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NTE30011, NTE30012, NTE30013
Light Emitting Diode (LED)
PLCC Surface Mount

Description:

The NTE30011 thru NTE30013 are 3.5mm x 2.8mm chip LED lamps in a PLCC surface mount type package. The Super Bright Red source color device (NTE30011) is made with Gallium Arsenide Red Light Emitting Diode. The Super Bright Green source color device (NTE30012) is made with Gallium Phosphide Green Light Emitting Diode. The Yellow source color device (NTE30013) is made with Gallium Arsenide Phosphide on Gallium Phosphide Yellow Light Emitting Diode.

Features:

- Single Color
- Suitable for All SMT Assenbly and Solder Process
- Ideal for Backlighting

Absolute Maximum Ratings: (T_A = +25°C unless otherwise specified)

DC Forward Current, I_F
- NTE30011, NTE30013 . . . . . 30mA
- NTE30012 . . . . . 25mA

Peak Forward Current (Note 1), $I_{F(peak)}$
- NTE30011 . . . . . 155mA
- NTE30012, NTE30013 . . . . . 140mA

Reverse Voltage, V_R 5V

Viewing Angle ($2\theta 1/2$) . . . . . 120°

Power Dissipation, P_D
- NTE30011 . . . . . 100mW
- NTE30012, NTE30013 . . . . . 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°C unless otherwise specified)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Luminous Intensity NTE30011	I_V	I_F = 20mA	50	150	–	mcd
NTE30012			10	25	–	mcd
NTE30013			4	15	–	mcd

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V_F	I_F = 20mA				
NTE30011			–	1.85	2.5	V
NTE30012			–	2.2	2.5	V
NTE30013			–	2.1	2.5	V
Reverse Current	I_R	V_R = 5V	–	–	10	μA
Peak Emission Wave Length	λ_P	I_F = 20mA				
NTE30011			–	660	–	nm
NTE30012			–	565	–	nm
NTE30013			–	590	–	nm
Dominate Wavelength	λ_D	I_F = 20mA				
NTE30011			–	640	–	nm
NTE30012			–	568	–	nm
NTE30013			–	588	–	nm
Spectral Line Half Width	$\Delta\lambda$	I_F = 20mA				
NTE30011			–	45	–	nm
NTE30012			–	30	–	nm
NTE30013			–	35	–	nm
Capacitance	C	V_F = 0V, f = 1MHz				
NTE30011			–	45	–	pF
NTE30012			–	15	–	pF
NTE30013			–	20	–	pF

