



**G-NOR ELECTRONICS CO.,LTD.**

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**SPECIFICATIONS FOR LED DISPLAYS**

**12.7mm(0.50") Seven Segments Fivefold Digit**

**GNF-5051BS**

**NINGBO G-NOR ELECTRONICS CO.,LTD.**

**Features:**

High efficiency, low power consumption.  
 Extremely low current.  
 Luminous evenly distributed on each segment.  
 Low development cost.

**Descriptions:**

Industrial standard size.  
 These display provide excellent reliability in bright ambient light.  
 These devices are made with white segments and black surface.

**Applications:**

Audio equipment or Instrument panels.  
 General use for digital indicators.  
 Multimedia product.

**Selection Guide:**

Part No.	Anode	Chip		Lens Color
		Material	Emitting Color	
GNF-5051BS		GaAlAs	Super Red	White Diffused

**Absolute Maximum Rating ( Ta=25 )**

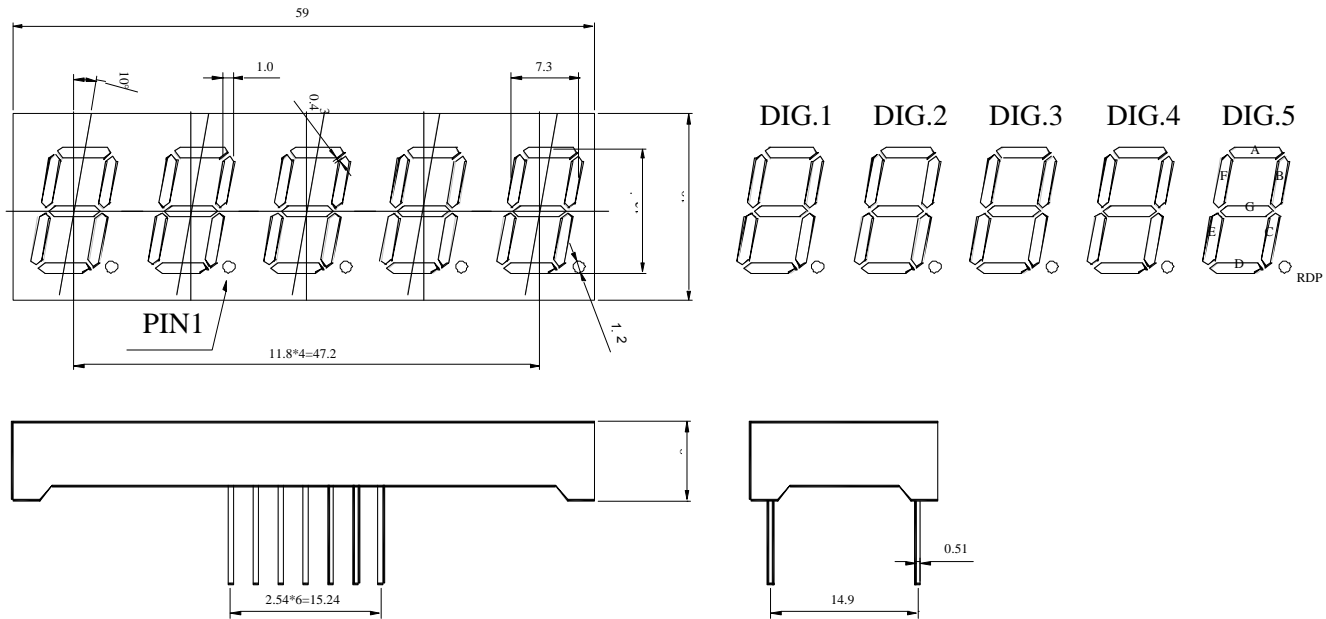
Parameter	Symbol	Super Red	Unit
Power Dissipation/Segment	$P_d$	60	mW
Peak Forward Current /Segment (Duty 1/10@ 1KHz)	$I_{FP}$	70	mA
Continuous Forward Current /Segment	$I_F$	20	mA
Recommend use current /Segment	$I_F$	5~10	mA
Reverse Voltage /Segment	$V_R$	5	V
Operating Temperature Range	$T_{opr}$	-25~ +75	
Storage Temperature Range	$T_{stg}$	-30 ~ +85	
Solder Temperature	$T_{sol}$	260±5	

- Notes :** 1、 This is the limit current . It is not allowed to use when the product work continuously.  
 2、 It is recommended that the product is driven by TTL,CMOS.  
 3、 Soldering time≤5 seconds.

**Electrical Optical Characteristics ( Ta=25 )**

Parameter	Symbol	Super Red		Unit	Test Condition
		Typ.	Max.		
Luminous Intensity/Segment	$I_v$	10	--	mcd	$I_F=10mA$
Forward Voltage /Segment	$V_F$	1.85	2.3	V	$I_F=20mA$
Reverse Current /Segment	$I_R$	--	50	uA	$V_R=5V$
Dominant Wavelength	$\lambda_d$	645	--	nm	$I_F=20mA$
Spectral Line Half Width	$\Delta\lambda$	30	--	nm	$I_F=20mA$

**Package Dimensions:**

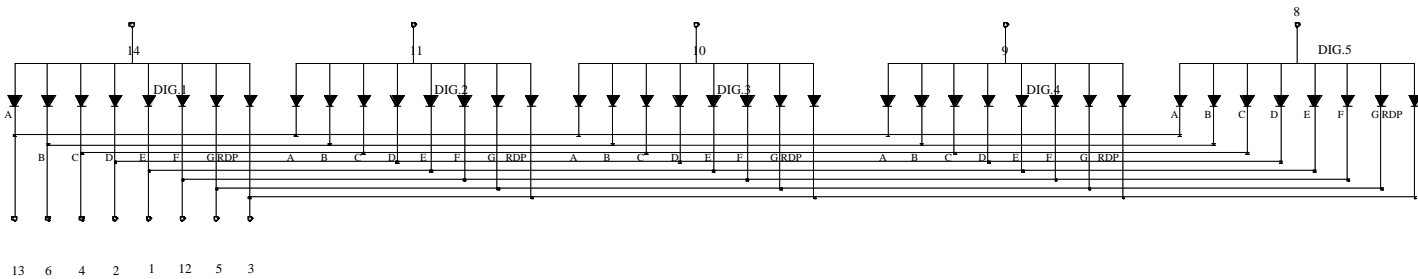


**NOTES :**

- All dimensions are in millimetres (mm), Tolerance is  $\pm 0.25\text{mm}$  unless otherwise noted.
- Specifications are subject to change without notice.

**Internal Circuit:**

Common Anode

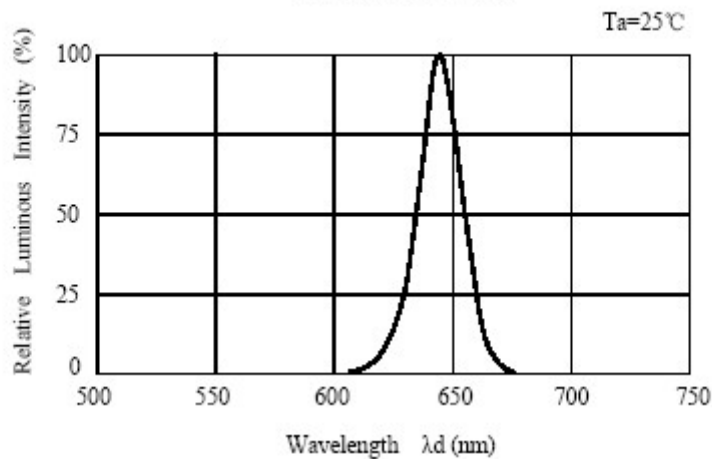
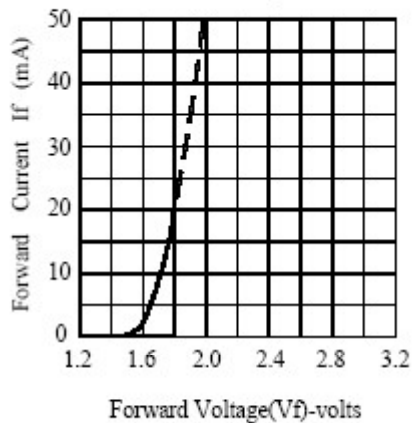


**GNF-5051Bx**

## Reliability Test Items and Conditions

NO	Test Item	Test Conditions	Duration	Sample	Ac/Re
1	Temperature Cycle	-30°C~25°C~85°C~25°C 30min 5min 30min 5min	50cycles	100	0/1
2	High Temp. Storage	Ta=85°C	1000hours	100	0/1
3	Temp.& Humidity Test	Ta=85°C RH=85%	1000hours	100	0/1
4	Low Temp. Storage	Ta=-30°C	1000hours	100	0/1
5	Operating Life Test	Ta=25±5°C DC IF=15mA	1000hours	100	0/1
6	Solder Heat	Tsol=260±5°C, 5s	1times	20	0/1

Spectrum Distribution

Forward Current vs.  
Forward Voltage

Forward Current Derating Curve

