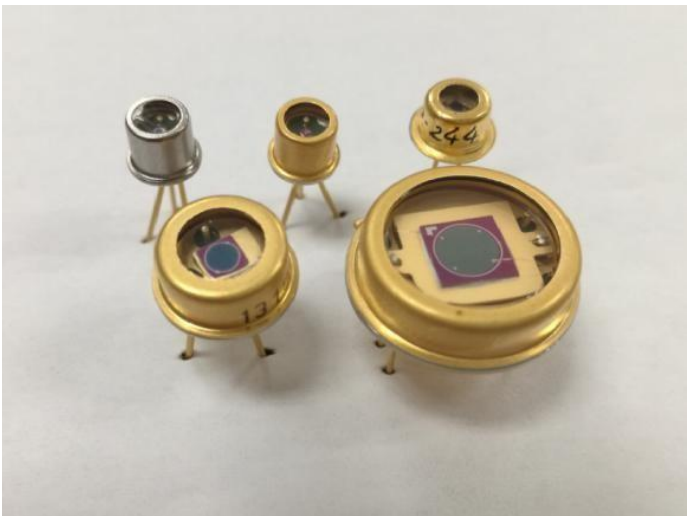


# HL102 型光电二极管系列

## (HL102 Photodiode series)

器件为硅 PIN 光电二极管，在反向偏置条件下工作，光谱响应范围从可见光到近红外，峰值响应波长 980nm, 在 1064nm 响应可达 0.3A/W。

The device is a silicon PIN photodiode, which operates under reverse bias conditions. Its spectral response range is from visible light to near-infrared light. Its peak response wavelength is 980 nm, and its response at 1064 nm can reach 0.3 A/W.



- ◆ 特点 Features

➢ 平面正照结构  
Plane orthographic structure

➢ 低暗电流  
Low dark current

➢ 高响应度  
High responsiveness

➢ 高可靠性  
High reliability
- ◆ 应用 Applications

➢ 光纤通信、传感、测距  
Optical fiber communication, sensing and ranging

➢ 可见光至近红领域的光探测快速光脉冲检测  
Fast light pulse detection from visible light to near red field

➢ 各种工业控制系统  
Various industrial control systems

### ◆ 结构/最大绝对额定值 Structure/maximum absolute rating

器件型号 Device model	封装形式 Packaging form	光敏面尺 Photosensitive surface ruler (mm)	最大工作电压 Maximum operating voltage (V)	工作温度 Operating temperature and pressur (°C)	储存温度 Storage temperature (°C)	焊接温度 welding temperatur (°C)	饱和光功率 Saturated optical power (W/cm²)
HL102Φ 0.2	同轴 II 型、 550I、T0-46、 插拔式	Φ 0.2	40	-45~100	-55~125	260	0.3
HL102Φ 0.5		Φ 0.5					
HL102Φ 1		Φ 1.0					
HL102Φ 2	T0-5	Φ 2.0					
HL102Φ 4	T0-8	Φ 4.0					

◆ 光电性能 Photoelectric performanc (@Ta=25℃)

器件型号 Device model	光谱响应范围 Spectral response range (nm)	峰值响应波长 Peak response wavelength (nm)	响应度 Responsiveness $\lambda=1064\text{nm}$ (A/W)	暗电流 Dark current $V_R=40\text{V}$ (nA)	上升时间 By raising up the time $\lambda=1064\text{nm}$ $V_R=40\text{V}$ $R_L=50\Omega$ (ns)	结电容 Event $V_R=40\text{V}$ $f=1\text{MHz}$ (pF)	击穿电压 breakdown voltage (V)
HL102Φ 0.2	400~1100	980	0.3	0.5	10	0.5	100
HL102Φ 0.5				1.0	10	0.8	
HL102Φ 1				2.0	12	2.0	
HL102Φ 2				3.0	12	5.0	
HL102Φ 4				5.0	20	12.0	

◆ 典型特性曲线 Typical characteristic curve (@Ta=25℃)

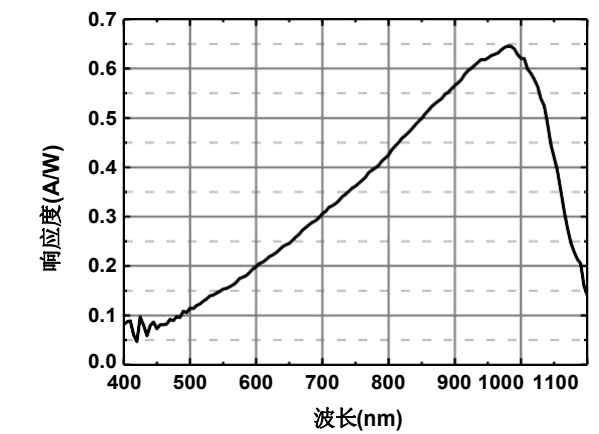


图 1 光谱响应曲线  
Spectral response curve

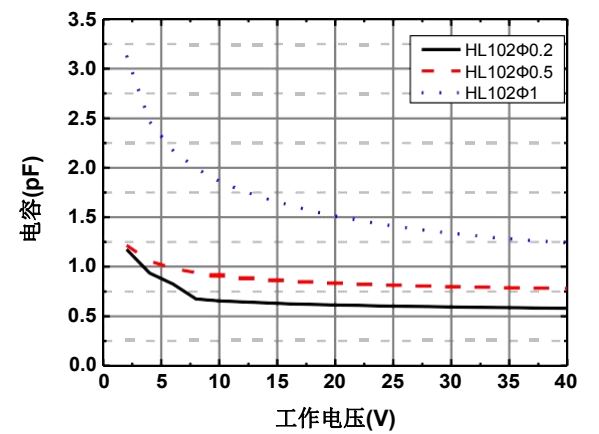


图 2 电容与工作电压关系曲线  
Relation curve between capacitance and working voltage

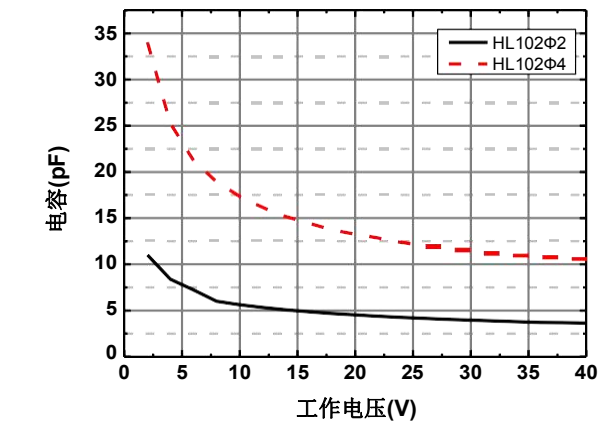
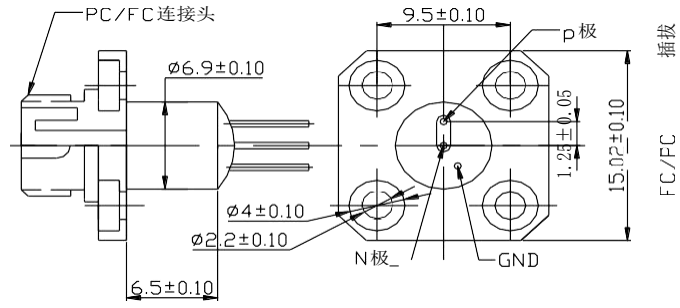
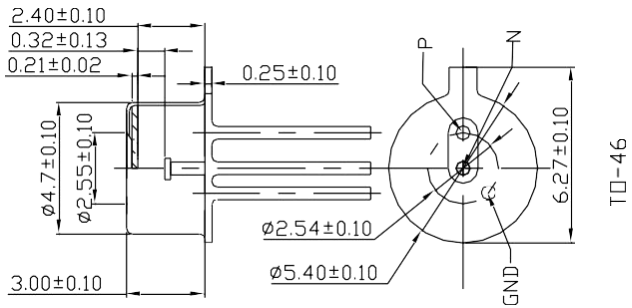
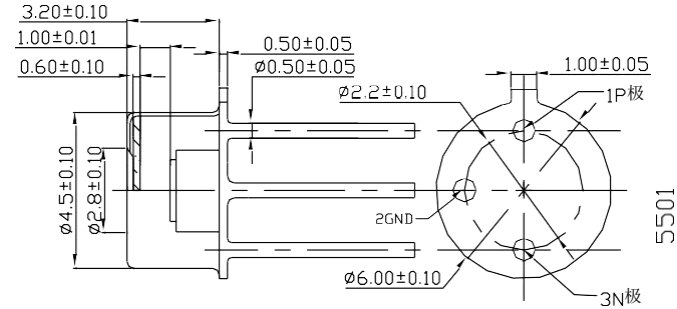
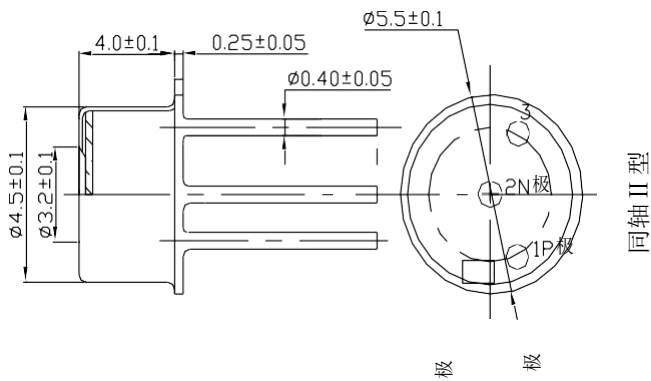


图 3 电容与工作电压关系曲线  
Relation curve between capacitance and working voltage

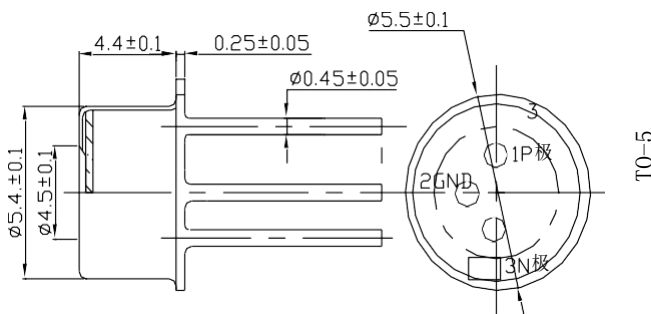
◆ 封装外形、尺寸及引脚定义

Package shape, size and pin definitio

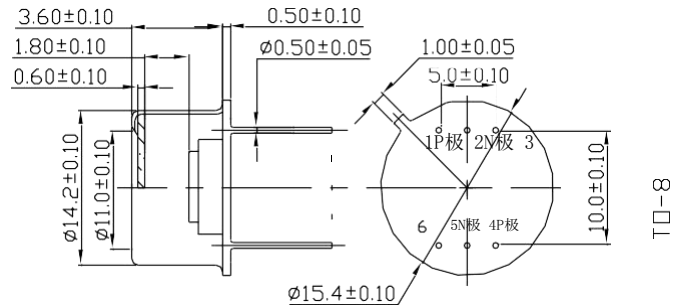
■ HL102Φ 0.2/HL102Φ 0.5/HL102Φ 1



■ HL102Φ 2



■ HL102Φ 4



◆ 应用电路 Application circuit

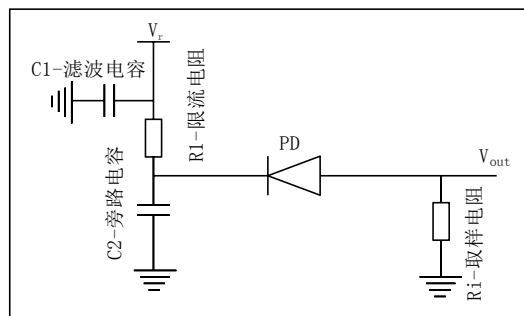


图 4 应用电路图

◆ 注意事项 note

- 器件属于静电敏感器件，请在静电安全环境下操作。

Device belongs to electrostatic sensitive device, please operate in electrostatic safe environment

◆ 联系方式 Contact information

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