



ELECTRONICS, INC.  
 44 FARRAND STREET  
 BLOOMFIELD, NJ 07003  
 (973) 748-5089  
<http://www.nteinc.com>



## NTE30088 & NTE30089 Light Emitting Diode (LED) SOT-23 Surface Mount

**Features:**

- Available in 2 Different Colors:  
     NTE30088 (Super Red, GaAlAs/GaAs)  
     NTE30089 (Yellow, GaAsP/GaP)
- 3.0mm x 1.6mm SOT-23 SMT LED, 1.0mm Thickness
- Single Color

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

DC Forward Current, $I_F$		
NTE30088	.....	30mA
NTE30089	.....	25mA
Peak Forward Current (Note 1), $I_{F(\text{peak})}$	.....	50mA
Reverse Voltage, $V_R$	.....	5V
Power Dissipation, $P_D$		
NTE30088	.....	110mW
NTE30089	.....	90mW
Operating Temperature Range, $T_{\text{opr}}$	.....	$-30^\circ$ to $+85^\circ\text{C}$
Storage Temperature Range, $T_{\text{stg}}$	.....	$-40^\circ$ to $+100^\circ\text{C}$
Reflow Soldering (Preheat $+150^\circ$ to $+180^\circ\text{C}$ 60sec to 120sec, 10sec max)	.....	$+260^\circ\text{C}$

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

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

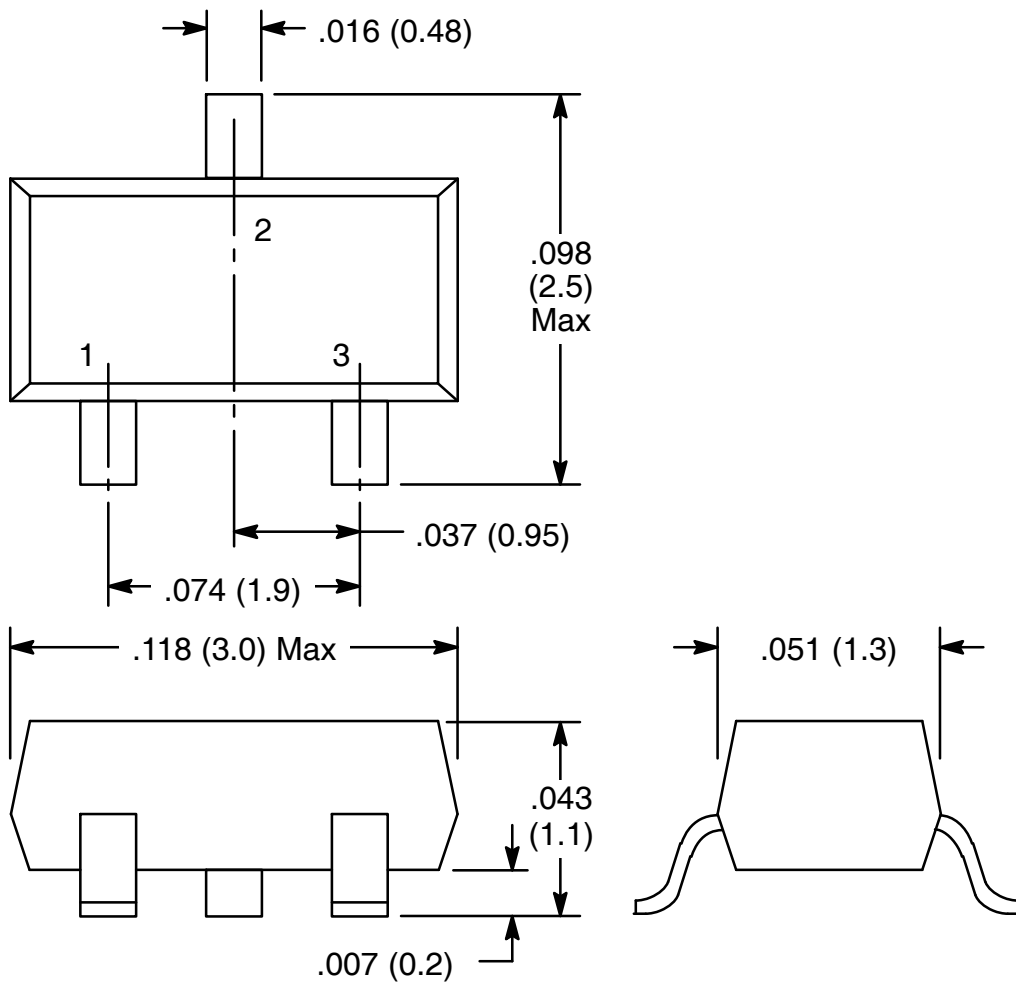
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Viewing Angle of Half Power	$2\theta_{1/2}$	$I_F = 20\text{mA}$	-	140	-	degrees
Luminous Intensity	$I_V$	$I_F = 20\text{mA}$ , Note 2	7	12	-	mcd
NTE30088			2	4	-	mcd
Forward Voltage	$V_F$	$I_F = 20\text{mA}$	-	1.80	2.40	V
NTE30089			-	2.10	2.80	V
Reverse Current	$I_R$	$V_R = 5\text{V}$	-	-	10	$\mu\text{A}$
Peak Emission Wave Length	$\lambda_P$	$I_F = 20\text{mA}$	-	660	-	nm
NTE30089			-	589	-	nm

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
Dominate Wavelength NTE30088	$\lambda_d$ (HUE)	$I_F = 20\text{mA}$ , Note 3	-	643	-	nm
NTE30089			-	585	-	nm
Spectral Line Half Width NTE30088	$\Delta\lambda$	$I_F = 20\text{mA}$	-	30	-	nm
NTE30089			-	35	-	nm

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



	1	2	3
NTE30088	NC	A	K
NTE30089	NC	K	A