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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 ( $2\theta_{1/2}$ )	.....	$120^\circ$
Power Dissipation, $P_D$	.....	105mW
Operating Temperature Range, $T_{opr}$	.....	$-40^\circ$ to $+85^\circ\text{C}$
Storage Temperature Range, $T_{stg}$	.....	$-40^\circ$ to $+85^\circ\text{C}$

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 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	$\mu\text{A}$
Peak Emission Wave Length NTE30002	$\lambda_P$	$I_F = 20\text{mA}$	-	627	-	nm
NTE30003			-	565	-	nm
NTE30004			-	590	-	nm
Dominate Wavelength NTE30002	$\lambda_D$	$I_F = 20\text{mA}$	-	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

