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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°C unless otherwise specified)

DC Forward Current, I_F
- NTE30002, NTE30004 . . . . . 30mA
- NTE30003 . . . . . 25mA

Peak Forward Current (Note 1), $I_{F(peak)}$
- NTE30002 . . . . . 160mA
- NTE30003, NTE30004 . . . . . 140mA

Reverse Voltage, V_R 5V

Viewing Angle (2θ1/2) . . . . . 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. θ1/2 is the angle from optical centerline where the luminous intensity is 1/2 the optical centerline value.

Electrical/Optical Characteristics: (T_A = +25°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Luminous Intensity NTE30002	I_V	I_F = 20mA	5	12	–	mcd
NTE30003			3	12	–	mcd
NTE30004			2	8	–	mcd

Electrical/Optical Characteristics (Cont'd): (T_A = +25°C unless otherwise specified)

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