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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° to $+80^{\circ}\text{C}$
NTE3187	-40° to $+85^{\circ}\text{C}$
Storage Temperature Range, T_{stg}	
NTE3186	-30° to $+100^{\circ}\text{C}$
NTE3187	-40° 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	-	μA
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	λ_{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.

