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## NTE3186 & NTE3187 Discrete Blue LED Indicators 5mm (T-1 3/4)

**Description:**

The NTE3186 and NTE3187 are blue source color light emitting diodes made with GaN on SiC. It is recommended that a wrist strap or anti-electrostatic glove be used when handling these devices as static electricity and surge will damage these devices. All devices, equipment, and machinery must be electrically grounded.

**Features:**

- Low Power Consumption
- Solid State Blue Light Source
  - NTE3186 (Blue Diffused)
  - NTE3187 (Clear Blue)
- Suitable for use in Full Color LED Displays and Indicators in Diagnostic/Analytical Equipment

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

Reverse Voltage, $V_R$ .....	5V
DC Forward Current, $I_F$	
NTE3186 .....	25mA
NTE3187 .....	30mA
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width), $I_F$	
NTE3186 .....	100mA
NTE3187 .....	200mA
Power Dissipation, $P_D$	
NTE3186 .....	100mW
NTE3187 .....	105mW
Operating Temperature Range, $T_{opr}$	
NTE3186 .....	$-20^\circ$ to $+80^\circ\text{C}$
NTE3187 .....	$-40^\circ$ to $+85^\circ\text{C}$
Storage Temperature Range, $T_{stg}$	
NTE3186 .....	$-30^\circ$ to $+100^\circ\text{C}$
NTE3187 .....	$-40^\circ$ to $+85^\circ\text{C}$
Lead Temperature (During Soldering, .157 (4mm) below package base, 5sec max), $T_L$ ...	$+260^\circ\text{C}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	$V_F$	$I_F = 20\text{mA}$	3.0	-	3.2	V
NTE3186			-	4.5	5.5	V
NTE3187						
Reverse Current	$I_R$	$V_R = 5\text{V}$	-	10	-	$\mu\text{A}$
Luminous Intensity	$I_V$	$I_F = 20\text{mA}$	40	-	80	mcd
NTE3186			40	-	150	mcd
NTE3187						

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Luminous Intensity NTE3186	$I_V$	$I_F = 20\text{mA}$	40	-	80	mcd
NTE3187			40	-	150	mcd
Viewing Angle NTE3186	$2\theta^{1/2}$	Note 1	-	60	-	deg.
NTE3187			-	16	-	deg.
Peak Emission Wave Length NTE3186	$\lambda_{PEAK}$	$I_F = 20\text{mA}$	460	465	470	nm
NTE3187			-	430	-	nm
Spectral Line Half Width	$\Delta\lambda$	$I_F = 20\text{mA}$	-	65	-	nm
Capacitance	C	$V_F = 0, f = 1\text{MHz}$	-	100	-	pF

Note 1. Viewing Angle is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

