



98.00mm X 12.90mm Single Color Black Light Display

**Features:**

- \*High segment intensity
- \*Wide viewing angle
- \*Range of colors
- \*White face White segment
- \*RoHS compliant

**Available option:**

- \*Alternative face color
- \*Cropped terminal pins
- \*Available emitting color
- \*Low current version

**Electro/Optical Characteristics If=20mA Ta=25°C**

Part Number	Emitting Colors	Peak Wavelength	Forward Voltage V <sub>F</sub>		Luminous Intensity I <sub>v</sub>	
			Typ.	Max.	Min.	Typ.
NFBL-R9813ZH-01	GaP/GaP Red	700	18.00	20.00	6.40	12.80
NFBL-R9813ZS-01	GaAlAs/GaAs SH Hi-Red	660	14.40	17.60	128.00	192.00
NFBL-R9813ZD-01	GaAlAs/GaAs DH Super Red	660	14.40	17.60	352.00	448.00
NFBL-R9813ZE-01	GaAsP/GaP Orange	632	16.80	20.00	128.00	192.00
NFBL-R9813ZY-01	GaAsP/GaP Yellow	585	16.80	20.00	64.00	112.00
NFBL-R9813ZG-01	GaP/GaP Green	568	17.60	20.00	112.00	156.00
Units		nm	V		mcd	

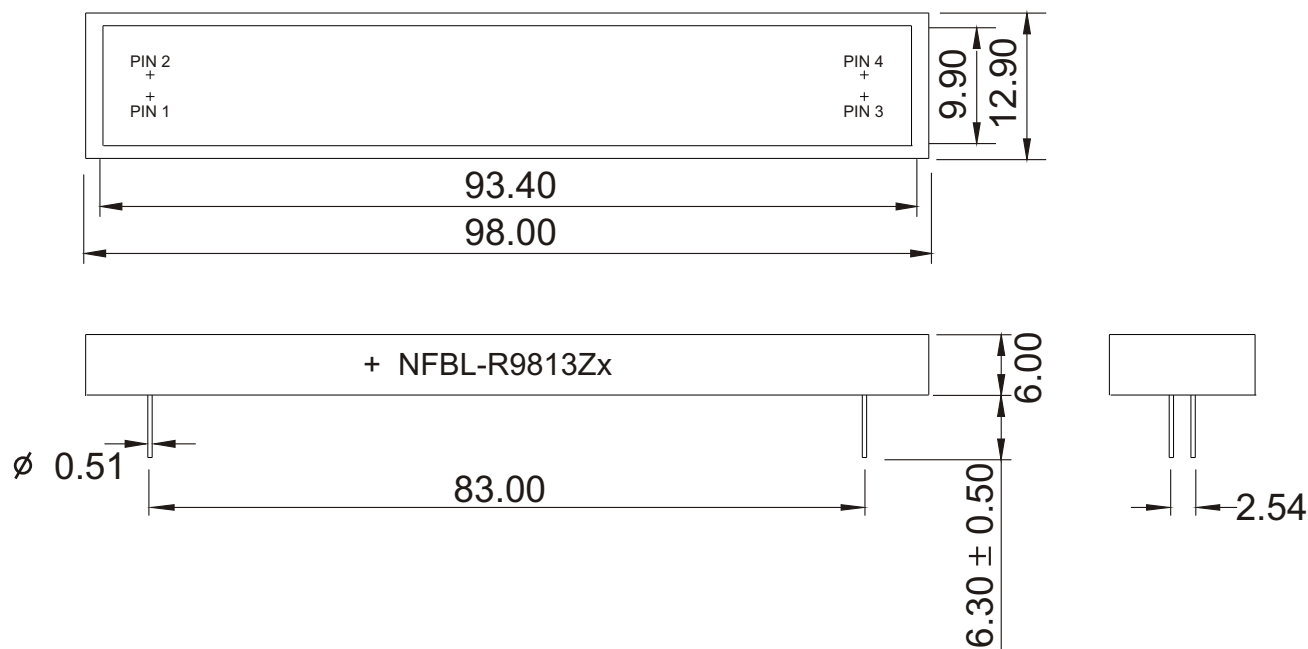
**Maximum Ratings Ta=25°C (Derate above 25°C)**

Characteristic	Test Condition	Symbol	H	S	D	E	Y	G	Units
Pulse Forward Current Per Seg.	1/10 duty cycle 0.1ms Pulse width	I <sub>FP</sub>	50*2	100*2	100*2	100*2	100*2	100*2	mA
DC Forward Current Per Seg.		I <sub>F</sub>	15*2	25*2	25*2	30*2	30*2	30*2	mA
Reverse Current Per Seg.	V <sub>R</sub> =5V	I <sub>R</sub>	10	10	10	10	10	10	μA
Power Dissipation		P <sub>D</sub>	40*16	60*16	60*16	80*16	80*16	80*16	mW
Operating Temperature		T <sub>OPR</sub>	-40 to +80						°C
Storage Temperature		T <sub>TSG</sub>	-40 to +85						°C
Lead soldering temperature	1.60mm from body maximum 3 seconds		260						°C



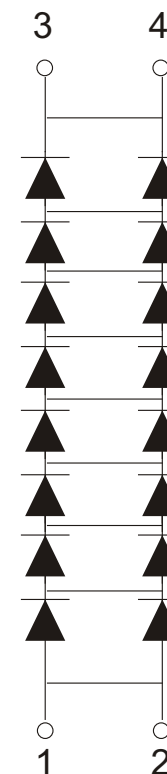
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#### PACKAGE DIMENSION



#### INTERNAL CIRCUIT DIAGRAM

### NFB-L-R9813Zx



Tolerance  $\pm 0.25$ mm unless stated

Checked

Chen N.H.

Approved

Jason Chen

Date

Aug/25/2011

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