



**ELECTRONICS, INC.**  
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## NTE3007 thru NTE3011 Discrete LED Indicators

**Features:**

- All Plastic Mold Type:
  - NTE3007 (Diffused Red, Gallium Arsenide Phosphide Red)
  - NTE3008 (Diffused Bright Red, Gallium Phosphide on Gallium Phosphide Red)
  - NTE3009 (Diffused Orange, Gallium Arsenide Phosphide on Gallium Phosphide Orange)
  - NTE3010 (Diffused Green, Gallium Phosphide on Gallium Phosphide Green)
  - NTE3011 (Diffused Yellow, Gallium Arsenide Phosphide on Gallium Phosphide Yellow)
- Low Power Consumption
- High Efficiency
- IC Compatible/Low Current Requirements
- Diffused Lens
- Wide Viewing Angle

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

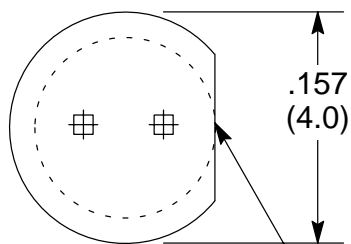
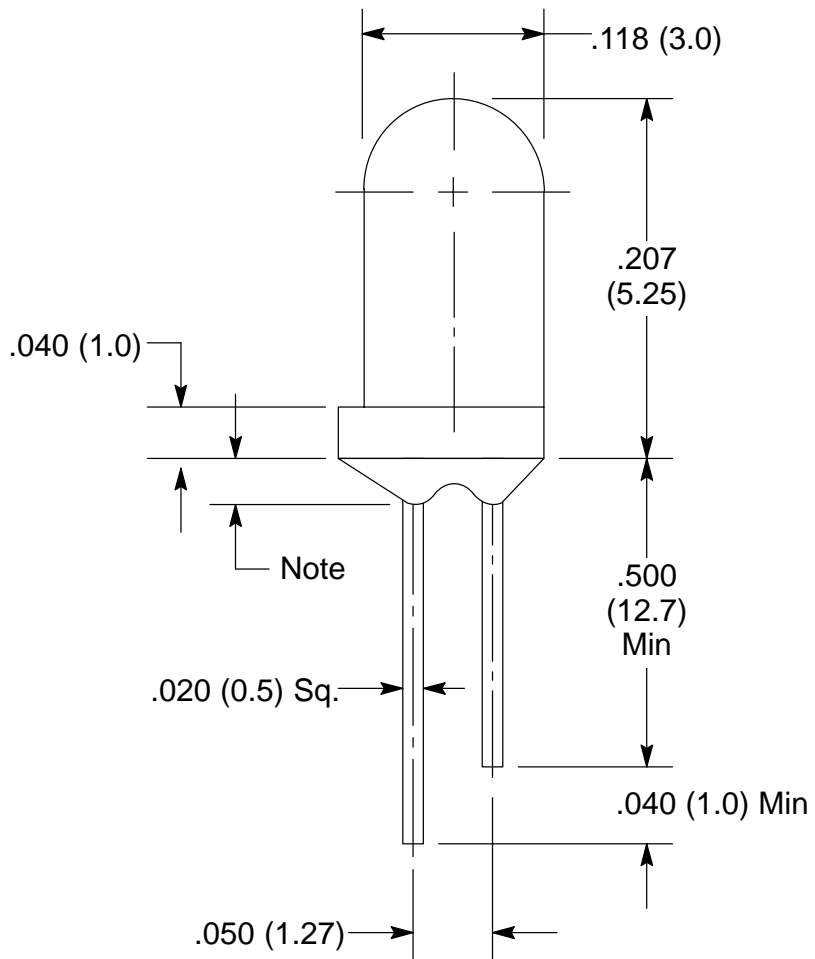
Reverse Voltage, $V_R$ .....	5V
Continuous Forward Current, $I_F$	
NTE3007 .....	40mA
Derate Linearly Above $25^\circ\text{C}$ .....	0.5mA/ $^\circ\text{C}$
NTE3008 .....	15mA
Derate Linearly Above $25^\circ\text{C}$ .....	0.2mA/ $^\circ\text{C}$
NTE3009, NTE3010 .....	30mA
Derate Linearly Above $25^\circ\text{C}$ .....	0.4mA/ $^\circ\text{C}$
NTE3011 .....	20mA
Derate Linearly Above $25^\circ\text{C}$ .....	0.25mA/ $^\circ\text{C}$
Peak Forward Current (1.10 Duty Cycle, 0.1ms Pulse Width), $I_F$	
NTE3007 .....	200mA
NTE3008 .....	60mA
NTE3009, NTE3010 .....	120mA
NTE3011 .....	80mA
Power Dissipation, $P_D$	
NTE3007 .....	80mW
NTE3008 .....	40mW
NTE3009, NTE3010 .....	100mW
NTE3011 .....	60mW
Operating Temperature Range, $T_{opr}$ .....	$-55^\circ$ to $+100^\circ\text{C}$
Storage Temperature Range, $T_{stg}$ .....	$-55^\circ$ to $+100^\circ\text{C}$
Lead Temperature (During Soldering, .063 (1.6mm) from body, 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 NTE3007	$V_F$	$I_F = 20\text{mA}$	–	1.7	2.0	V
NTE3008, NTE3010, NTE3011			–	2.1	2.8	V
NTE3009			–	2.0	2.8	V
Reverse Current	$I_R$	$V_R = 5\text{V}$	–	–	100	$\mu\text{A}$
Luminous Intensity NTE3007	$I_V$	$I_F = 10\text{mA}$ , Note 1	0.3	0.8	–	mcd
NTE3008			0.4	1.1	–	mcd
NTE3009			0.8	3.5	–	mcd
NTE3010, NTE3011			0.8	3.8	–	mcd
Peak Emission Wave Length NTE3007	$\lambda_P$	Measurement @ Peak	–	655	–	nm
NTE3008			–	697	–	nm
NTE3009			–	630	–	nm
NTE3010			–	565	–	nm
NTE3011			–	585	–	nm
Spectral Line Half Width NTE3007	$\Delta\lambda$		–	24	–	nm
NTE3008			–	90	–	nm
NTE3009			–	40	–	nm
NTE3010			–	30	–	nm
NTE3011			–	35	–	nm
Viewing Angle	$2\theta^{1/2}$	Note 2	–	72	–	deg.
Capacitance NTE3007	C	$V_F = 0$ , $f = 1\text{MHz}$	–	30	–	pF
NTE3008			–	55	–	pF
NTE3009			–	20	–	pF
NTE3010			–	35	–	pF
NTE3011			–	15	–	pF

Note 1. Luminous intensity is measured with a light sensor and filter combination that approximates the CIE (Commission Internationale De L'Éclairage) eye–response curve.

Note 2. Viewing Angle is the off–axis angle at which the luminous intensity is half the axial luminous intensity.



Flat Denotes Cathode

Note: Protruded resin under flange is  $.059$  (1.5) max