



ELECTRONICS, INC.
 44 FARRAND STREET
 BLOOMFIELD, NJ 07003
 (973) 748-5089
<http://www.nteinc.com>

NTE3180, NTE3181, NTE3182 Rectangle Light Emitting Diode – 12.7mm x 6.35mm

Description:

The NTE3180 (Super Bright Red), NTE3181 (Green) and NTE3182 (Yellow) are rectangular light sources designed for a variety of applications where a large bright source of light is required. These light bars are configured in dual-in-line packages. The NTE3181 utilize LED chips which are made from GaP on a transparent GaP substrate. The NTE3180 & NTE3182 utilize LED chips which are made from GaAsP on transparent GaP substrate.

Features:

- Low Power Requirement
- I.C Compatible
- Excellent On-Off Contrast
- Panel and Legend Mount Ready
- Suitable for Multiplex Operation
- Easy Mounting On P.C Board

Absolute Maximum Ratings: ($T_A = +25^{\circ}C$ unless otherwise specified)

Power Dissipation Per Chip	
NTE3180, NTE3181	100mW
Derate Linear from $+50^{\circ}C$	0.4mA/ $^{\circ}C$
NTE3182	60mW
Derate Linear from $+25^{\circ}C$	0.24mA/ $^{\circ}C$
Peak Forward Current Per Chip (1/10 Duty Cycle, 0.1ms Pulse Width)	
NTE3180 & NTE3181	100mA
NTE3182	80mA
Continuous Forward Current Per Chip	
NTE3180	40mA
NTE3181	50mA
NTE3182	20mA
Reverse Voltage Per Chip	5V
Storage and Operating Temperature Range	
NTE3180 (only)	-25° to $+85^{\circ}C$
NTE3181 & NTE3182	-40° to $+80^{\circ}C$
Soldering Temperature (1/16 inch Below Seating for 3 Seconds)	$+260^{\circ}C$

Electro-Optical Characteristics: ($T_A = +25^\circ\text{C}$ unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Viewing Angle	2 1/2		-	100	-	deg.
NTE3180 Only			-	150	-	deg.
Average Luminous Intensity Per Bar	I_V	$I_F = 10\text{mA}$	2.3	4.2	-	mcd
NTE3180 Only			7	11	15	mcd
Peak Emission Wavelength	peak	$I_F = 20\text{mA}$	-	565	-	nm
NTE3180 Only			563	568	573	nm
Spectral Line Half Width	°	$i_F = 20\text{mA}$	-	30	-	nm
NTE3180 Only			5	10	15	nm
Forward Voltage	V_F	$i_F = 20\text{mA}$	-	2.1	2.8	V
NTE3180 Only			1.7	2.2	2.6	V
Reverse Current	I_R	$V_R = 5\text{V}$	-	-	100	A

