

YL-2835F(120)-1050nm(33mW)

APPROVAL SHEET

PRODUCT :

ISSUE DATE : 04-JAN-2019

LED DATASHEET

Features

White SMT package.

Top view white LED

Lead-frame package with individual 2 pin.

Wide viewing angle

Soldering methods: IR reflow soldering.

Feature of the device: more light due to higher optical efficiency; extremely wide viewing angle; ideal for backlighting and coupling in light guide.

Description

The YL-2835F(120)-1050nM(33mW) package has high efficacy, high CRI, low power consumption, wide viewing angle and a compact form factor. These features make this package an ideal LED for all lighting applications.

Applications

LCD balck ight.

Mobile phones.

Indicators

Switch lights.

Device Selection Guide

PART NO	MATERIAL	COLOR	
		Emitted	Lens
YL-2835F(120)-1050nM(33mW)		infrared	Water Clear

Absolute Maximum Ratings (T_{Soldering}=25°C)

> Electro-optical Characteristics at 25°C:

Parameter	Symbol	Condition	Min.	Typ.	Max.	Unit	
Forward Voltage	Vf1	If = 10μA	0.7	-	-	V	
	Vf2	If = 100mA	-	1.3	1.75	V	
Reverse Current	Ir	Vr = 10V	-	-	5.0	μA	
Peak Wavelength ⁽¹⁾	λp	If = 100mA	1000	1050	1100	nm	
Spectra Half-width	Δλ	If = 100mA	-	60	-	nm	
Radiant flux ⁽²⁾⁽³⁾	Po	H2	If = 100mA	27	-	-	mW
		H3		33	-	-	
		H4		38	-	-	

Note:

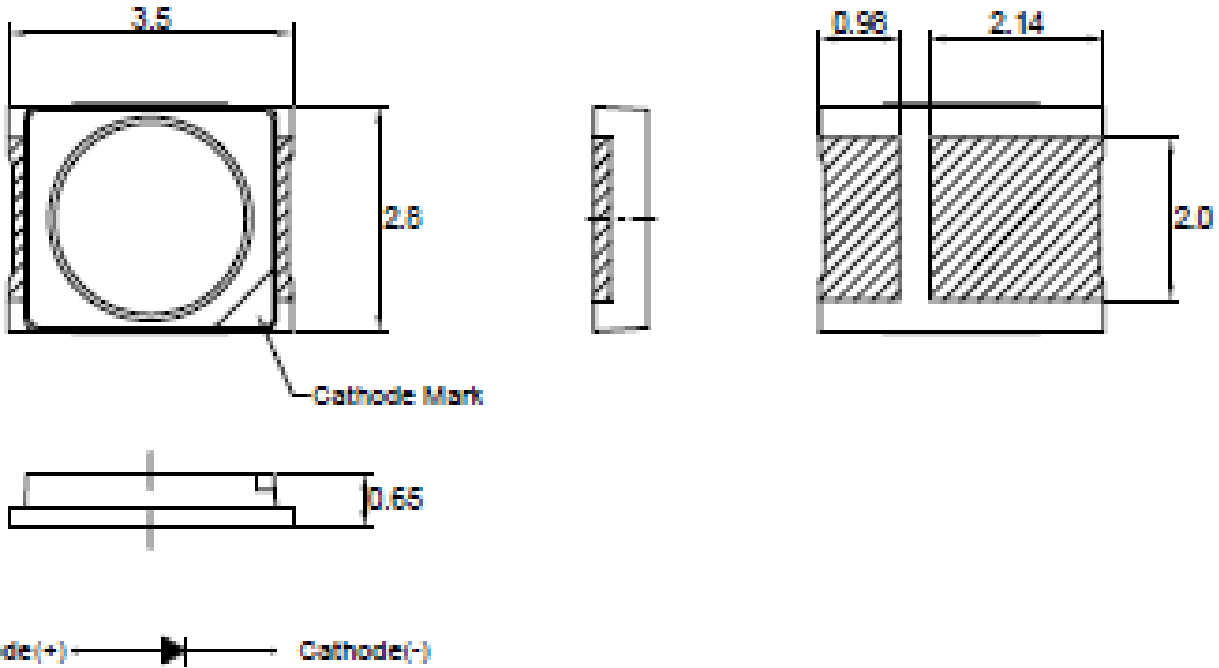
> Absolute Maximum Ratings:

Parameter	Symbol	Condition	Rating	Unit
Forward DC Current	If	Ta = 25°C	≤ 100	mA
Reverse Voltage	Vr	Ta = 25°C	≤ 10	V
Junction Temperature	Tj	-	≤ 115	°C
Storage Temperature	Tstg	Chip	-40 ~ +85	°C
		Chip-on-tape/storage	5 ~ 35	°C
		Chip-on-tape/transportation	-20 ~ +65	°C
Temperature during Packaging	-	-	280(<10sec)	°C

Notes:

1. The forward voltage data did not including ±0.1V testing tolerance.
2. The luminous intensity data did not including ±15% testing tolerance.
3. The dominant wavelength data did not including ±1nm testing tolerance

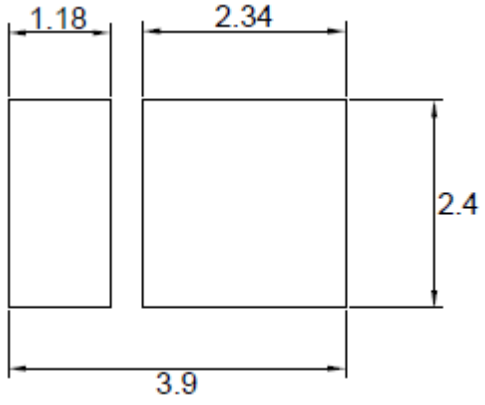
Package Dimension



Note:

- 1. All dimension are in millimeter tolerance is $\pm 0.2\text{mm}$ unless otherwise noted.
- 2. Specifications are subject to change without notice.

Recommended Soldering Pad Dimensions



Note: The tolerances unless mentioned is $\pm 0.1\text{mm}$, Unit=mm.

Typical Electro-Optical Characteristics Curve

Fig.1 – Relative Radiant Flux vs. Forward Current

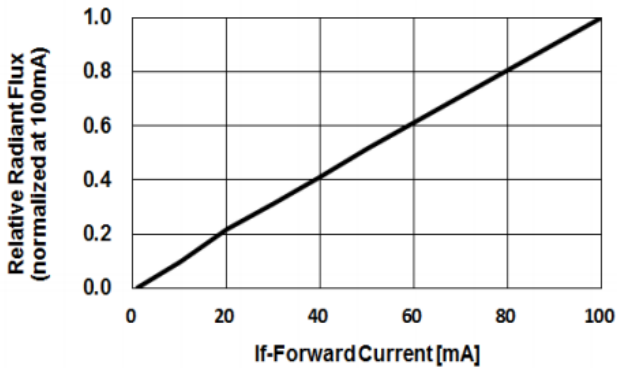


Fig.2 – Forward Current vs. Forward Voltage

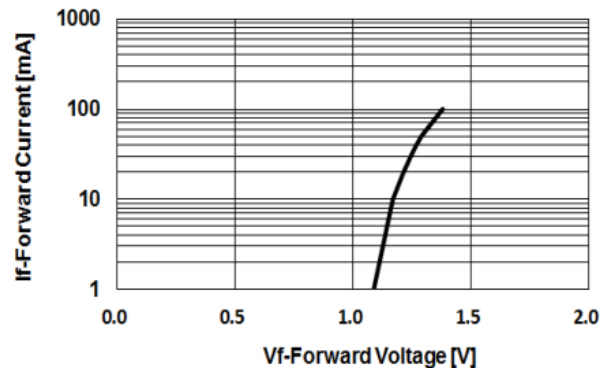


Fig.3 – Relative Radiant Flux (@100mA) vs. Ambient Temperature

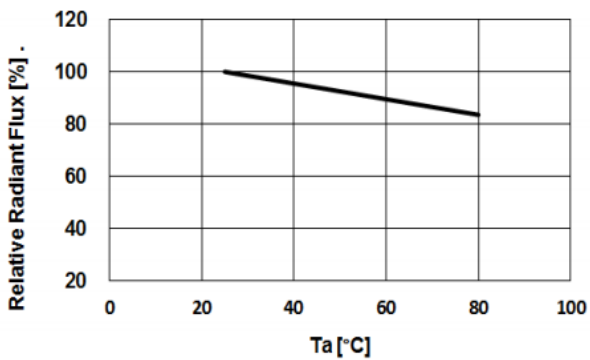


Fig.4 – Forward Voltage (@100mA) vs. Ambient Temperature

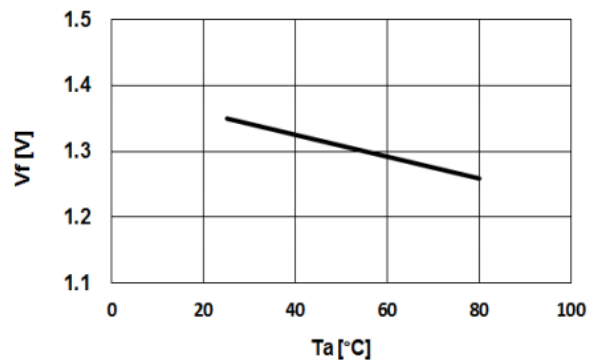


Fig.5 – Peak Wavelength (@100mA) vs. Ambient Temperature

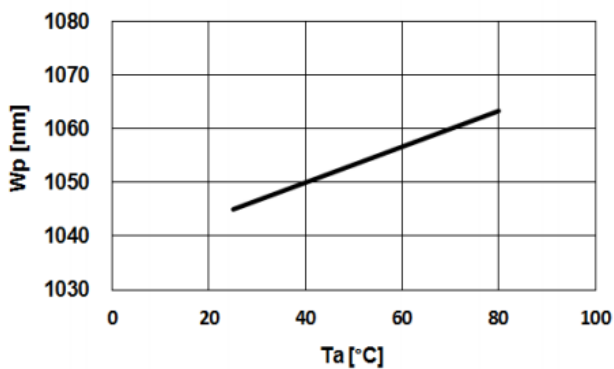
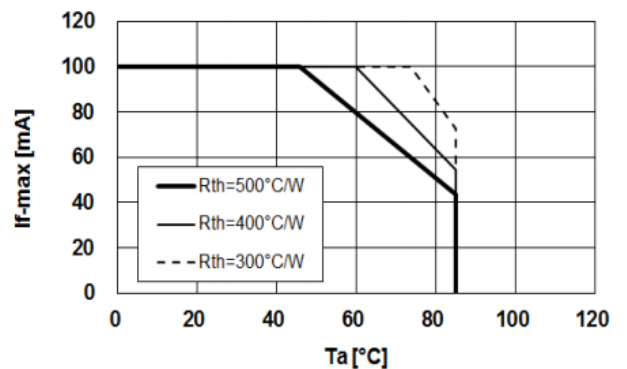


Fig.6 – Maximum Driving Forward DC Current vs. Ambient Temperature (De-rating based on Tj max. = 115°C)



Reliability Test Items and Conditions

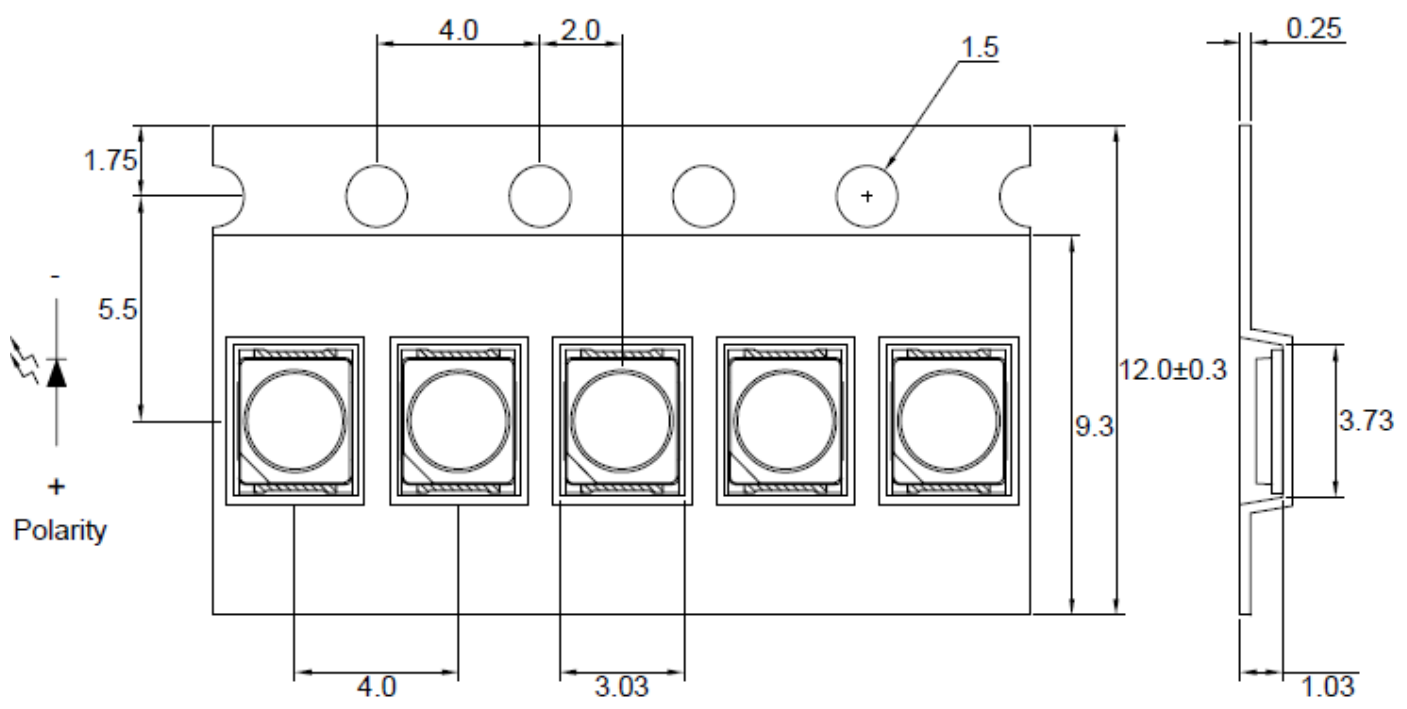
The reliability of products shall be satisfied with items listed below.

Confidence level : 90%

LTPD : 10%

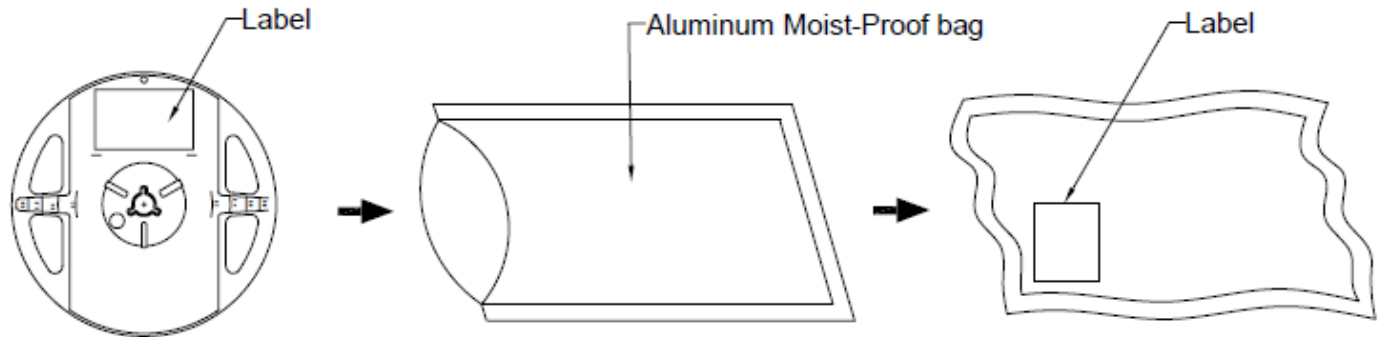
Items	Test Condition	Test Hours/Cycles	Sample Size	Ac/Re
Reflow Soldering	Temp:260°C/10sec	6 Min.	22 PCS.	0/1
Thermal Shock	H:+100°C 20min ↓ 10 sec L:-10°C 20 min	200 Cycles	22 PCS.	0/1
Temperature Cycle	H:+100°C 30min ↓ 5 min L:-40°C 30 min	200 Cycles	22 PCS.	0/1
High Temperature/Humidity Reverse Bias	Ta=85°C,85%RH	1000 Hrs.	22 PCS.	0/1
High Temperature/Humidity Operation	Ta=85°C,85%RH IF=40 mA	1000 Hrs.	22 PCS.	0/1
Low Temperature Storage	Ta=-40°C	1000 Hrs.	22 PCS.	0/1
High Temperature Storage	Ta=85°C	1000 Hrs.	22 PCS.	0/1
Low Temperature Operation Life	Ta=-40°C IF=75 mA	1000 Hrs.	22 PCS.	0/1
High Temperature Operation/ Life#1	Ta=25°C IF=75mA	1000 Hrs.	22 PCS.	0/1
High Temperature Operation/ Life#2	Ta=55°C IF=75 mA	1000 Hrs.	22 PCS.	0/1
High Temperature Operation/ Life#3	Ta=85°C IF=40 mA	1000 Hrs.	22 PCS.	0/1

Carrier Type Dimensions



Note : The tolerances unless mentioned is ±0.1mm, Angle± 0.5. Unit=mm.

Packing Specifications



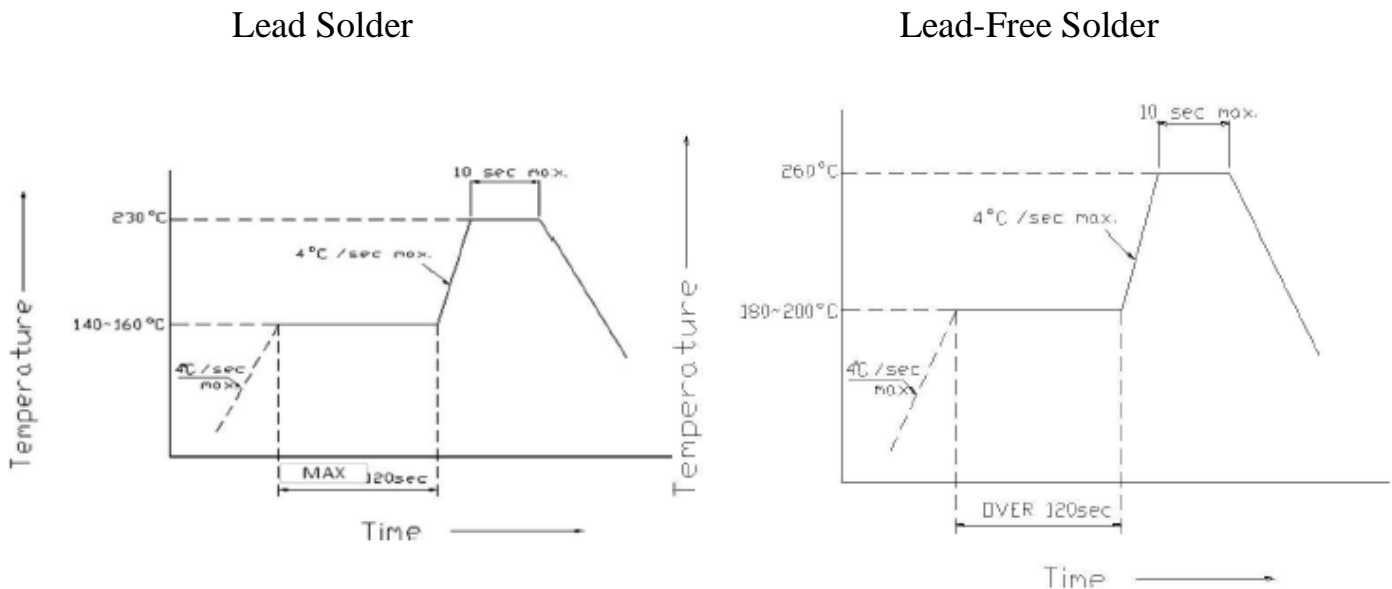
Part No. YL-2835F(120)-1050nM(33mW)
Quantity/Reel 2000 PCS

Precautions For Use LED

1. Soldering Conditions

Number of reflow process shall be less than 2 times and cooling process to normal temperature is required between first and Second soldering process.

(Recommended soldering conditions)



2. Static Electricity

It is recommended that a wrist band or an anti-electrostatic glove be used when handling the LEDs.

All devices, equipment and machinery must be properly grounded.

2.0V Damaged LEDs will show some unusual characteristics such as the forward voltage becomes lower, or the LEDs do not light at the low current. Criteria : ($V_F > 2.0V$ at $I_F=0.5mA$)

3. Moisture Proof Package

It is recommended that moisture proof package be used .

4. Cautions:

Please check if there is air leak before opening the package, if so, please return the goods back to take drying process for later using.

Products can be used within 15days after packaging, after that, they must be:

Soldered within 24 hrs

Used in the condition: 30°C within and 60%RH below

Stored in 30%RH for moisture below.

Products cannot be used for and over 15days after being packaged unless opening the package and take drying our process in 85°C/6H.

Products not be used for or over 60days after being packaged please return back to take drying out and packaging process for forward using.

Products not be used after opening the package need to be dried out for 85°C/6H

5. Repairing

Repair should not be done after the LEDs have been soldered. When repairing is unavoidable, a double-head soldering iron should be used (as below figure). It should be confirmed beforehand whether the characteristics of the LEDs will or will not be damaged by repairing.

