

PHOTODIODE PRODUCTS SPECIFICATION

HPDB5K-15A

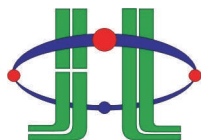


Drawn by	Checked by	Approved by



DATE:2008/12/24

REV:F



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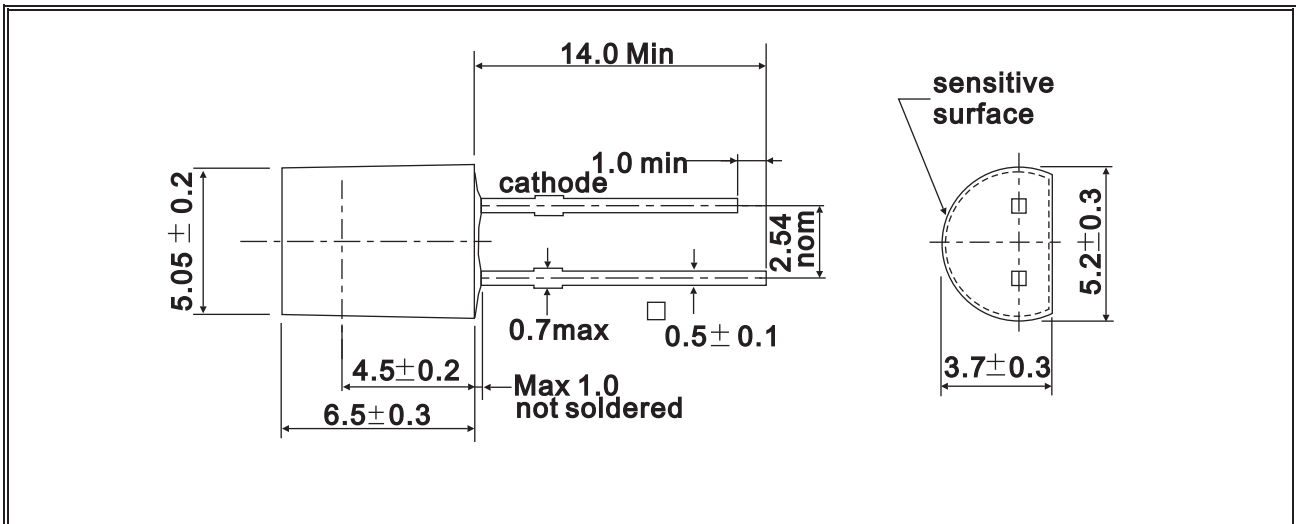
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DEVICES

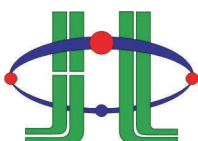
Part Number	Lens		Source	
	Color	Diffusion	Dice Source	Color
HPDB5K-15A	Black	Non-Diffused	---	Photodiode

PACKAGE DIMENSIONS:



NOTE:

- 1.All dimensions are in millimeter.
- 2.Lead spacing is measured where the lead emerge from the package.
- 3.protruded resin under flange is 1.5mm max.
- 4.specifications are subject to change without notice.
- 5.Tolerance is ± 0.3 mm unless otherwise noted.



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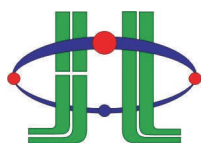
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ABSOLUTE MAXIMUM RATINGS

TA=25°C

PARAMETER	SYMBOL	MAX. RATING	UNIT
Power Dissipation	Pd	150	mW
Reverse Voltage	VR	33	V
Active Area	AA	7.16	mm ²
Operating Temperature	Topr	-40 ~ +85	°C
Storage Temperature	Tstg	-40 ~ +100	°C
Dip Soldering Temperature (3mm from case Bottom 260 °C for 5 seconds)			

*Iron soldering in 350°C within 5 seconds will not cause damage to the dice. But be aware of the high temperature will not only make the epoxy soften but also cause the lead moving and the gold wire broken and even open. So before returning to the normal temperature PLEASE AVOID any serious pressure on the top of epoxy and lead.



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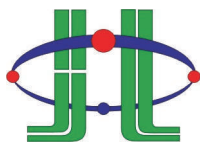
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ELECTRIC-OPTICAL CHARACTERISTICS

TA=25°C

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
View Angle of Half Power	2θ1/2	E=0.5mw/cm ²		120		deg
Forward Voltage	V _F	I _F =100mA		1.3	1.6	V
Open Circuit Voltage	V _{oc}	E=0.5mw/cm ²		350		mV
Light Current	I _p	E=0.5mw/cm ² V _R =10V		20		μA
Dark Current	I _d	V _R =10V,E=0			30	nA
Peak Wavelength *1	λ _p			900		nm
Sensitivity Wavelength	S λ		760		1000	nm
Ries Time	T _r	V _R =10V,RI=1KΩ		45		ns
Fall Time	T _f	V _R =10V,RI=1KΩ		45		ns

*1.The dominate wavelength , λ_d, is derived from the CIE Chromaticity Diagram and represents the color of the device.



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TYPICAL ELECTRICAL OPTICAL CHARACTERISTICS CURVES

Fig.1 Power Dissipation VS. Ambient Temperature

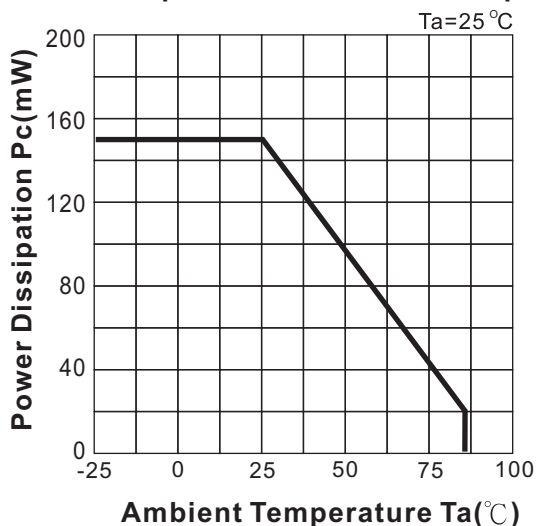


Fig.2 Spectral Sensitivity ($T_a=25^\circ\text{C}$)

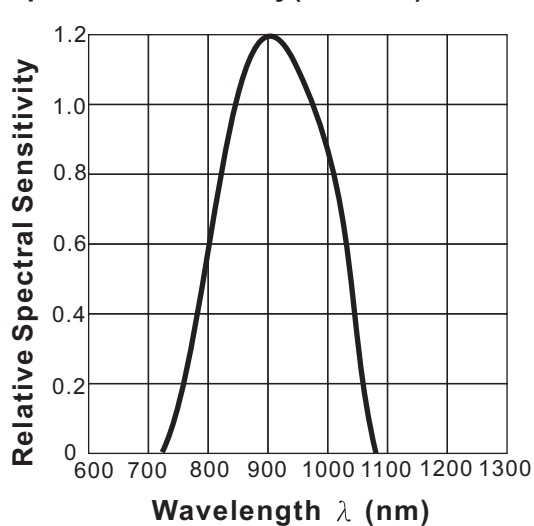


Fig.3 Dark Current VS. Ambient Temperature

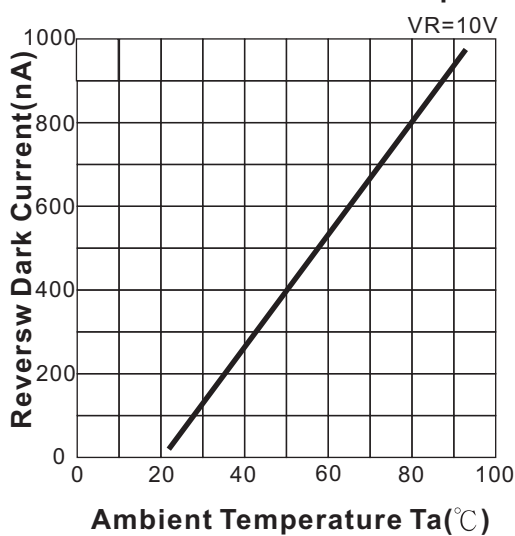
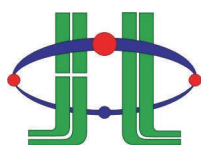
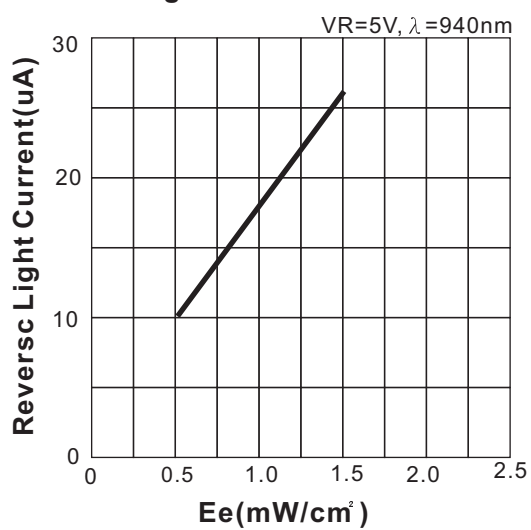


Fig.4 Reverse Light Current VS. E_e



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TYPICAL ELECTRICAL OPTICAL CHARACTERISTICS CURVES

Fig.5
Terminal Capacitance VS. Reverse Voltage
($F=1\text{MHz}, V_R=3\text{V}, E_e=0\text{mW/cm}^2$)

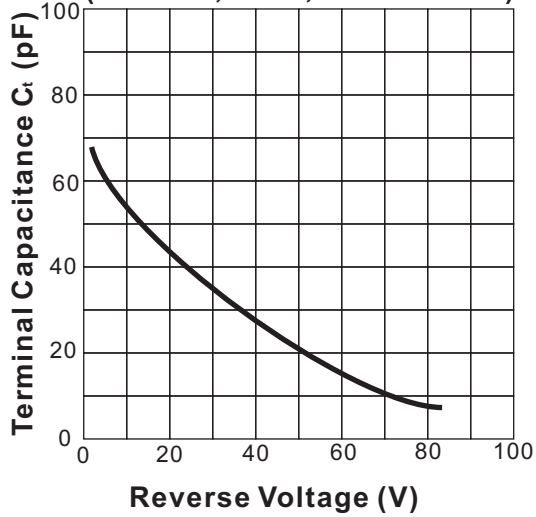
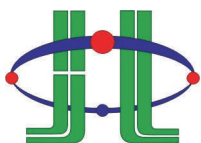
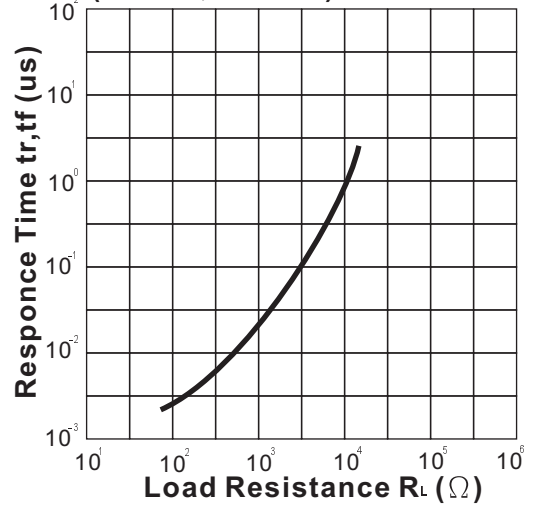


Fig.6
Response Time VS. Load Resistance
($V_R=10\text{V}, T_a=25^\circ\text{C}$)



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