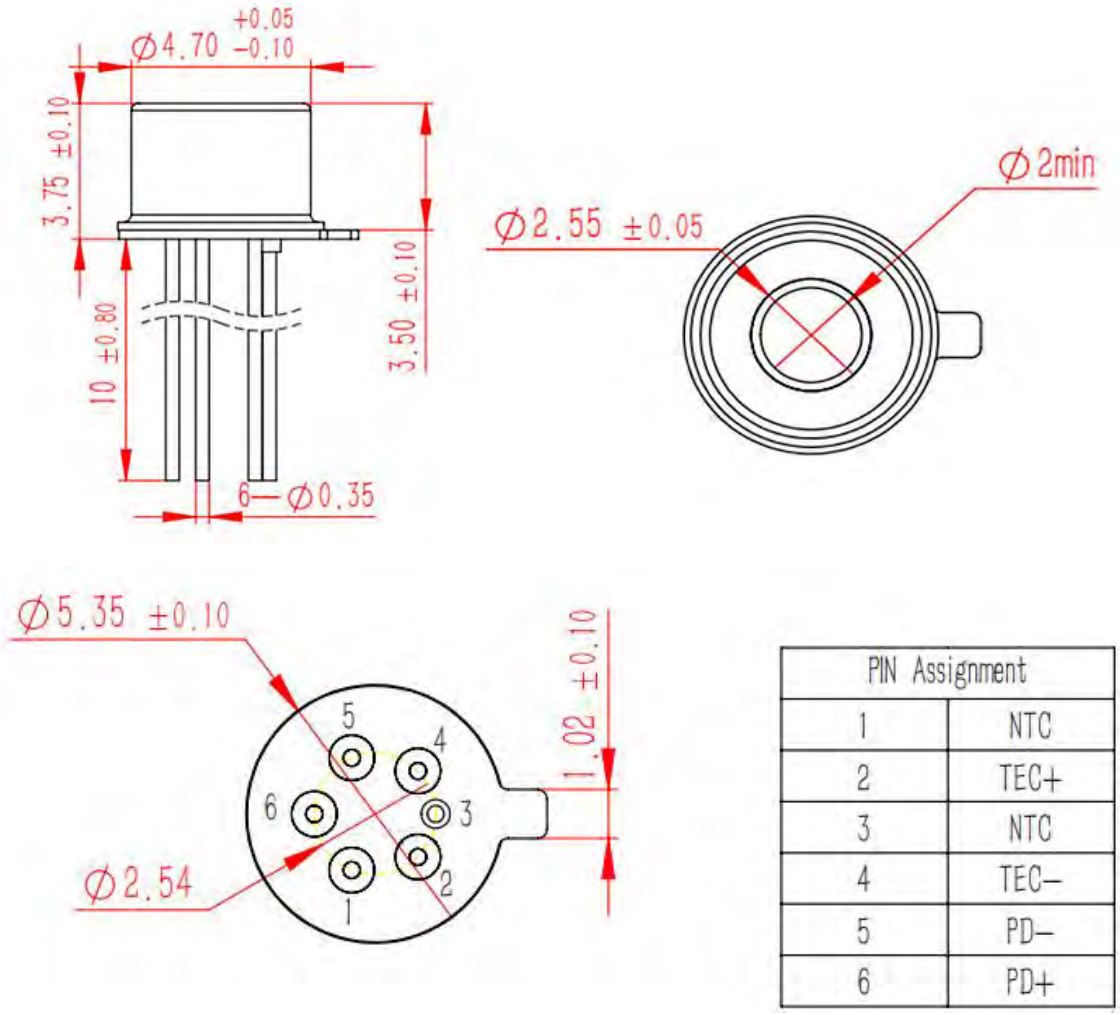
Absolute Maximum Ratings

Parameter	Symbol	Min	Max	Unit	Note
Operating Temperature	TC	-40	+70	°C	Avoid dew condensation
Storage Temperature (Ambient)	TSTG	-40	+85	°C	Avoid dew condensation
Reverse Voltage	VR	---	20	V	
Power dissipation	PD	---	100	mW	
Forward current	IF	---	50	mA	
Maximum optical power input	Pi(max)	---	50	mW	
TEC current	IC	---	1	A	
Thermistor power rating	Pth	---	1.5	mW	

Standard

- Compliant with Telcordia GR-468

Dimensions and Pin definitions



PIN Assignment	
1	NTC
2	TEC+
3	NTC
4	TEC−
5	PD−
6	PD+

Unit (mm)

Application

- Near IR sensors
- Near IR spectroscopy
- CommunicationsPower meterså