

GD5520Y 型 InGaAs 雪崩光电探测器

GD5520Y InGaAs APD

◇ 产品特点 The features

- 正照平面型芯片结构 Top illumination planar APD
- 噪声低、灵敏度高、可靠性高 Low noise, High sensitivity, High reliability
- 2.5Gbps 测试模块, 光纤测试系统等应用 2.5Gbps testing module, Optical testing system, etc. application



◇ 最大额定值 The absolute values

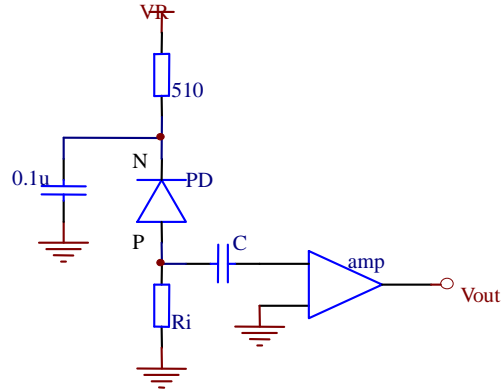
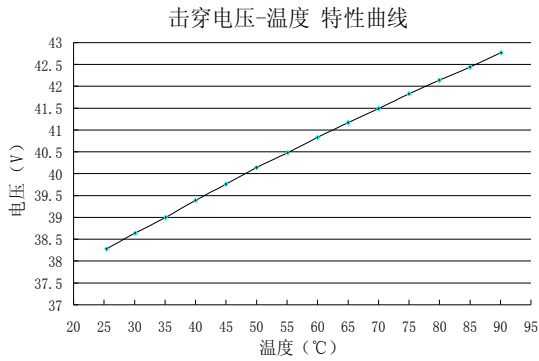
工作电压 Operating voltage	0.99 $\times V_{BR}$	工作温度 Operating temperature	-50~+80°C	耗散功率 Power dissipation	50mW
正向电流 Forward current	5mA	贮存温度 storage temperature	-55~+85°C	焊接温度(时间) Soldering temperature(time)	260°C (10s)

◇ 光电性能 The opto-eletronic characteritics (@Tc=22±3°C)

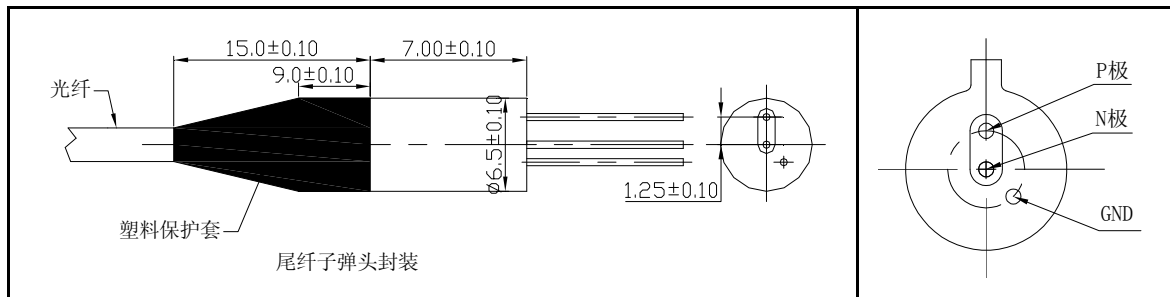
特性参数 Parameters	符号 Sym.	测试条件 Test conditions	最小 Min	典型 Typ	最大 Max	单位 Unit
光谱响应范围 Response Spectrum	λ	—	900~1700			nm
光敏面直径 Active diameter	φ	—	50			μm
响应度 Reponsivity	Re	$\lambda=1.55\mu\text{m}, M=10, \varphi_e=1\mu\text{w}$	8.5			A/W
最大可用增益 Maximum multiplication gain	M_{max}	$\lambda=1.55\mu\text{m}, \varphi_e=1\mu\text{w}$	20			
反向击穿电压 Reverse breakdown voltage	V_{BR}	$I_D=100\mu\text{A}, \varphi_e=0$	40		60	V
暗电流 Dark current	I_D	$M=10, \varphi_e=0$		2	10	nA
总电容 Total capacitance	C_{tot}	$M=10, \varphi_e=0$		0.5		pF
-3dB 带宽 -3dB bandwidth	BW	$V_R=5\text{V}, f_0=100\text{MHz}, R_L=50\Omega$	1.8	2.0		GHz
工作电压温度系数 Operating voltage temperature coefficient	δ	$T_c=-40\sim+85^\circ\text{C}$		0.10	0.15	V/°C

◇ 典型特性曲线及应用电路

The typical characteristic curve and application electric circuit



◇ 封装外形、尺寸及引脚定义 The package and lead



◇ 注意事项 The cautions

- 该器件要有温度反馈工作电压控制
This detector need feedback of voltage temperature when operating.
- 贮运、使用注意静电保护措施
The suitable ESD protecting mersures are recommend in storage,transporting and using.
- 光纤弯曲半径不小于 20mm
The fiber bending radius no less than 20mm for avoiding fiber damaged
- 使用前保证光纤连接处洁净
Be sure the fiber coupling facet is clean before connecting it to opto-circuit.