

### T-1 (3mm) BI-LEVEL LED INDICATOR

Part Number: L-934FN/1G1ID

Green High Efficiency Red

#### **Features**

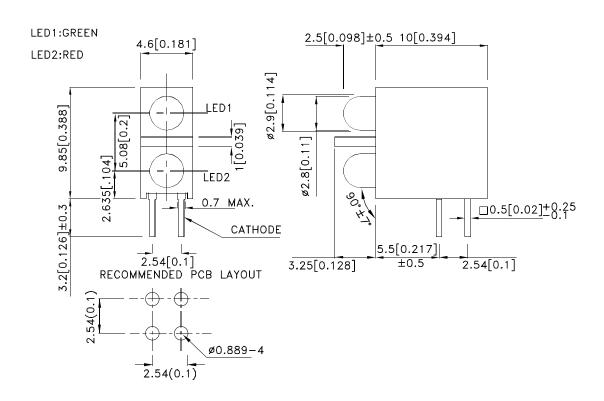
- Pre-trimmed leads for pc mounting.
- Black case enhances contrast ratio.
- High reliability life measured in years.
- Housing UL rating:94V-0.
- Housing material: type 66 nylon.
- RoHS compliant.

#### Description

The Green source color devices are made with Gallium Phosphide Green Light Emitting Diode.

The High Efficiency Red source color devices are made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

#### **Package Dimensions**



- 1. All dimensions are in millimeters (inches).
- 2. Tolerance is ±0.25(0.01") unless otherwise noted.
- Lead spacing is measured where the leads emerge from the package.
   The specifications, characteristics and technical data described in the datasheet are subject to change without prior notice.

SPEC NO: DSAD6927 **REV NO: V.5A DATE: AUG/27/2013** PAGE: 1 OF 6 APPROVED: WYNEC CHECKED: Allen Liu DRAWN: Q.M.Chen ERP: 1102014058

#### **Selection Guide**

Part No.	Dice	Lens Type	lv (mcd) [2] @ 10mA		Viewing Angle [1]
			Min.	Тур.	201/2
L-934FN/1G1ID	Green (GaP)	Green Diffused	10	25	40°
		Green Dillused	*10	*25	
	High Efficiency Red (GaAsP/GaP)	Dad Diffused	12	30	40°
		Red Diffused	*10	*20	

- 1.  $\theta$ 1/2 is the angle from optical centerline where the luminous intensity is 1/2 of the optical peak value.

#### Electrical / Optical Characteristics at TA=25°C

Symbol	Parameter	Device	Тур.	Max.	Units	Test Conditions	
λpeak	Peak Wavelength	Green High Efficiency Red	565 627		nm	IF=20mA	
λD [1]	Dominant Wavelength	Green High Efficiency Red	568 617		nm	IF=20mA	
Δλ1/2	Spectral Line Half-width	Green High Efficiency Red	30 45		nm	IF=20mA	
С	Capacitance	Green High Efficiency Red	15 15		pF	Vr=0V;f=1MHz	
VF [2]	Forward Voltage	Green High Efficiency Red	2.2 2	2.5 2.5	V	Ir=20mA	
lR	Reverse Current	Green High Efficiency Red		10 10	uA	VR = 5V	

#### Notes:

- 1.Wavelength: +/-1nm.
- Forward Voltage: +/-0.1V.
   Wavelength value is traceable to the CIE127-2007 compliant national standards.

#### Absolute Maximum Ratings at TA=25°C

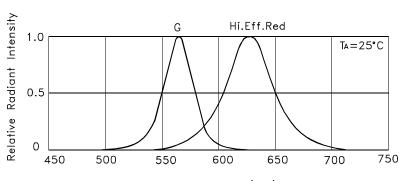
Parameter	Green	High Efficiency Red	Units		
Power dissipation	62.5	75	mW		
DC Forward Current	25	30	mA		
Peak Forward Current [1]	140	160	mA		
Reverse Voltage	5 V				
Operating / Storage Temperature	-40°C To +85°C				
Lead Solder Temperature [2]	260°C For 3 Seconds				
Lead Solder Temperature [3]	260°C For 5 Seconds				

#### Notes:

- 1. 1/10 Duty Cycle, 0.1ms Pulse Width.
   2. 2mm below package base.
- 3. 5mm below package base.

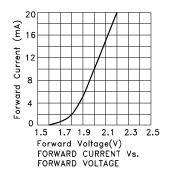
DATE: AUG/27/2013 SPEC NO: DSAD6927 **REV NO: V.5A** PAGE: 2 OF 6 APPROVED: WYNEC **CHECKED: Allen Liu** DRAWN: Q.M.Chen ERP: 1102014058

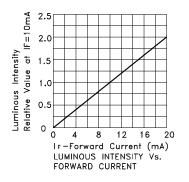
Luminous intensity/ luminous Flux: +/-15%.
 Luminous intensity value is traceable to the CIE127-2007 compliant national standards.

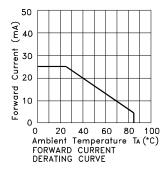


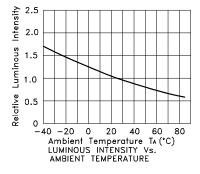
wavelength > (nm) RELATIVE INTENSITY Vs. WAVELENGTH

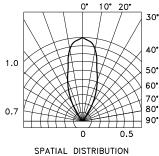
### L-934FN/1G1ID Green





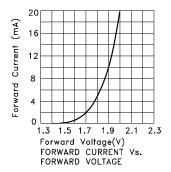


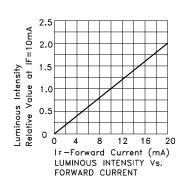


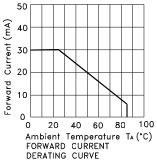


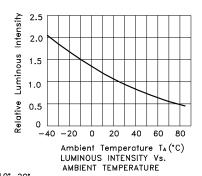
SPEC NO: DSAD6927 REV NO: V.5A DATE: AUG/27/2013 PAGE: 3 OF 6
APPROVED: WYNEC CHECKED: Allen Liu DRAWN: Q.M.Chen ERP: 1102014058

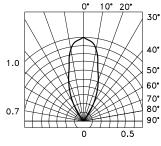
### **High Efficiency Red**





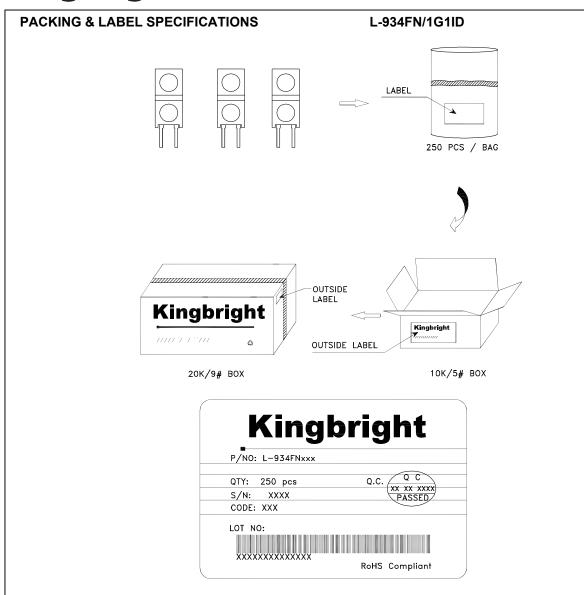






SPATIAL DISTRIBUTION

SPEC NO: DSAD6927 REV NO: V.5A DATE: AUG/27/2013 PAGE: 4 OF 6
APPROVED: WYNEC CHECKED: Allen Liu DRAWN: Q.M.Chen ERP: 1102014058



#### Terms and conditions for the usage of this document

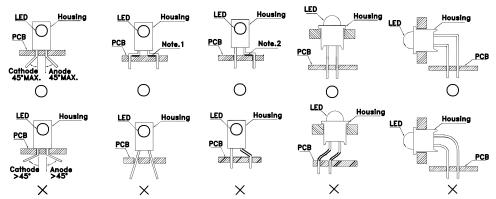
- 1. The information included in this document reflects representative usage scenarios and is intended for technical reference only.
- 2. The part number, type, and specifications mentioned in this document are subject to future change and improvement without notice. Before production usage customer should refer to the latest datasheet for the updated specifications.
- 3. When using the products referenced in this document, please make sure the product is being operated within the environmental and electrical limits specified in the datasheet. If customer usage exceeds the specified limits, Kingbright will not be responsible for any subsequent issues.
- 4. The information in this document applies to typical usage in consumer electronics applications. If customer's application has special reliability requirements or have life-threatening liabilities, such as automotive or medical usage, please consult with Kingbright representative for further assistance
- 5. The contents and information of this document may not be reproduced or re-transmitted without permission by Kingbright.
- 6.All design applications should refer to Kingbright application notes available at <a href="http://www.kingbright.com/application">http://www.kingbright.com/application</a> notes

 SPEC NO: DSAD6927
 REV NO: V.5A
 DATE: AUG/27/2013
 PAGE: 5 OF 6

 APPROVED: WYNEC
 CHECKED: Allen Liu
 DRAWN: Q.M.Chen
 ERP: 1102014058

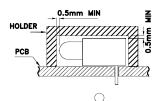
#### **PRECAUTIONS**

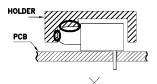
 The lead pitch of the LED must match the pitch of the mounting holes on the PCB during component placement. Lead—forming may be required to insure the lead pitch matches the hole pitch. Refer to the figure below for proper lead forming procedures.



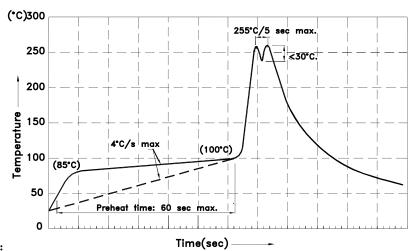
" $\bigcirc$  " Correct mounting method "imes" Incorrect mounting method

2. During soldering, component covers and holders should leave clearance to avoid placing damaging stress on the LED during soldering.





- 3. The tip of the soldering iron should never touch the lens epoxy.
- 4. Through—hole LEDs are incompatible with reflow soldering.
- 5. If the LED will undergo multiple soldering passes or face other processes where the part may be subjected to intense heat, please check with Kingbright for compatibility.
- 6. Recommended Wave Soldering Profiles:



1.Recommend pre—heat temperature of 105°C or less (as measured with a thermocouple attached to the LED pins) prior to immersion in the solder wave with a maximum solder bath temperature of 260°C

2.Peak wave soldering temperature between 245°C ~ 255°C for 3 sec (5 sec max).

3.Do not apply stress to the epoxy resin while the temperature is above 85°C.

4.Fixtures should not incur stress on the component when mounting and during soldering process.

5.SAC 305 solder alloy is recommended.

6.No more than one wave soldering pass.

SPEC NO: DSAD6927 REV NO: V.5A DATE: AUG/27/2013 PAGE: 6 OF 6
APPROVED: WYNEC CHECKED: Allen Liu DRAWN: Q.M.Chen ERP: 1102014058

### **X-ON Electronics**

Largest Supplier of Electrical and Electronic Components

Click to view similar products for LED Panel Mount Indicators category:

Click to view products by Kingbright manufacturer:

Other Similar products are found below:

607-1312-310F 607-3232-140F 6091M1-24V 6091M5-24V 6091M7-24V 821-0331-503 FL2870C8R FL2950WL7B FL589WL8R

Q6P3BXXB12E H8630FBBA3 MPC5ADW6.0 DX1091GN NL177WL3G NL276C3G NL2950BWL3G NL2950CWL2R NL589WL2R

NL67C3G NL67C3R 2191L1-12V PB22SIOL0RG PB22SPPM41R PB22SPPM61R LE177C5B LH1048BSWL3702 LH1048BWL3702

LH382A LHM62B SSI-LXH387USBD-150 SSI-LXH9ZIC40587 SSP-LXS110818BA FL2950BWL7R FL2950WL7R FL2951WL8G

FL2951WL8R FL589C7R FL67C7R FL67WL8G 2191QU7-24V 2191U1-12V 2191U5-12V 2191U5-6V 2191U7-12V 249-4167-3734-504F Q6P5BXXG02E 3990A7 5110F3-12V MPC5BCW18.0 556-1237-801F