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NTE30022 & NTE30023 Light Emitting Diode (LED) 0805 Surface Mount

Features:

- NTE30022: Super Bright Orange (AlInGaP/GaAs)
- NTE30023: Super Bright Blue
- 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		
NTE30022	.....	25mA
NTE30023	.....	20mA
Peak Forward Current (Note 1), $I_{F(\text{peak})}$		
NTE30022	.....	50mA
NTE30023	.....	100mA
Reverse Voltage, V_R		
NTE30022	.....	5V
NTE30023	.....	4V
Power Dissipation, P_D		
NTE30022	.....	100mW
NTE30023	.....	120mW
Electrostatic Discharge (NTE30023 Only), ESD		150V
LED Junction Temperature, T_J		
NTE30022	.....	+100°C
NTE30023	.....	+125°C
Operating Temperature Range, T_{opr}		-30° to +85°C
Storage Temperature Range, T_{stg}		-40° to +85°C
Reflow Soldering (Preheat +150° to +180°C 60sec to 120sec, 10sec max)		+260°C

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	$2\theta_{1/2}$	$I_F = 20\text{mA}$	–	140	–	degrees
Luminous Intensity	I_V	$I_F = 20\text{mA}$, Note 2				
NTE30022			35	70	–	mcd
NTE30023			30	52	–	mcd

Note 2. Tolerance: 30% measured with EXELTRON 2001

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage NTE30022	V_F	$I_F = 20\text{mA}$	–	2.0	2.4	V
NTE30023			–	3.5	4.0	V
Reverse Current NTE30022	I_R	$V_R = 5\text{V}$	–	–	10	μA
NTE30023		$V_R = 4\text{V}$	–	–	60	μA
Peak Emission Wave Length NTE30022	λ_P	$I_F = 20\text{mA}$	–	620	–	nm
NTE30023			–	468	–	nm
Dominate Wavelength NTE30022	λ_d (HUE)	$I_F = 20\text{mA}$, Note 3	–	615	–	nm
NTE30023			465	470	480	nm
Spectral Line Half Width NTE30022	$\Delta\lambda$	$I_F = 20\text{mA}$	–	20	–	nm
NTE30023			–	45	–	nm

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

