



# 鐵研科技股份有限公司 TAK Technology Co., Ltd.

## Takcade LNC 195

<b>Type</b>	Nano-layer modified lithium nickel cobalt oxide ( $\text{LiNi}_x\text{Co}_{1-x}\text{O}_2$ )。	
<b>Supply Form</b>	powder。	
<b>Application</b>	lithium batteries。	
<b>Specification</b>	Appearance	Dark gray powder
	XRD Pattern	$\alpha\text{-NaFeO}_2$
	Tap Density(g/c.c)	> 2.4
	SSA ( $\text{m}^2/\text{g}$ )	< 0.6
	Particle Size( $\mu\text{m}$ ) $D_{50}$	12 ~ 17
	Li (%)	6 ~ 9
	Ni (%)	46 ~ 52
	Co (%)	9 ~ 12
	Fe (%)	< 0.01
	Na (%)	< 0.035
	Cu (%)	< 0.005
	<b>Other Data*</b>	PH value
Water content (%)		< 0.8
LiOH+Li <sub>2</sub> CO <sub>3</sub> content (%)		<0.5
Capacity (coin-cell, 0.1C, 2.8v-4.3v)		> 185 mAh/g

\* These values provide the reference informations and are not part of product's specification。

**Properties** **Takcade LNC 195** have the high capacity and energy density as same as Takcade LNC-190. Furthermore, Takcade LNC 195 had been controlled the content of lithium salt to improve



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the stability of material-slurry in the electrode-coating process. This new technology is helpful to quality control in mass production. Takcade LNC 195 is also modified with nano-layer on the surface in order to have a high safety and pass various safety tests. The DSC test shows a lower reaction heat , less than 100 (J/g).

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<b>Application</b>	<b>Takcade LNC 195</b> cathode material is designed for the application of high-energy lithium batteries, especially for using in 18650 cells of laptop and prismatic cells of smart phone. In addition, a high-power $\text{LiMn}_2\text{O}_4$ battery can be increased the capacity and cycle life by adding 10-15% Takcade LNC 195. Nickel-rich cathode material is easy to absorb moisture. It is suggested to bake the material at 120°C in vacuumed condition prior to slurry preparation. Mostly, the relative humidity of environment has to be controlled. Slurry should be used at once and never be stored. By selecting a proper electrolyte, the <b>Takcade LNC 195</b> cells can display the best performances.
<b>Storage</b>	<b>Takcade LNC 195</b> , a nickel-rich material is known to easily absorb moisture. Therefore, the vacuumed packaging should be stored without damage and treated with care. With proper storage condition, this product shelf life can be extended to as long as 1 year.
<b>Safety</b>	Hazardous level: Inflammable. May cause irritations when in contact with skin. Please refer to material safety data sheet MSDS (95-1677/1) for details of product labeling, product transportation, product storage and product manuals and safety.

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