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## NTE30131 Infrared Emitting Diode for Remote Control and Night Vision Applications T-3 1/4 (10mm) Type Package

**Features:**

- High Reliability
- Low-Voltage Characteristics
- Narrow Viewing Angle
- Gallium Aluminum Arsenide
- Water Clear Lens

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

Power Dissipation (Per Chip), $P_D$ .....	150mW
Reverse Voltage (Per Chip), $V_R$ .....	5V
Forward Current (Per Chip), $I_F$	
Continuous .....	100mA
Peak ( $F = 1\text{kHz}$ , Duty Ratio = 0.1%) .....	1A
Operating Temperature Range, $T_{opr}$ .....	$-25^\circ$ to $+85^\circ\text{C}$
Storage Temperature Range, $T_{stg}$ .....	$-25^\circ$ to $+85^\circ\text{C}$

Note 1. IFP Condition: Pulse Width  $\leq 10\text{ms}$ , Duty Cycle = 10%.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	$V_F$	$I_F = 20\text{mA}$	1.1	-	1.4	V
		$I_F = 100\text{mA}$	-	1.3	1.6	V
Reverse Current	$I_R$	$V_R = 5\text{V}$	-	-	10	$\mu\text{A}$
Peak Emission Wavelength	$\lambda_p$	$I_F = 20\text{mA}$	-	940	-	nm
Half Intensity Angle	$2\theta_{1/2}$	$I_F = 20\text{mA}$	-	35	-	degree
Radiant Intensity	$I_E$	$I_F = 20\text{mA}$	-	20	-	mw/sr
		$I_F = 100\text{mA}$	-	100	-	mw/sr
Junction Capacity	$C_j$	$V_R = 0\text{V}$ , $f = 1\text{MHz}$	-	50	-	pF
Rise/Fall Time	$t_r/t_f$	$I_{FP} = 100\text{mA}$ , $f = 1\text{kHz}$ , $t_p/T = 1\%$	-	1	-	ns



