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NTE30081 thru NTE30085 Light Emitting Diode (LED) Right Angle Surface Mount

Features:

- Available in 5 Different Colors:
 - NTE30081 (Super Red, GaAlAs/GaAs)
 - NTE30082 (Super Green, GaP/GaP)
 - NTE30083 (Super Yellow, AlInGaP/GaAs)
 - NTE30084 (Super Orange)
 - NTE30085 (Super Blue, GaInN/GaN)
- 3.2mm x 1.0mm Right Angle SMT LED, 1.5mm Thickness
- Single Color
- Suitable for All SMT Assembly and Solder Process
- Ideal for Backlighting

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

DC Forward Current, I_F

NTE30081	30mA
NTE30082, NTE30083, NTE30084	25mA
NTE30085	20mA

Peak Forward Current (Note 1), $I_{F(\text{peak})}$

NTE30085	100mA
All Other Devices	50mA

Reverse Voltage, V_R

NTE30085	4V
All Other Devices	5V

Power Dissipation, P_D

NTE30081	110mW
NTE30082	84mW
NTE30083, NTE30084	100mW
NTE30085	120mW

Electrostatic Discharge (NTE30085 **Only**), ESD

LED Junction Temperature, T_J

NTE30081, NTE30082, NTE30083, NTE30084	+100°C
NTE30085	+125°C

Operating Temperature Range, T_{opr}

Storage Temperature Range, T_{stg}

Reflow Soldering (Preheat +150° to +180°C 60sec to 120sec, 10sec max)

Note 1. 1/10 Duty Cycle, 0.1ms Pulse Width.

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Viewing Angle of Half Power NTE30083	$2\theta_{1/2}$	$I_F = 20\text{mA}$	–	140	–	degrees
All Other Devices			–	120	–	degrees
Luminous Intensity NTE30081	I_V	$I_F = 20\text{mA}$, Note 2	15.0	37.5	–	mcd
NTE30082			6.0	13.5	–	mcd
NTE30083, NTE30085			30	60	–	mcd
NTE30084			32	60	–	mcd
Forward Voltage NTE30081	V_F	$I_F = 20\text{mA}$	–	1.80	2.40	V
NTE30082			–	2.15	2.80	V
NTE30083, NTE30084			–	2.00	2.40	V
NTE30085			–	3.50	3.90	V
Reverse Current NTE30085	I_R	$V_R = 4\text{V}$	–	–	60	μA
All Other Devices		$V_R = 5\text{V}$	–	–	10	μA
Peak Emission Wave Length NTE30081	λ_P	$I_F = 20\text{mA}$	–	660	–	nm
NTE30082			–	570	–	nm
NTE30083			–	595	–	nm
NTE30084			–	635	–	nm
NTE30085			–	468	–	nm
Dominate Wavelength NTE30081	λ_d (HUE)	$I_F = 20\text{mA}$, Note 3	–	643	–	nm
NTE30082			–	567	–	nm
NTE30083			–	592	–	nm
NTE30084			–	626	–	nm
NTE30085			–	470	–	nm
Spectral Line Half Width NTE30081, NTE30082	$\Delta\lambda$	$I_F = 20\text{mA}$	–	30	–	nm
NTE30083, NTE30084			–	20	–	nm
NTE30085			–	45	–	nm
Terminal Capacitance (NTE30081 Only)	C_t	$V = 0\text{V}$, $f = 1\text{MHz}$	–	18	–	pF
Response Frequency (NTE30081 Only)	F_c		–	4	–	MHz

Note 2. Tolerance: 30% measured with EXELTRON 2001

Note 3. The dominate wavelength, λ_d , is derived from the CIE Chromatic Diagram and represents the color of the device.

