

NTE30014, NTE30015, NTE30016 Light Emitting Diode (LED)

Description:

The NTE30014 thru NTE30016 are Right Angle LED Indicators in a T-1 (3mm) type package. The High Efficiency Red source color device (NTE30014) is made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode. The Green source color device (NTE30015) is made with Gallium Phosphide Green Light Emitting Diode. The Yellow source color device (NTE30016) is made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow Light Emitting Diode.

Features:

- Pre-Trimmed Leads for PC Board Mounting
- I.C. Compatible
- Black Case Enhances Contrast Ratio
- Wide Viewing Angle
- High Reliability

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

DC Forward Current, I_F	
NTE30014, NTE30016	30mA
NTE30015	25mA
Peak Forward Current (Note 1), $I_{F(\text{peak})}$	
NTE30014	160mA
NTE30015, NTE30016	140mA
Reverse Voltage, V_R	5V
Viewing Angle ($2\theta_{1/2}$)	60°
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, 2mm Below Package Base, 5sec), T_L	$+260^\circ\text{C}$

Note 1. 1/10 Duty Cycle, 0.1ms Pulse Width.

Note 2. $\theta_{1/2}$ is the angle from optical centerline where the luminous intensity is 1/2 the optical center-line value.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Luminous Intensity NTE30014, NTE30015	I_V	$I_F = 10\text{mA}$	8	20	-	mcd
NTE30016			5	15	-	mcd

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage NTE30014, NTE30015	V_F	$I_F = 20\text{mA}$	-	2.0	2.5	V
NTE30016			-	2.1	2.5	V
Reverse Current	I_R	$V_R = 5\text{V}$	-	-	10	μA
Peak Emission Wave Length NTE30014	λ_P	$I_F = 20\text{mA}$	-	627	-	nm
NTE30015			-	565	-	nm
NTE30016			-	590	-	nm
Dominate Wavelength NTE30014	λ_D	$I_F = 20\text{mA}$	-	625	-	nm
NTE30015			-	568	-	nm
NTE30016			-	588	-	nm
Spectral Line Half Width NTE30014	$\Delta\lambda$	$I_F = 20\text{mA}$	-	45	-	nm
NTE30015			-	30	-	nm
NTE30016			-	35	-	nm
Capacitance NTE30014, NTE30015	C	$V_F = 0\text{V}, f = 1\text{MHz}$	-	15	-	pF
NTE30016			-	20	-	pF

