

### Features

- ◆ High photo sensitivity
- ◆ Fast response times
- ◆ Small junction capacitance
- ◆ Pb free
- ◆ RoHS Compliance
- ◆ The product itself will remain within RoHS compliant version.

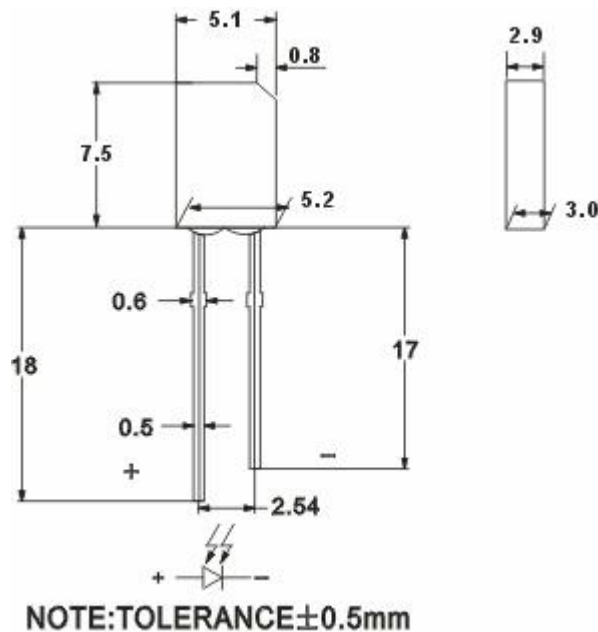
### Descriptions

- ◆ CL-PD5120B-07 is a high speed and sensitive PIN photodiode in a flat side view plastic package. ◆ The epoxy package itself is an IR filter , spectrally matched to IR emitter.

### Applications

- ◆ High speed photo detector
- ◆ Camera
- ◆ Optoelectronic switch
- ◆ VCRs , Video camera

### Package Dimension:



Part NO.	Chip	Lens Color
	Material	
CL-PD5120B-07	Silicon	Black

### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerances unless dimensions  $\pm 0.25\text{mm}$ .
3. Lead spacing is measure where the lead emerge from the package.

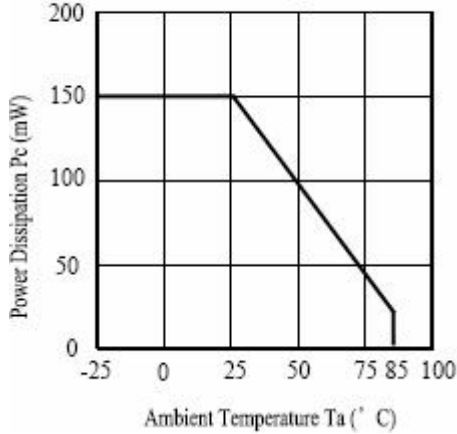
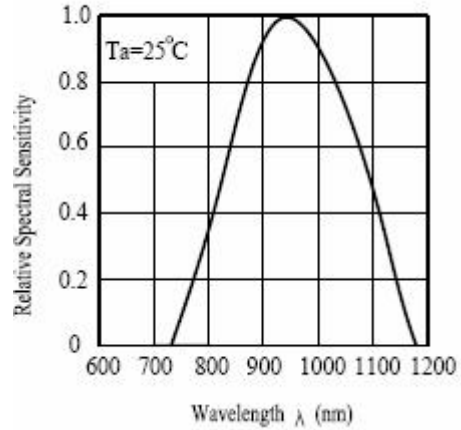
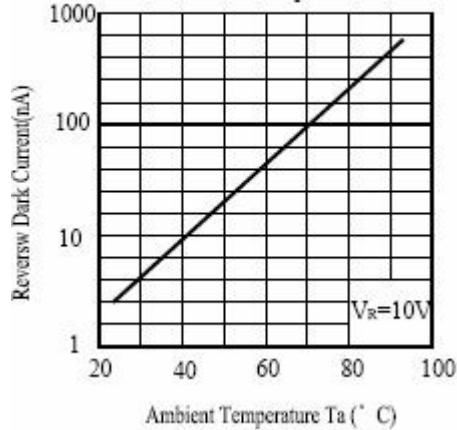
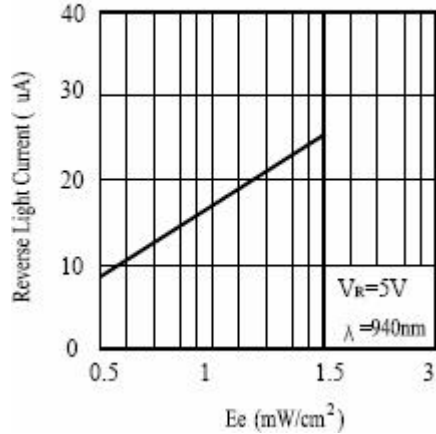
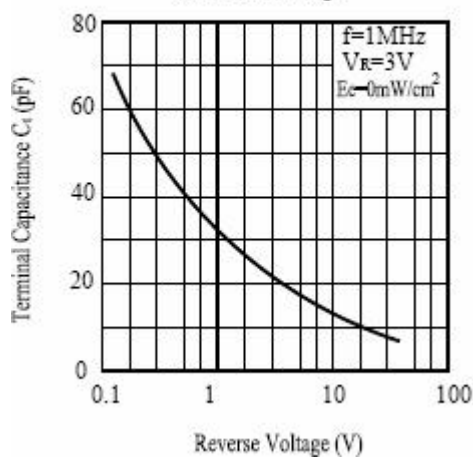
**Absolute Maximum Ratings at Ta=25°C**

Parameter	Symbol	Rating	Unit	Notice
Reverse Voltage	$V_R$	32	V	
Power Dissipation	$P_d$	150	mW	
Lead Soldering Temperature	$T_{sol}$	260	°C	4mm from mold body less than 5 seconds
Operating Temperature	$T_{opr}$	-40~+85	°C	
Storage Temperature	$T_{stg}$	-40~+85	°C	

**Electrical Optical Characteristics:**

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Range of Spectral Bandwidth	$\lambda_{0.5}$	840		1100	nm	
Wavelength of Peak Sensitivity	$\lambda_P$		940		nm	
Open-Circuit Current	$V_{oc}$		0.35		V	$E_e=5mW/cm^2$ $\lambda_P=940nm$
Short-Circuit Current	$I_{sc}$		18		$\mu A$	
Reverse Light Current	$I_L$	10.2	18		$\mu A$	$E_e=5mW/cm^2$ $\lambda_P=940nm$ $V_R=5V$
Dark Current	$I_D$		5	30	nA	$E_e=0mW/cm^2$ $V_R=10V$
Reverse Breakdown Voltage	$B_{VR}$	32	170		V	$E_e=0mW/cm^2$ $I_R=100\mu A$
Total Capacitance	$C_t$		25		pF	$E_e=0mW/cm^2$ $F=1MHZ$ $V_R=3V$
Rise/Fall Time	$t_r/t_f$		50/50		nS	$R_L=1000\Omega$ $V_R=10V$

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**Typical Electrical-Optical Characteristics Curves**
**Fig.1 Power Dissipation vs. Ambient Temperature**

**Fig.2 Spectral Sensitivity**

**Fig.3 Dark Current vs. Ambient Temperature**

**Fig. 4 Reverse Light Current vs. Ee**

**Fig.5 Terminal Capacitance vs. Reverse Voltage**

**Fig.6 Response Time vs. Load Resistance**
