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NTE3020 & NTE3023 Light Emitting Diode (LED) 5mm (T-1 3/4) Type Package

Description:

The NTE3020 and NTE3023 are discrete LED indicators in a 5mm (T-1 3/4) type package. The Red (NTE3020) source color device is made with Gallium Arsenide Phosphide on Gallium Arsenide Red Light Emitting Diode while the Orange (NTE3023) source color device is made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode.

Features:

- Low Power Consumption
- High Efficiency
- IC Compatible/Low Current Requirements
- Versatile mounting on P.C. board or panel
- Reliable and Rugged

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

Power Dissipation, P_D	
NTE3020	80mW
NTE3023	100mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width), $I_{F(\text{Peak})}$	
NTE3020	200mA
NTE3023	120mA
Continuos Forward Current, I_F	
NTE3020	40mA
Derate Linearly Above 25°C	$0.5\text{mA}/^\circ\text{C}$
NTE3023	30mA
Derate Linearly Above 25°C	$0.4\text{mA}/^\circ\text{C}$
Reverse Voltage, V_R	5V
Operating Temperature Range, T_A	-55° to $+100^\circ\text{C}$
Storage Temperature Range, T_{stg}	-55° to $+100^\circ\text{C}$
Lead Temperature (During Soldering, .063 in. (1.6mm) from Body for 5sec), T_L	$+260^\circ\text{C}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Luminous Intensity NTE3020 NTE3023	I_V	$I_F = 10\text{mA}$, Note 1	0.3 2.5	0.8 8.7	- -	mcd
Viewing Angle	$2\theta^{1/2}$	Note 2	-	36	-	deg.
Peak Emission Wavelength NTE3020 NTE3023	λ_P		- -	655 635	- -	nm
Spectral Line Half Width NTE3020 NTE3023	$\Delta\lambda$		- -	24 40	- -	nm
Forward Voltage NTE3020 NTE3023	V_F	$I_F = 20\text{mA}$	- -	1.7 2.0	- 2.8	V
Reverse Current	I_R	$V_R = 5\text{V}$	-	-	100	μA
Capacitance NTE3020 NTE3023	C	$V_F = 0$, $f = 1\text{MHz}$	- -	30 20	- -	pF

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

Note 2. $\theta^{1/2}$ is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

