



## POWrTherm™ BN-LG20Y Series Features

- Power NTC thermistor for Inrush Current Limiting (ICL)
- 20 mm disc diameter with wide resistance range
- Highly stable electrical characteristics
- Flame retardant coating material meets UL 94V-0 requirements
- RoHS\* compliant and halogen free\*\*
- Agency recognition:



## BN-LG20Y Series – Power NTC Thermistors for ICL

### Electrical Characteristics

Model	Resistance @ 25 °C (Ω)	Resistance Tolerance <sup>1</sup>	I <sub>max</sub> (A)	R <sub>imax</sub> @ 25 °C (Ω)	Max. Load Capacitance @ 240 VAC (μF)	P <sub>max</sub> Typical (W)	Dissipation Factor Typical δ (mW/°C)	Thermal Time Constant Typical (sec.)	Operating Temperature Range (°C)
BN-LG20Y0R7Mx	0.7	±20 %	13	0.029	1000	4.9	Approx. 28	Approx. 110	-40 to +200
BN-LG20Y1R0Mx	1.0	±20 %	13	0.037					
BN-LG20Y1R3Mx	1.3	±20 %	10	0.042					
BN-LG20Y1R5Mx	1.5	±20 %	10.5	0.042					
BN-LG20Y2R0Mx	2.0	±20 %	10	0.059					
BN-LG20Y2R2Mx	2.2	±20 %	9.5	0.066					
BN-LG20Y2R5Mx	2.5	±20 %	9.0	0.083					
BN-LG20Y3R0Mx	3.0	±20 %	8.5	0.076					
BN-LG20Y4R0Mx	4.0	±20 %	8.0	0.076					
BN-LG20Y4R7Mx	4.7	±20 %	7.5	0.116					
BN-LG20Y5R0Mx	5.0	±20 %	7.5	0.118					
BN-LG20Y6R0Mx	6.0	±20 %	7.0	0.120					
BN-LG20Y6R8Mx	6.8	±20 %	6.5	0.122					
BN-LG20Y7R0Mx	7.0	±20 %	6.5	0.124					
BN-LG20Y8R0Mx	8.0	±20 %	6.0	0.128					
BN-LG20Y100Mx	10.0	±20 %	6.0	0.135					
BN-LG20Y120Mx	12.0	±20 %	5.0	0.165					
BN-LG20Y130Mx	13.0	±20 %	5.0	0.179					
BN-LG20Y150Mx	15.0	±20 %	4.5	0.255					
BN-LG20Y160Mx	16.0	±20 %	4.5	0.263					
BN-LG20Y180Mx	18.0	±20 %	4.0	0.278					
BN-LG20Y200Mx	20.0	±20 %	4.0	0.308					
BN-LG20Y121Mx	120.0	±20 %	2.0	1.075	1500				

Notes:

"x" denotes lead type. "Y" = Kinked, "S" = Straight.

<sup>1</sup> ±15 % resistance tolerance is available upon request.



**WARNING Cancer  
and Reproductive Harm**  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

\*RoHS Directive 2015/863, Mar 31, 2015 and Annex.

\*\*Bourns considers a product to be "halogen free" if (a) the Bromine (Br) content is 900 ppm or less; (b) the Chlorine (Cl) content is 900 ppm or less; and (c) the total Bromine (Br) and Chlorine (Cl) content is 1500 ppm or less.

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Specifications are subject to change without notice.

Users should verify actual device performance in their specific applications.

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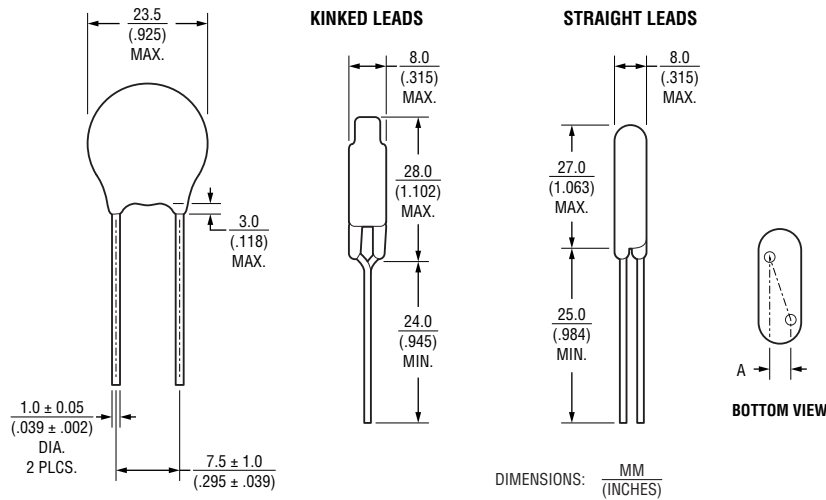


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# BN-LG20Y Series – Power NTC Thermistors for ICL

**BOURNS®**

## Product Dimensions



R <sub>25</sub> Ω	A dim.
0.7	$\frac{2.4 \pm 0.8}{(.094 \pm .031)}$
1.0	$\frac{2.6 \pm 0.8}{(.102 \pm .031)}$
1.3	
1.5	
2.0	$\frac{3.1 \pm 0.8}{(.122 \pm .031)}$
2.5	$\frac{2.6 \pm 0.8}{(.102 \pm .031)}$
3.0	
4.0	

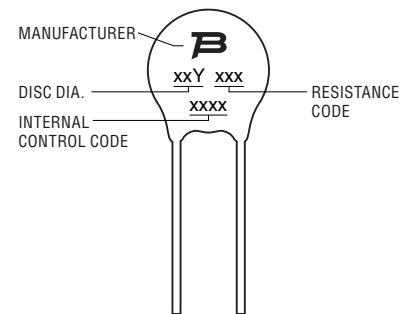
R <sub>25</sub> Ω	A dim.
4.7	$\frac{2.7 \pm 0.8}{(.106 \pm .031)}$
5.0	
6.0	$\frac{2.6 \pm 0.8}{(.102 \pm .031)}$
6.8	
7.0	$\frac{2.7 \pm 0.8}{(.106 \pm .031)}$
8.0	$\frac{3.0 \pm 0.8}{(.118 \pm .031)}$
10	$\frac{3.2 \pm 0.8}{(.126 \pm .031)}$
12	$\frac{3.6 \pm 0.8}{(.142 \pm .031)}$

R <sub>25</sub> Ω	A dim.
13	$\frac{3.6 \pm 0.8}{(.142 \pm .031)}$
15	
16	
18	$\frac{2.9 \pm 0.8}{(.114 \pm .031)}$
20	
120	$\frac{3.8 \pm 0.8}{(.150 \pm .031)}$

## Agency Recognition

UL File number: [E307915](#)  
 File number: [R50571116](#)  
 (Test for EN 60539-1:2016)

## Typical Part Marking



## Environmental Characteristics

### Storage Conditions

Temperature.....+15 °C to +40 °C  
 Humidity.....20 to 70 %  
 Moisture Sensitivity Level..... 1

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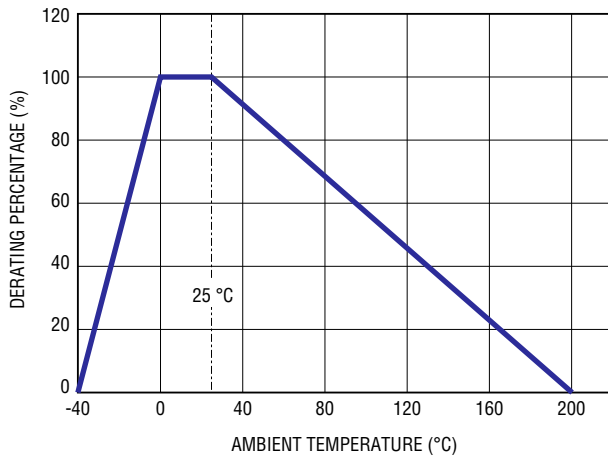
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## BN-LG20Y Series – Power NTC Thermistors for ICL

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### $I_{max}$ Derating vs. Ambient Temperature Curves



### Standard Packaging Quantities

Resistance $R_{25}$	Packaging Type		
	Bulk pcs./box	Tape & Reel pcs./reel	Ammo Pack pcs./box
0R7 ~ 200	750	500	500
121	450		

### How to Order

**BN - LG 20Y 2R5 M Y B**

POWrrTherm™ Product Designator \_\_\_\_\_

Series \_\_\_\_\_  
 LG = For Inrush Current Limiting (ICL)

Disc Diameter \_\_\_\_\_  
 20Y = 20 mm

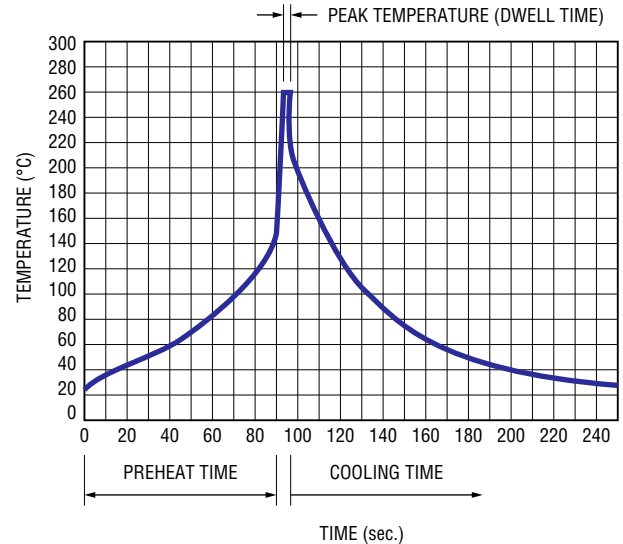
Resistance @ 25 °C \_\_\_\_\_  
 2R5 = 2.5  $\Omega$       100 = 10  $\Omega$       121 = 120  $\Omega$

Tolerance of  $R_{25}$  \_\_\_\_\_  
 L =  $\pm 15\%$       M =  $\pm 20\%$

Lead Type \_\_\_\_\_  
 Y = Kinked      S = Straight

Packaging Type \_\_\_\_\_  
 B = Bulk      R = Tape & Reel      M = Ammo Pack

### Solder Reflow Recommendations



Profile Feature	Pb-Free Assembly
Preheat Temperature Max. ( $T_{smax}$ ) Time ( $t_s$ ) from ( $T_{smin}$ to $T_{smax}$ )	150 °C 60~90 seconds
Solder Pot Temperature	260 °C max.
Solder Dwell Time	2-3 seconds

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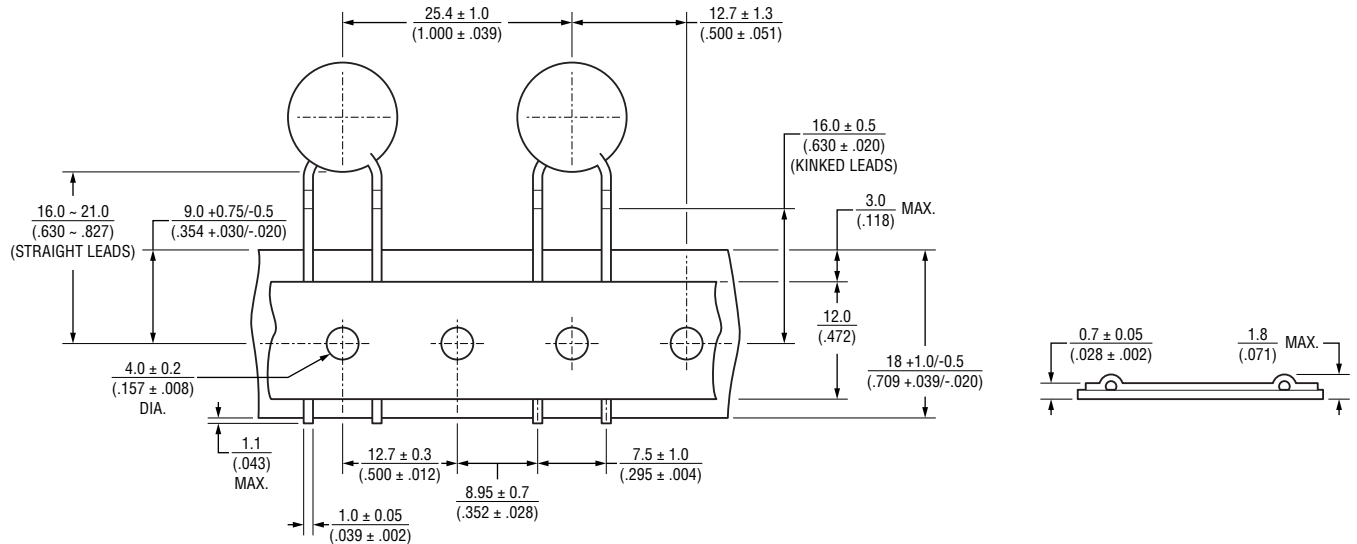
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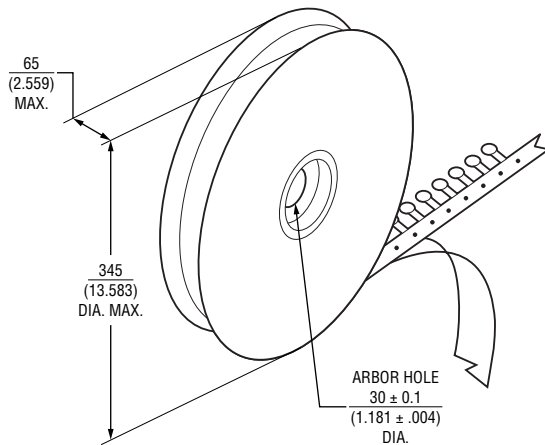
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## Packaging Specifications

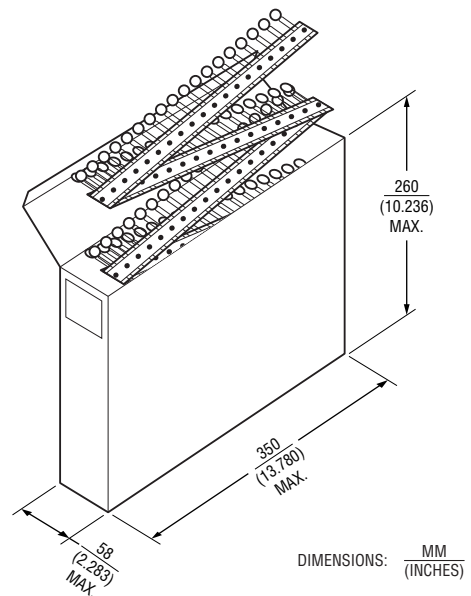
### Tape



### Reel



### Ammo Pack



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