



BRIGHTTEK
BRIGHTTEK (EUROPE) LIMITED

Brighten Up The World With LED!



ISO/TS 16949:2009



BS EN ISO 14001:2004



QC 080000 IECQ HSPM

PRODUCT DATASHEET

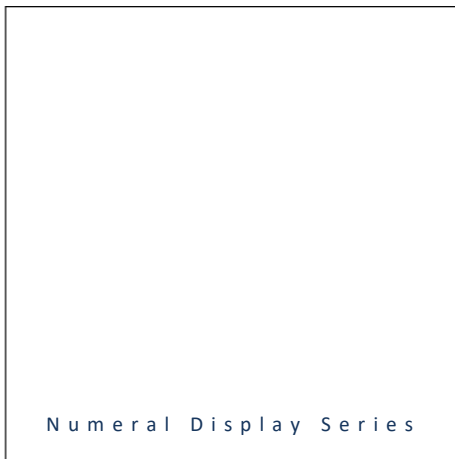


- ▶ Numeral Display
- ▶ 0.56'' (14.2mm) 88:88
- ▶ Cool White (7700K)

N0W50D98BS (LFC0566SWWY-ND)
N0W50D99BS (LFC0565SWWY-ND)



Release Date: 13 February 2020 Version: A1.0



Numeral Display Series

Numeral Display

RoHS
Compliant



FEATURES:

- **Package:** Through Holes Quadruple Digit 7-Segment Display
- **Forward Current:** 20mA per diode
- **Pulse Current:** 100mA Per diode
- **Forward Voltage (typ.):** 3.0V per diode
- **Luminous Intensity (typ.):** 30mcd @20mA per diode
- **Colour:** Cool White
- **Colour Temperature:** 7700K
- **Materials:**
 - Die: InGaN
 - Resin: Epoxy (Yellow Diffused)
- **Operating Temperature:** -40~+85°C
- **Storage Temperature:** -40~+100°C
- **Grouping parameters:**
 - Forward voltage
 - Luminous intensity
- **Soldering methods:** Hand; Wave Soldering (DIP)
- **Preconditioning:** acc. to JEDEC Level 3
- **Packing:** 200pcs/carton

APPLICATIONS:

- 7-Segment Display
- Quadruple Digital Display
- Information Board
- White Goods
- Counter

CHARACTERISTICS:

Absolute Maximum Characteristics (Ta=25°C)

Parameter	Symbol	Ratings	Unit
Forward Current *	I _F	30	mA
Peak Forward Current Duty 1/10 @1KHz	I _{FP}	100	mA
Reverse Voltage	V _R	5	V
Reverse Current @5V	I _R	10	μA
Power Dissipation	P _D	85	mW
Electrostatics Discharge (HBM)	ESD	200	V
Operating Temperature	T _{OPR}	-40~+85	°C
Storage Temperature	T _{STG}	-40~+100	°C

1. All parameters are per diode.

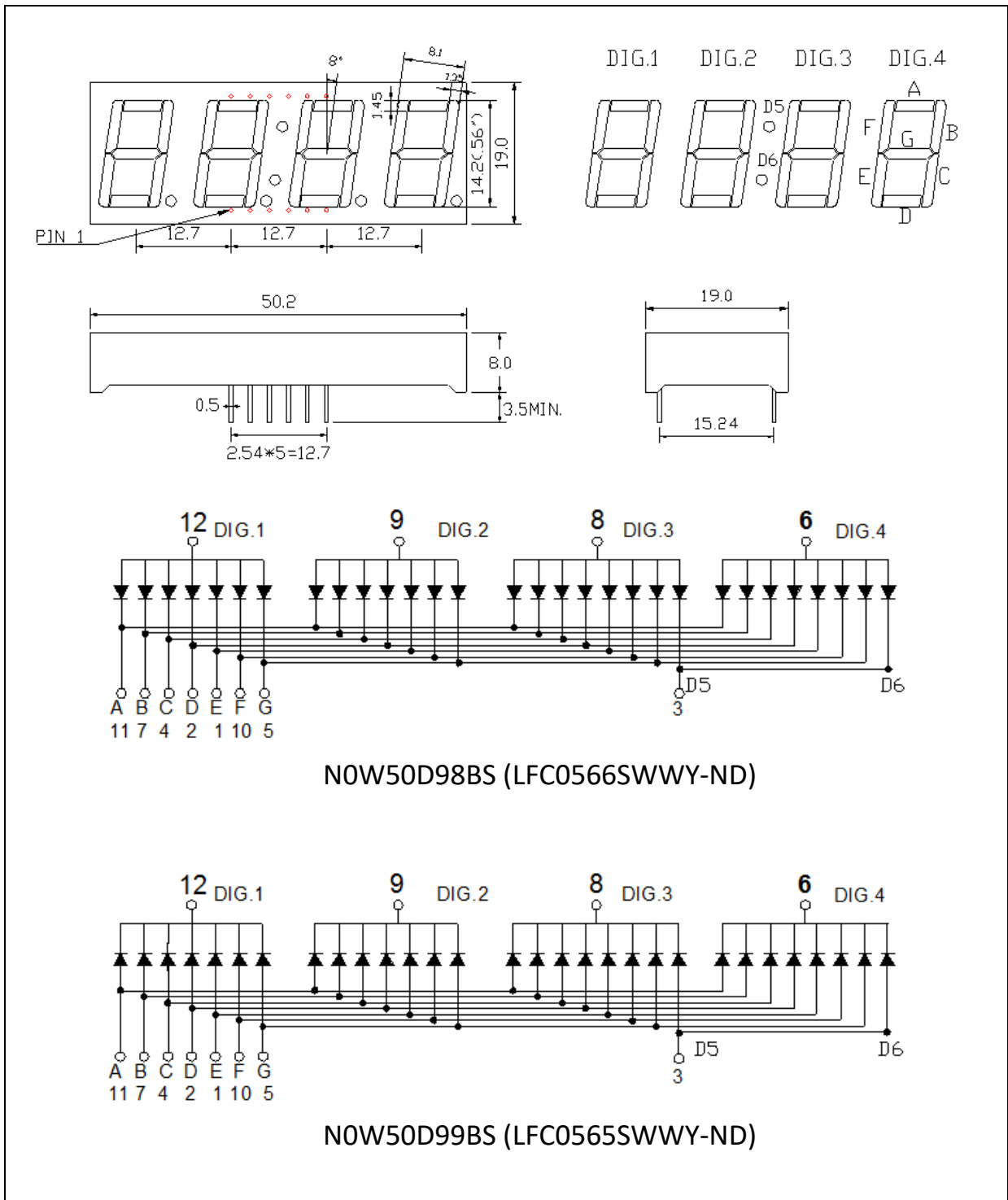
Electrical & Optical Characteristics (Ta=25°C)

Parameter	Symbol	Values			Unit	Test Condition
		Min.	Typ.	Max.		
Forward Voltage	V _F	2.8	3.0	3.5	V	I _F =20mA
Luminous Intensity	I _v	25	30	35	mcd	I _F =20mA
Chromaticity Coordinates	X	---	0.3000	---	---	I _F =20mA
	Y	---	0.3000	---		
Colour Temperature	CCT	---	7700	---	K	I _F =20mA

1. All parameters are per diode.
2. Luminous intensity (I_v) ±10%, Forward Voltage (V_F) ±0.1V

OUTLINE DIMENSION:

Package Dimension:



1. All dimensions are in millimetre (mm).
2. Tolerance ± 0.25 mm, unless otherwise noted.

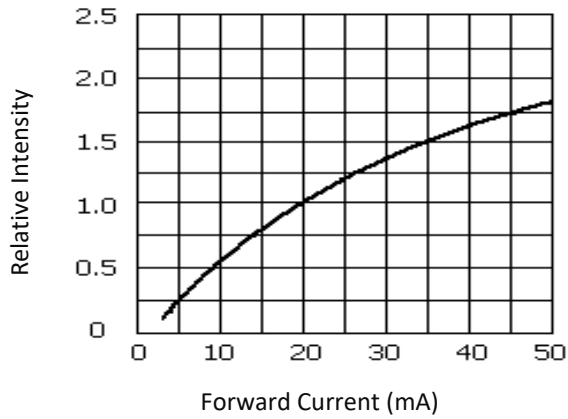
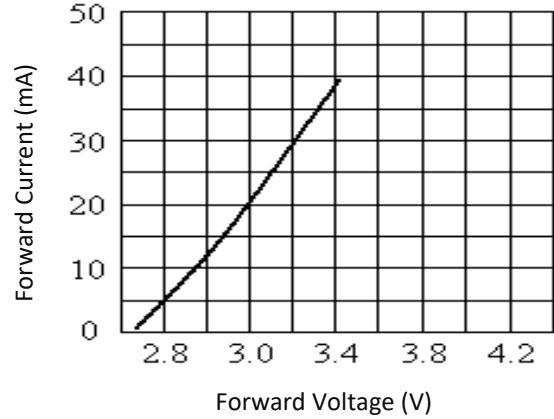
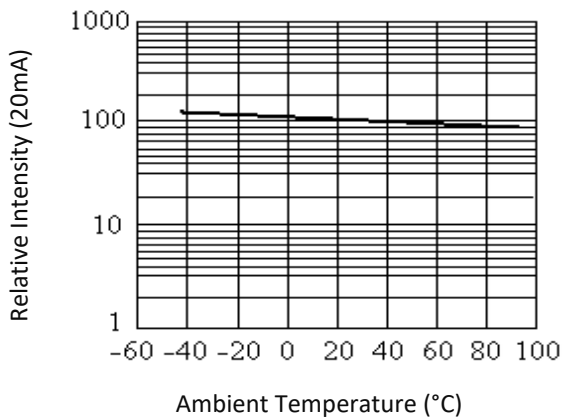
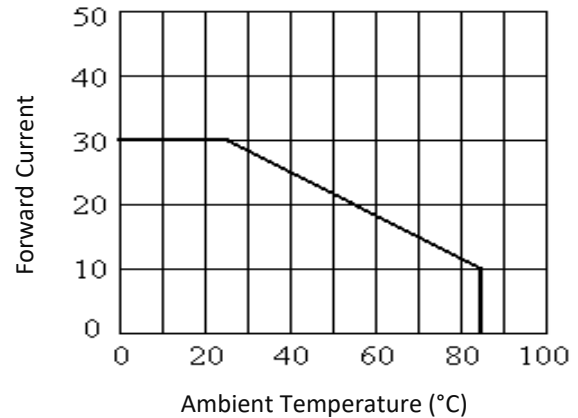
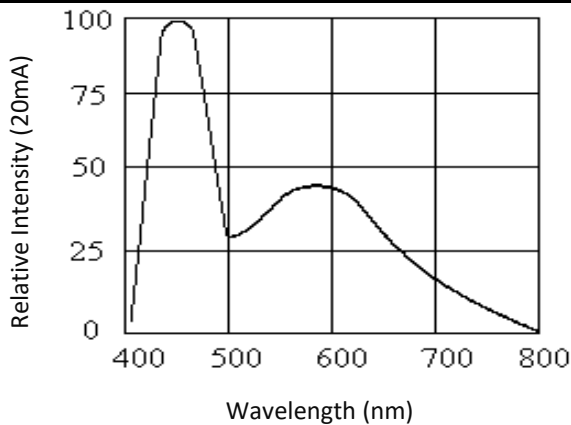
BINNING GROUPS:

Forward Voltage Classifications ($I_F = 20\text{mA}$):

Code	Min.	Max.	Unit
F	2.8	3.5	V

Luminous Intensity Classifications ($I_F = 20\text{mA}$):

Code	Min.	Max.	Unit
P	25	35	mcd

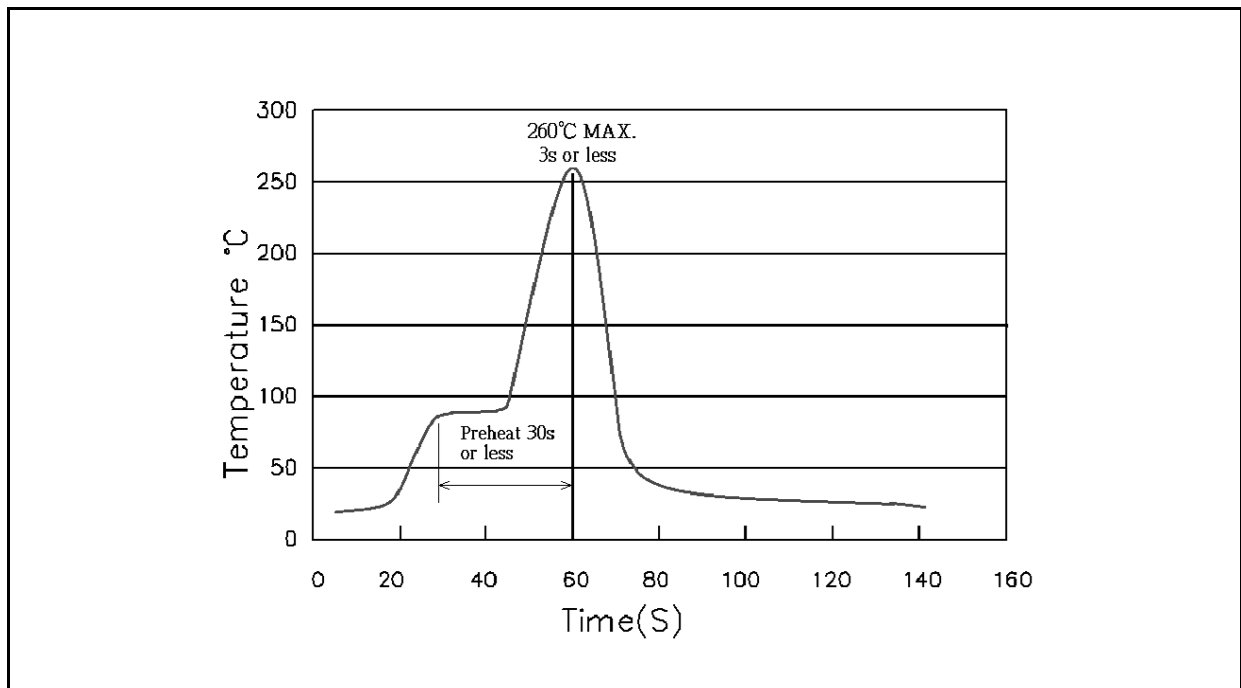
ELECTRO-OPTICAL CHARACTERISTICS:
Relative Intensity v.s. Forward Current

Forward Current v.s. Forward Voltage

Relative Intensity v.s. Temperature

Forward Current v.s. Temperature

Relative Spectral Distribution


RECOMMENDED SOLDERING PROFILE:

Hand Solder (Solder Iron):

- Temperature at tip of iron: 350°C max.
- Soldering Time: 3 seconds \pm 1 sec.
- Maximum reflow soldering: 1 time.

Wave / Soldering Heat (DIP):

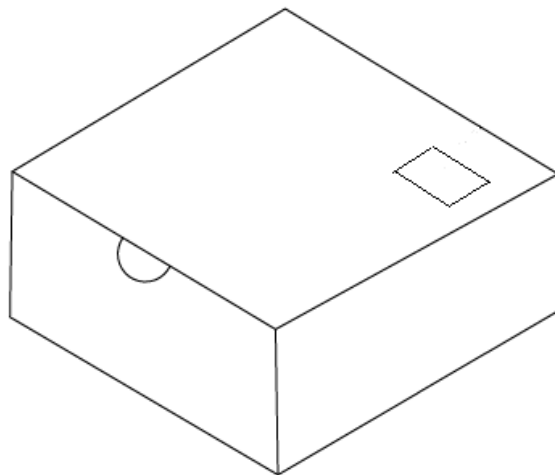


Note:

1. Maximum reflow soldering: 1 time.
2. Before, during, and after soldering, should not apply stress on the components and PCB board.

PACKING SPECIFICATION:

200pcs/carton



PRECAUTIONS OF USE:

Storage:

It is recommended to store the products in the following conditions:

- Humidity: 60% R.H. Max.
- Temperature: 5°C~30°C (41°F ~86°F).

Shelf life in sealed bag: 12 months at 5°C~30°C and <60% R.H.

Once the package is opened, the products should be used within a week. Otherwise, they should be kept in a damp-proof box with desiccating agent and apply baking.

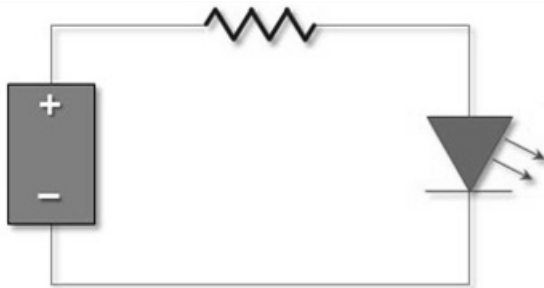
Baking:

It is recommended to bake the LED before soldering if the pack has been unsealed for longer than 24hrs. The suggested baking conditions are as followings:

- 60±5°C x 24hrs and <5%RH.

It's normal to see slight color fading of carrier (light yellow) after baking in process.

Testing Circuit:



Must apply resistor(s) for protection (over current proof).

Cleaning:

Use alcohol-based cleaning solvents such as isopropyl alcohol to clean the LED carrier / package. Avoid putting any stress force directly on to the LED lens.

ESD (Electrostatic Discharge):

Static Electricity or power surge will damage the LED. Use of a conductive wrist band or anti-electrostatic glove is recommended when handling the LED all time. All devices, equipment, machinery, work tables, and storage racks must be properly grounded.

In the events of manual working in process, make sure the devices are well protected from ESD at any time.

REVISION RECORD:

Version	Date	Summary of Revision
A1.0	13/02/2020	Datasheet set-up.