Model No.:	FYLS-4333PDB-PLCC3
Date / Rev.	2024.01.29 / A

PRODUCT SPECIFICATION

Model No.: FYLS-4333PDB-PLCC3

Features:

- SMD Type
- Size (mm):4.20*3.30*3.60
- Emitting Color: Photo diode.
- Lens Color: Black.
- SMT package
- Suitable for all SMT assembly and soldering method
- Pb-free Reflow soldering application
- RoHS Compliant
- MSL:6

Applications:

- Mouse
- Optoelectronic switch
- Copiers
- Scanners
- Amusement machines
- Surveillance system
- Wireless communication

CUSTOMER APPROVED SIGNATURES	APPROVED BY	SALES BY	PREPARED BY
		Foryard S020 2024.01.29	Foryard E001 2024.01.29

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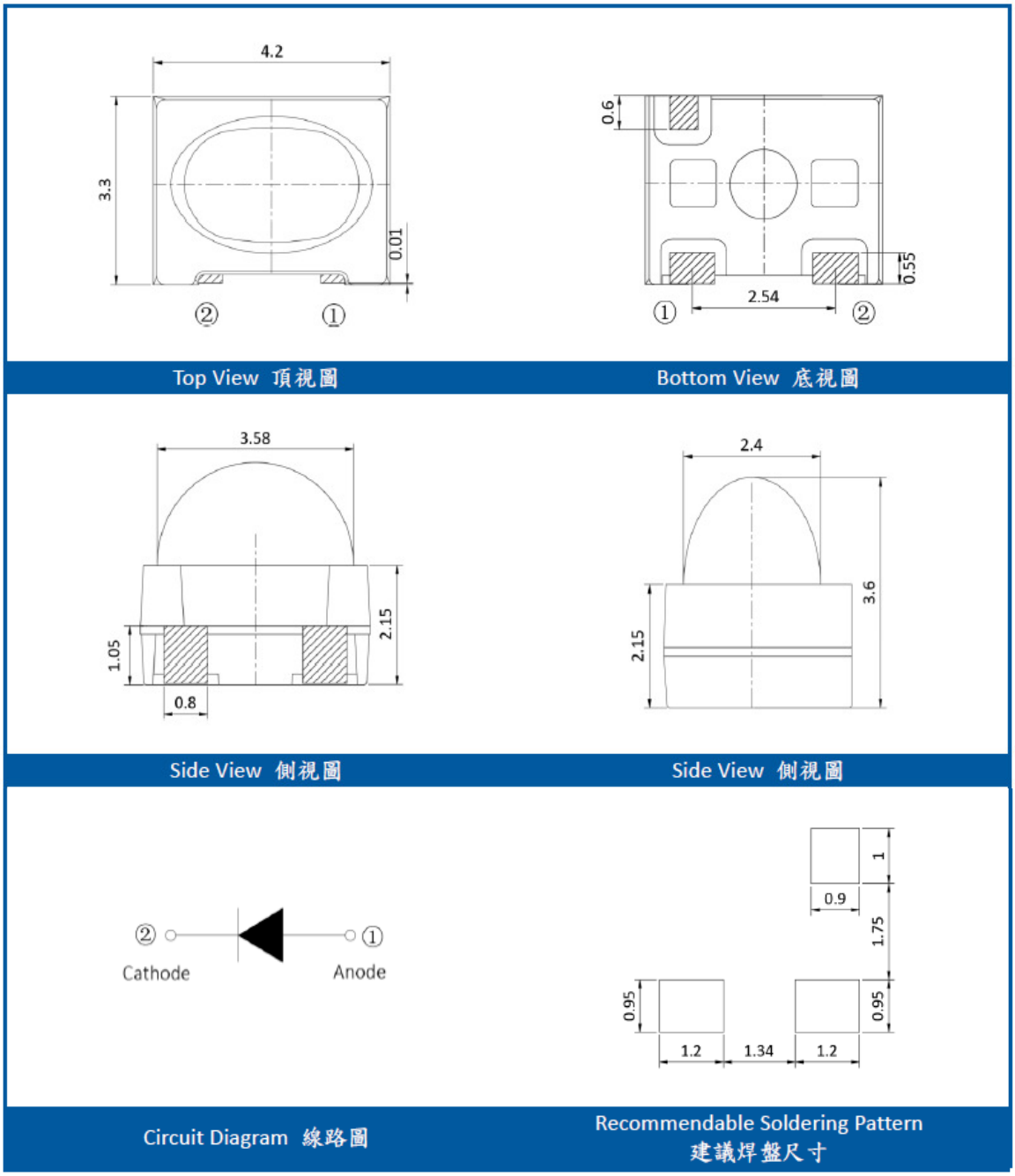
Model No.：FYLS-4333PDB-PLCC3

■ Mechanical Dimensions



Notes:

1. Dimension in millimeter, tolerance is ±0.10.

2.Angle:±5°

3.The specifications,characteristics and technical data described in the datasheet are subject to change without prior notice.

4.The drawing is different from the actual one, please refer to the sample.

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■ Absolute Maximun Ratings(Ta=25ºC)

Parameter	Symbol	Value	Unit
Power Dissipation	P_D	150	mW
Reverse Voltage	V_R	32	V
Operating Temperature Range	Topr	-25~ +85	℃
Storage Temperature Range	Tstg	-25~ +85	℃
Soldering Temperature	Tsol	Reflow soldering : 260°C， 5s	

*Pulse WidthWidth≦100 μ s, Duty Cycle=1%

■ Typical Electrical &Optical Charcteristics(Ta=25ºC)

Parameter	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Range Of Spectral Bandwidth	$\lambda_{0.5}$	---	850	---	1100	nm
Wavelength Of Peak Sensitivity	λ_p	---	---	940	---	nm
Reverse Light Current	I_L	E_e =1mW/cm^2 λ_P =940nm, V_R	2.0	3.1	4.0	μA
Short Circuit Current	I_{SC}	E_e =1mW/cm^2 λ_P =940nm	---	2.9	---	μA
Reverse Dark Current	I_D	E_e =0 mW/cm^2 V_R =10V	---	---	100	nA
Open Circuit Voltage	V_{OC}	E_e =5 mW/cm^2 λ_P =940nm	---	0.44	---	V
Forward Voltage	V_F	I_F =20 mA	---	0.6	---	V
Reverse Breakdown Voltage	V_{BR}	E_e =0 mW/cm^2 I_R =100 μA	32	170	---	V
Terminal Capacitance	C_T	E_e =0 mW/cm^2 V_R =5V; f=1MHz	---	6	---	PF
Rise Time	T_R	V_R =10V R_L =100Ω	---	20	---	ns
Fall Time	T_F		---	20	---	ns

Note:

1.Luminous Intensity is based on the Foryard standards.

2.Pay attention about static for InGaN

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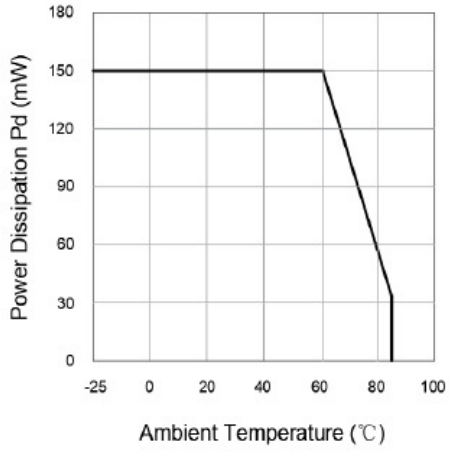
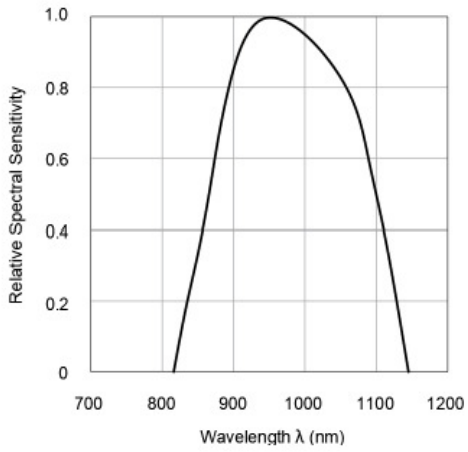
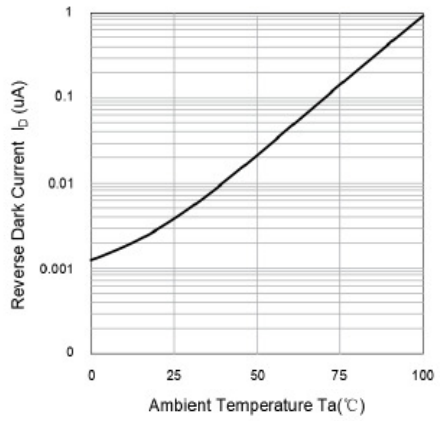
■ Typical Electrical Optical Characteristics Curves



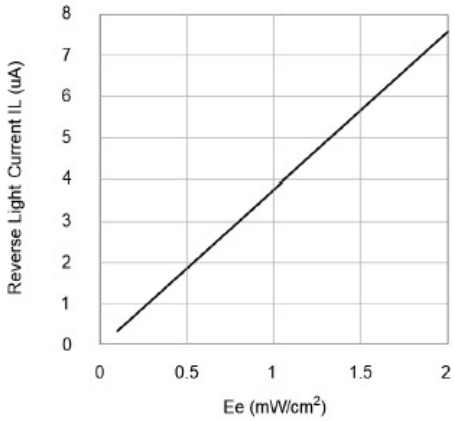
Power Dissipation V.S. Ambient Temperature



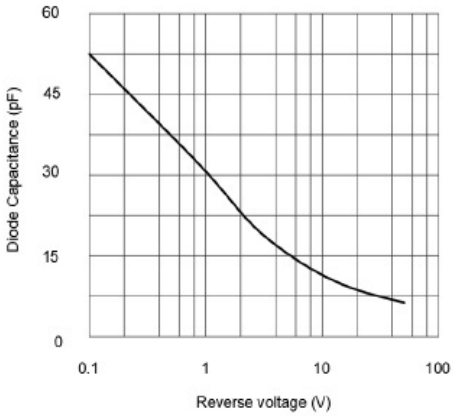
Spectral Sensitivity



Reverse Dark Current V.S. Ambient Temperature



Reverse Light Current V.S. E_e



Terminal Capacitance V.S. Reverse Voltage

NOTE:25°C free air temperature unless otherwise specified

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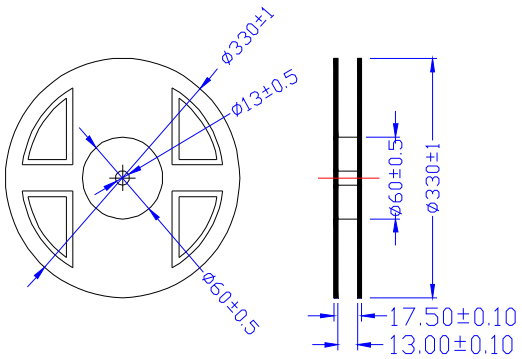
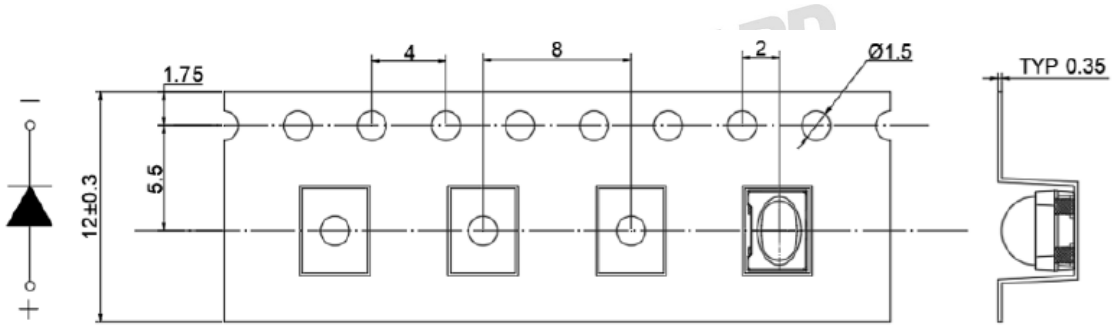
■ **Package-**

1. Reel Dimension



2. Tape Dimension



Notice:

1.Tolerance unless mentioned is ±0.2mm

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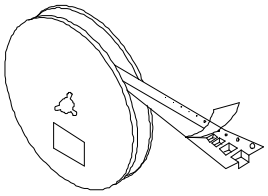
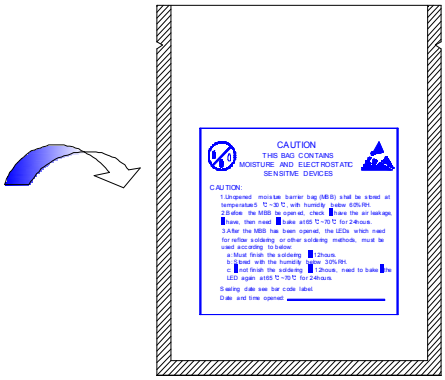
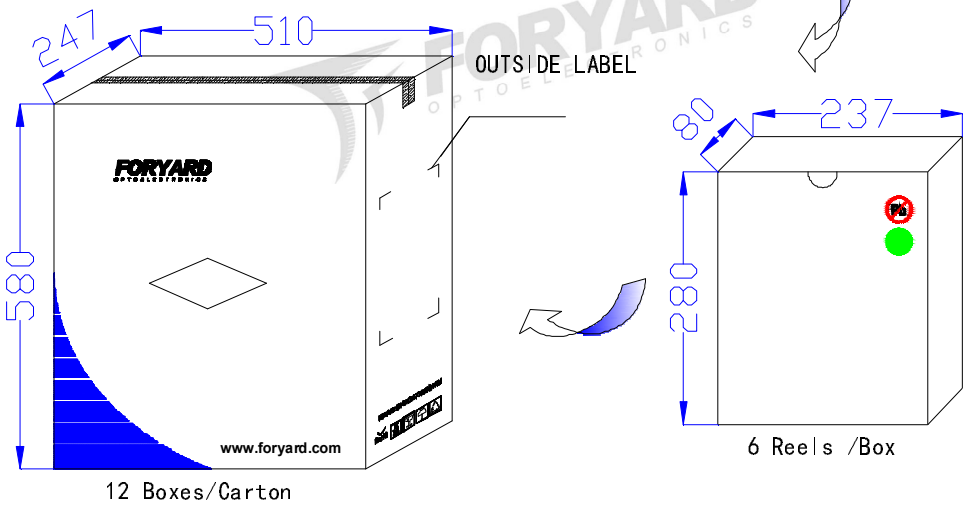
3.Packing Diagram

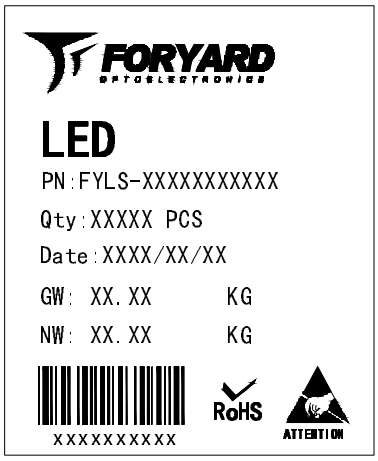


Reel





12 Boxes/Carton



OUTSIDE LABEL

Notice:

1.Quantity:2000 PCS/Reel

2.The specifications are subject to change without notice. Please contact us for updated information.

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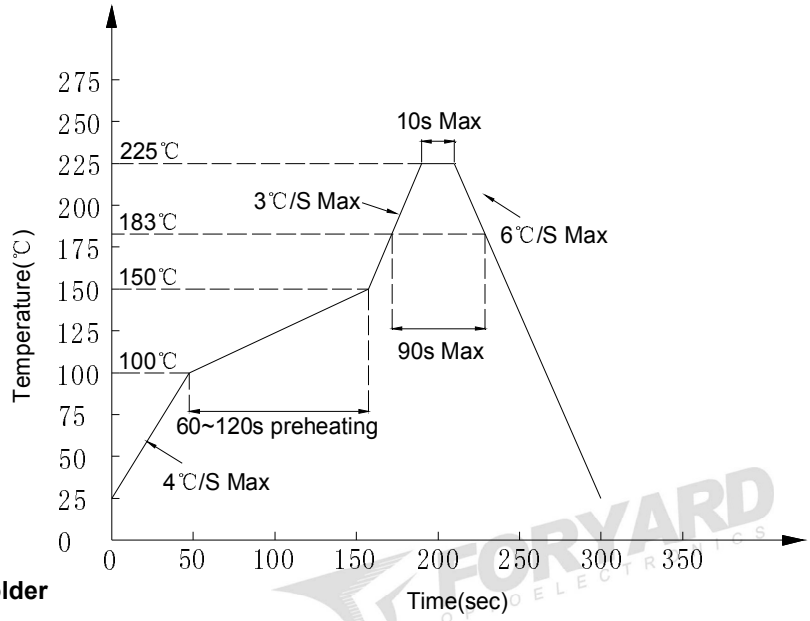
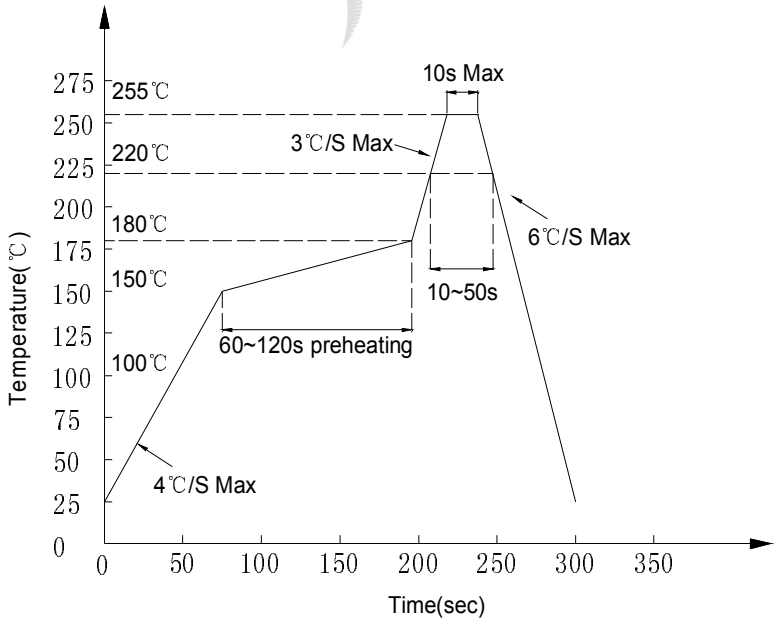
■Soldering Characteristics-

●Reflow Soldering

- **Lead Solder**



- **Lead-free Solder**



Notes:

1.Although the recommended soldering conditions are specified in above table, reflow or hand soldering at the lowest possible temperature is desired for the LEDs.

2.A rapid-rate process is not recommended for cooling the LEDs down from the peak temperature.

3.All temperatures refer to solder Pad.

●Hand Soldering

Soldering temperature	300℃ Max.（25W Max.）	One time olny
Soldering time	3 ±1sec	

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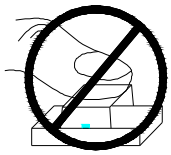
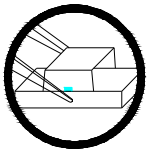
■ Handling of Silicone Resin LEDs-

● Handling Indications

When handling the product, do not touch it directly with bare hands as it may contaminate the surface and affect on opti characteristics.In the worst cases,excessive force to the product might result in catastrophic failure due to package damag and/or wire breakage.



When handling the product with tweezers,LEDs should only be handled from the side and make sure that excessive force is not applied to the resin portion of the pordct. Failure to comply can cause the resin portion of the product to be cut,chipped,delaminated and/or deformed, and wire to be broken, and thus resulting in catastrophic failure.

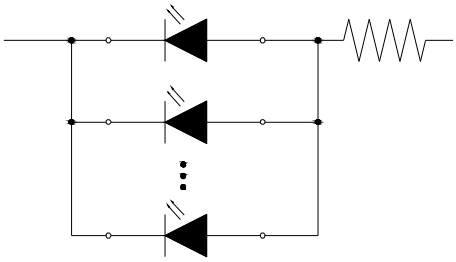


■ Recommended circuit-

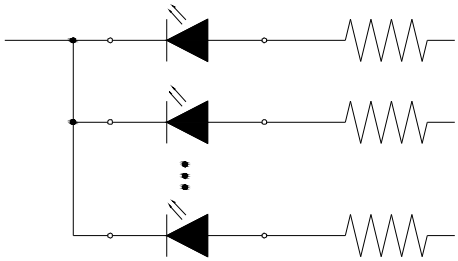
- In designing a circuit, the current through each LED must not exceed the absolute maximum rating specified for each LE

It is recommended to use Circuit B which regulates the current flowing through each LED. In the meanwhile,when driving L with a constant voltage in Circuit A,the current through the LEDs may vary due to the variation in forward voltage(VF) of the LEDs. In the worst case, some LED may be subjected to stresses in excess of the absolute maximum rating.

(A)



(B)



- This product should be operated in forward bias. A driving circuit must be designed so that the product is not subjected to either forward or reverse voltage while it is off. In particular, if a reverse voltage is continuously applied to the product; such operation can cause migration resulting in LED damage.

■ Storage-

● Storage Conditions

1.Unopened moisture barrier bag (MBB) shall be stored at temperature below 5℃~30℃, with humidity below 60%RH.

2.Before the MBB be opened, check if have the air leakage, if have, then need to bake at 65℃~70℃ for 24hours.

3.After the MBB has been opened, the LEDs which need for reflow soldering or other soldering methods, must be used according to below:

a: Must finish the soldering in 12hours

b: Stored with the humidity below 30%RH

c: If not finish the soldering in 12hours, need to bake the LED again at 65℃~70℃ for 24hours