



YETDA INDUSTRY LTD.

5mm Silicon PIN Photo Diode P500FOD5G

5mm with photodiode Dice ◦

Encapsulated with Black color Package ◦

Long Leads

Absolute Maximum Ratings:

Parameter	Maximum Rating	Unit
Peak Forward Current	120	mA
Continuous Forward Current	30	mA
Operating Temperature Range	-20°C to +75°C	
Storage Temperature Range	-40°C to +100°C	
Lead Soldering Temperature	260°C for 3 seconds 1.6mm(0.063 inch) from body	

Electro-Optical Characteristics (Ta = 25°C)

Parameter Radiant	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Rang of Spectral Bandwidth		$\lambda_{0.5}$	700		1050	nm
Wavelength of Peak Sensitivity		λ_p		940		nm
Open-Circuit Current	Ee=5mW/cm ² $\lambda_p=940\text{nm}$	Voc		0.35		V
Short-Circuit Current	Ee=1mW/cm ² $\lambda_p=940\text{nm}$	Isc		95		μA
Reverse Light Current	Ee=5mW/cm ² $\lambda_p=940\text{nm}$ $V_R=5\text{V}$	I _L		11		μA
Dark Current	Ee=0mW/cm ² $V_R=10\text{V}$	I _D		2	10	nA
Reverse Breakdown Voltage	Ee=0mW/cm ² $I_R=100\mu\text{A}$	B _{VR}	35			V
Total Capacitance	Ee=0mW/cm ² F=1MHZ $V_R=3\text{V}$	Ct		25		PF
Rise/Fall Time	$R_L=1000\Omega$ $V_R=10\text{V}$	t _r /t _f		15/15		nS
View Angle	I _F =20mA	$2\theta_{1/2}$		45		deg

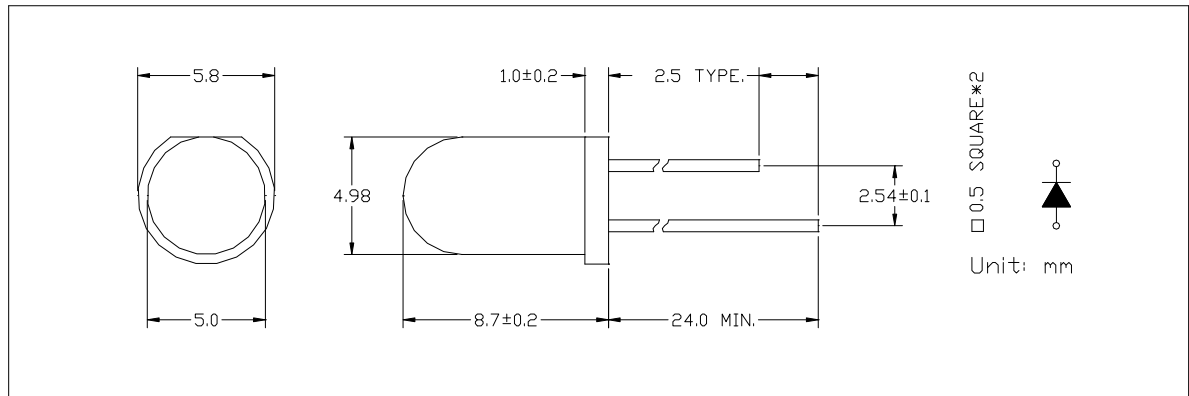


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20090509

Package

Item: 500





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Typical Electro-Optical Characteristics Curve:

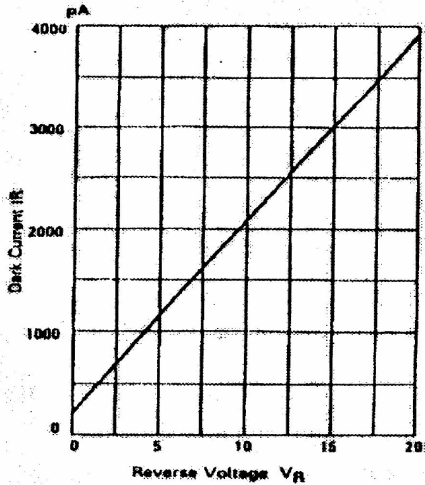


FIG. 1 DARK CURRENT VS. REVERSE VOLTAGE
 $T_{AMB} = 25^\circ\text{C}$, $E_e = 0 \text{ mW/cm}^2$

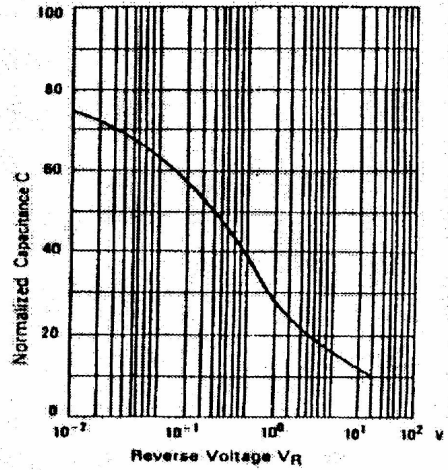


FIG. 2 CAPACITANCE VS. REVERSE VOLTAGE
 $F = 1 \text{ MHz}$; $E_e = 0 \text{ mW/cm}^2$

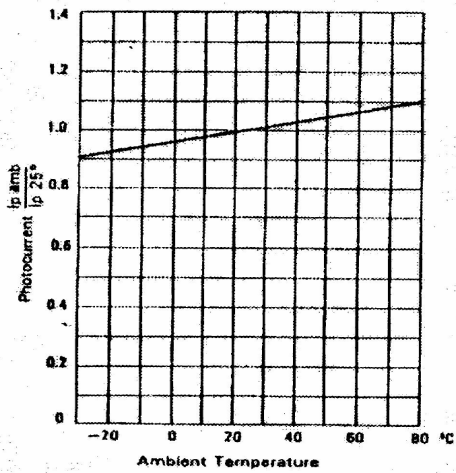


FIG. 3 PHOTOCURRENT VS. AMBIENT TEMPERATURE

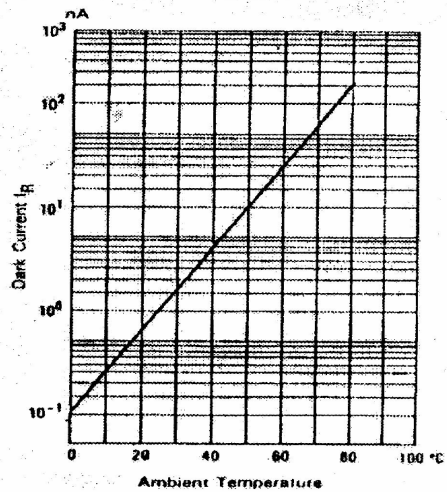
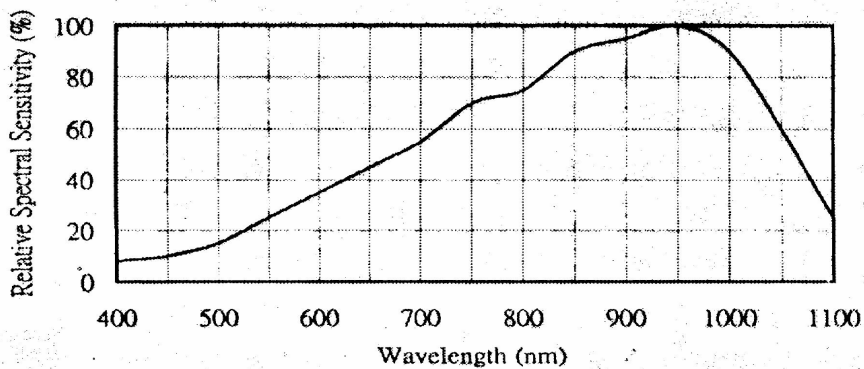


FIG. 4 DARK CURRENT VS. AMBIENT TEMPERATURE
 $V_A = 10\text{V}$, $E_e = 0 \text{ mW/cm}^2$

Relative Spectral Sensitivity VS Wavelength





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• Soldering:

1. Manual of soldering

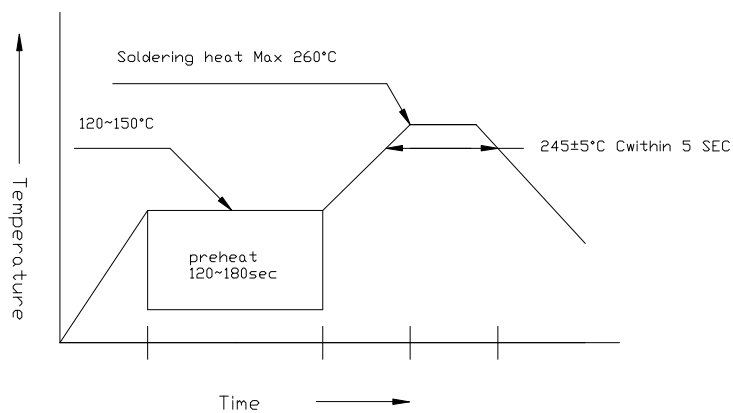
The temperature of the iron tip should not be higher than 260°C and

Soldering within 3 seconds per solder-land is to be observed

2. DIP soldering (Wave Soldering):

Preheating: 120°C ~ 150°C within 5 sec. 260°C (Max)

Gradual Cooling (Avoid quenching)

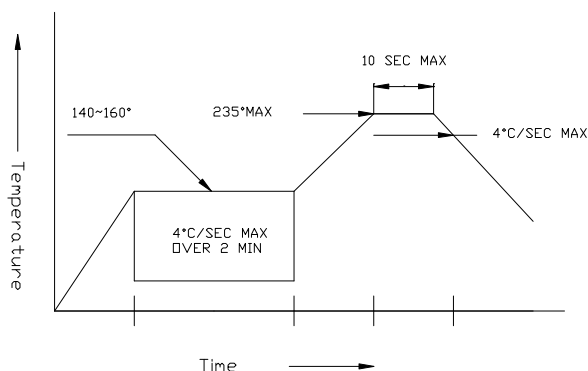


3. Reflow Soldering

Preheating: 140°C ~ 160°C ± 5°C, within 2 minutes.

Operation heating: 235°C (Max) within 10 seconds (Max)

Gradual Cooling (Avoid quenching)



• Handling:

Care must be taken not to cause to the epoxy resin portion of Yetda LEDS while it is exposed to high temperature.

Care must be taken not rub the epoxy resin portion of Yetda LEDS with hard or sharp article such as the sand blast and the metal hook