



98.00mm X 12.90mm Single Color Black Light Display

**Features:**

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

**Available option:**

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

**Electro/Optical Characteristics If=20\*2mA Ta=25°C**

Part Number	Emitting Color	Peak Wavelength	Forward Voltage V <sub>F</sub>		Luminous Intensity I <sub>v</sub>	
			Typ.	Max.	Min.	Typ.
NFBL-R9813ZUHR-01	AlGaInP/GaAs Ultra Red	640	16.00	20.00	640.00	960.00
NFBL-R9813ZUE-01	AlGaInP/GaAs Ultra Orange	632	16.00	20.00	640.00	960.00
NFBL-R9813ZYO-01	AlGaInP/GaAs Ultra Amber	605	16.00	20.00	640.00	960.00
NFBL-R9813ZUY-01	AlGaInP/GaAs Ultra Yellow	590	16.00	20.00	640.00	960.00
NFBL-R9813ZUG-01	AlGaInP/GaAs Ultra Green	574	16.80	20.00	400.00	640.00
NFBL-R9813ZPG-01	InGaN/SiC Pure Green	525	26.40	30.40	2400.00	3200.00
NFBL-R9813ZUB-01	InGaN/SiC Ultra Blue	470	26.40	30.40	640.00	1600.00
NFBL-R9813ZUW-01	InGaN/SiC Ultra White	X-0.31/Y-0.31	26.40	30.40	3200.00	8000.00
Units		nm	V		mcd	

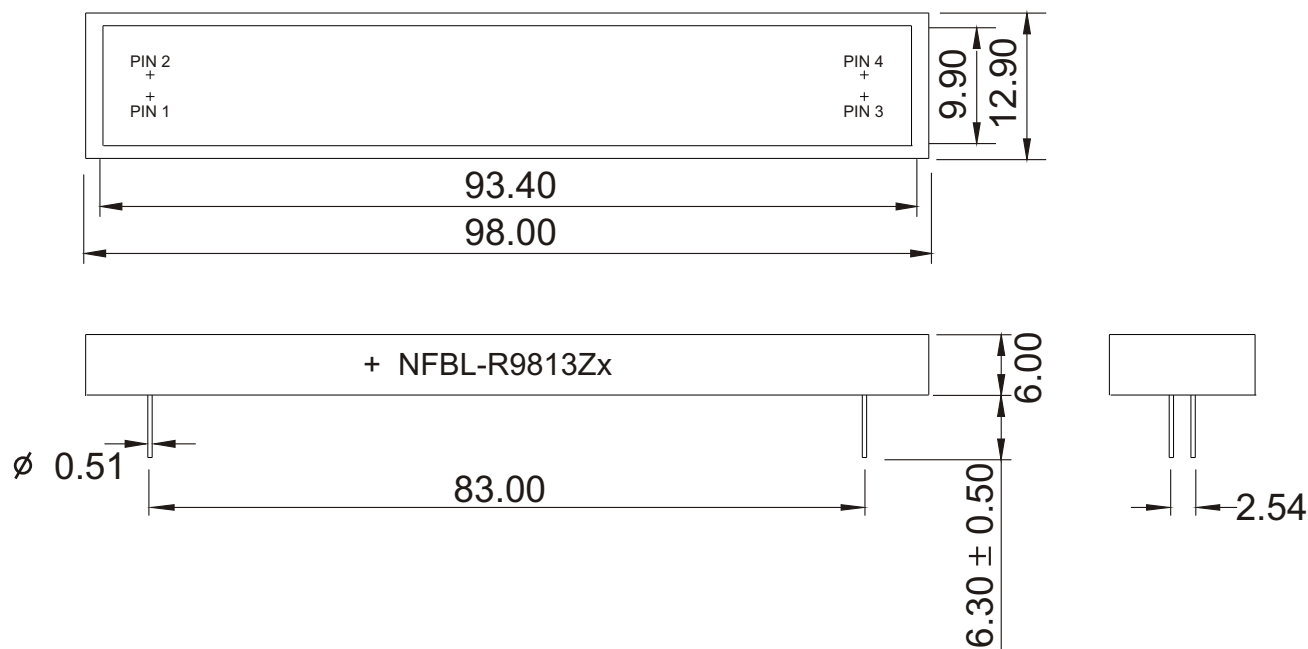
**Maximum Ratings Ta=25°C (Derate above 25°C)**

Characteristic	Test Condition	Symbol	UHR	UE	YO	UY	UG	PG	UB	UW	Units
Pulse Forward Current Per Seg.	1/10 duty cycle 0.1ms Pulse width	I <sub>FP</sub>	100*2	100*2	100*2	100*2	100*2	100*2	100*2	100*2	mA
DC Forward Current Per Seg.		I <sub>F</sub>	30*2	30*2	30*2	30*2	30*2	30*2	30*2	30*2	mA
Reverse Current Per Seg.	V <sub>R</sub> =10V	I <sub>R</sub>	10	10	10	10	10	10	10	10	μA
Power Dissipation		P <sub>D</sub>	65*16	65*16	65*16	65*16	75*16	110*16	120*16	120*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



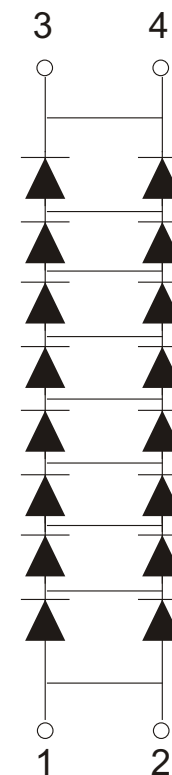
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#### PACKAGE DIMENSION



#### INTERNAL CIRCUIT DIAGRAM

### NFBL-R9813Zx



Tolerance  $\pm 0.25$ mm unless stated

Checked

Chen N.H.

Approved

Jason Chen

Date

Apr/26/2011

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