

NTE30001 Infrared Emitting Diode Bi-Directional

Features:

- Bi-Directional Light Emission Type
- High Output: $\Phi_e = 1\text{mW Typ at } I_F = 20\text{mA}$

Applications:

- Light Source for Tape End Detector for VHS type VCR's

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

Power Dissipation, P_D	75mW
Forward Current, I_F	50mA
Peak Forward Current (Note 1), I_{FM}	1A
Reverse Voltage, V_R	6V
Operating Junction Temperature Range, T_{opr}	-25°C to $+85^\circ\text{C}$
Storage Temperature Range, T_{stg}	-40°C to $+85^\circ\text{C}$
Lead Temperature (During Soldering, Note 2), T_L	$+260^\circ\text{C}$

Note 1. Pulse Width $\leq 100\mu\text{s}$, Duty Ratio = 0.01

Note 2. For 3 seconds at a distance of 2.5mm from the bottom face of the resin package.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V_F	$I_F = 20\text{mA}$	–	1.2	1.4	V
Peak Forward Voltage	V_{FM}	$I_{FM} = 500\text{mA}$	–	3.0	4.0	V
Reverse Current	I_R	$V_R = 3\text{V}$	–	–	10	μA
Terminal Capacitance	C_t	$V = 0, f = 1\text{MHz}$	–	50	100	pF
Radiant Flux	Φ_e	$I_F = 20\text{mA}$	0.7	1.0	2.0	mW
Peak Emission Wavelength	λ_p	$I_F = 5\text{mA}$	–	950	–	nm
Half Intensity Wavelength	$\Delta\lambda$	$I_F = 5\text{mA}$	–	45	–	nm

