



**ELECTRONICS, INC.**  
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## NTE30135 thru NTE30139 Super Bright LED Indicators 5mm, Bullet Head Type

**Features:**

- Low Power Consumption
- High Efficiency
- General Purpose Leads
- High Intensity
- All 5mm Bullet Head Super Bright Types w/Water Clear Lens:
  - NTE30135 (Yellow Green, AlGaInP)
  - NTE30136 (Yellow, AlGaInP)
  - NTE30137 (Red, AlGaInP)
  - NTE30138 (Blue, InGaN)
  - NTE30139 (White, InGaN)

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

Power Dissipation, $P_D$		
NTE30135, NTE30136, NTE30137	.....	75mW
NTE30138, NTE30139	.....	90mW
Peak Forward Current (1/10th Duty Cycle, 0.1ms Pulse Width), $I_{FM}$	.....	100mA
Continuous Forward Current, $I_F$		
NTE30135, NTE30136, NTE30137	.....	30mA
NTE30138, NTE30139	.....	25mA
Derating Linear from $+50^{\circ}\text{C}$	.....	$0.4\text{mA}/^{\circ}\text{C}$
Reverse Voltage, $V_R$	.....	5V
Operating Temperature Range, $T_{opr}$	.....	$-40^{\circ}$ to $+85^{\circ}\text{C}$
Storage Temperature Range, $T_{stg}$	.....	$-40^{\circ}$ to $+100^{\circ}\text{C}$
Lead Temperature (During Soldering, 4mm from Body, 5sec Max), $T_L$	.....	$+260^{\circ}\text{C}$

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Luminous Intensity	$I_V$	$I_F = 20\text{mA}$	600	1000	-	mcd
NTE30135						
NTE30136						
NTE30137						
NTE30138						
NTE30139						
View Angle of Half Power	$2 \theta_{1/2}$	$I_F = 20\text{mA}$	-	6	-	deg
Chromaticity Coordinates (NTE30139 <b>ONLY</b> )	X	$I_F = 20\text{mA}$	-	0.29	-	
	Y		-	0.29	-	
Color Temperature (NTE30139 <b>ONLY</b> )	CCT	$I_F = 20\text{mA}$	-	9500	-	K



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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Peak Emission Wavelength NTE30135	$\lambda_P$	$I_F = 20\text{mA}$	-	565	-	nm
NTE30136			-	591	-	nm
NTE30137			-	630	-	nm
NTE30138			-	470	-	nm
Dominant Emission Wavelength NTE30135	$\lambda_d$	$I_F = 20\text{mA}$	566	570	573	nm
NTE30136			586	590	592	nm
NTE30137			618	622	627	nm
NTE30138			464	470	473	nm
Spectral Line Half-Width NTE30135, NTE30136	$\Delta\lambda$	$I_F = 20\text{mA}$	-	20	-	nm
NTE30137			-	15	-	nm
NTE30138			-	30	-	nm
Forward Voltage NTE30135	$V_F$	$I_F = 20\text{mA}$	1.8	2.1	2.5	V
NTE30136, NTE30137			1.8	2.0	2.4	V
NTE30138			2.8	3.0	3.4	V
NTE30139			2.8	3.0	3.2	V
Reverse Current	$I_R$	$V_R = 5\text{V}$	-	-	10	$\mu\text{A}$

