



ELECTRONICS, INC.

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NTE3186 & NTE3187 Discrete Blue LED Indicators

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 30mA
 Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width), I_F 200mA
 Power Dissipation, P_D 105mW
 Operating Temperature Range, T_{opr} -40° to $+85^\circ\text{C}$
 Storage Temperature Range, T_{stg} -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	$I_F = 20\text{mA}$	–	4.5	5.5	V
Reverse Current	I_R	$V_R = 5\text{V}$	–	10	–	μA
Luminous Intensity	I_v	$I_F = 20\text{mA}$	20	–	60	mcd
NTE3186						
NTE3187			40	–	150	mcd
Viewing Angle	$2\theta_{1/2}$	Note 1	–	60	–	deg.
NTE3186						
NTE3187			–	16	–	deg.

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

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Peak Emission Wave Length	λ_{PEAK}	$I_F = 20\text{mA}$	–	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

