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NTE30002, NTE30003, NTE30004 Light Emitting Diode (LED) 0805 Surface Mount

Description:

The NTE30002 thru NTE30004 are 2.0mm x 1.2mm chip LED lamps in a 0805 surface mount type package. The High Efficiency Red source color device (NTE30002) is made with Gallium Arsenide Phosphide on Gallium Phosphide Orange Light Emitting Diode. The Super Bright Green source color device (NTE30003) is made with Gallium Phosphide Green Light Emitting Diode. The Yellow source color device (NTE30004) is made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow Light Emitting Diode.

Features:

- 2.0mm x 1.2mm (0805) SMT LED, 0.75mm Thickness
- Low Power Consumption
- Wide Viewing Angle
- Ideal for Backlight and Indicator Applications

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

DC Forward Current, I_F		
NTE30002, NTE30004	30mA	
NTE30003	25mA	
Peak Forward Current (Note 1), $I_{F(\text{peak})}$		
NTE30002	160mA	
NTE30003, NTE30004	140mA	
Reverse Voltage, V_R	5V	
Viewing Angle ($2\theta_{1/2}$)	120°	
Power Dissipation, P_D	105mW	
Operating Temperature Range, T_{opr}	-40° to +85°C	
Storage Temperature Range, T_{stg}	-40° to +85°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 centerline value.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Luminous Intensity	I_v	$I_F = 20\text{mA}$				
NTE30002			5	12	-	mcd
NTE30003			3	12	-	mcd
NTE30004			2	8	-	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 NTE30002	V_F	$I_F = 20\text{mA}$	-	2.0	2.5	V
NTE30003			-	2.2	2.5	V
NTE30004			-	2.1	2.5	V
Reverse Current	I_R	$V_R = 5\text{V}$	-	-	10	μA
Peak Emission Wave Length NTE30002	λ_P	$I_F = 20\text{mA}$	-	627	-	nm
NTE30003			-	565	-	nm
NTE30004			-	590	-	nm
Dominate Wavelength NTE30002	λ_D	$I_F = 20\text{mA}$	-	625	-	nm
NTE30003			-	568	-	nm
NTE30004			-	588	-	nm
Spectral Line Half Width NTE30002	$\Delta\lambda$	$I_F = 20\text{mA}$	-	45	-	nm
NTE30003			-	30	-	nm
NTE30004			-	25	-	nm
Capacitance NTE30002, NTE30003	C	$V_F = 0\text{V}, f = 1\text{MHz}$	-	15	-	pF
NTE30004			-	20	-	pF

