

EnerCera®

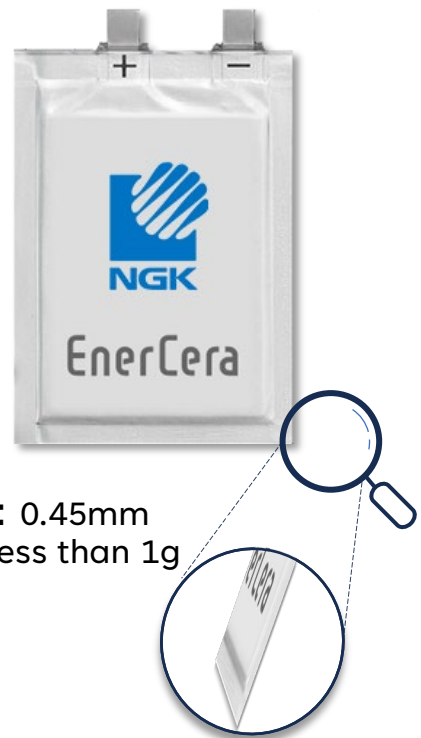
Expand what's possible:

Smaller, Lighter, Thinner

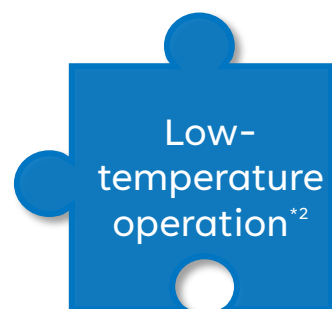
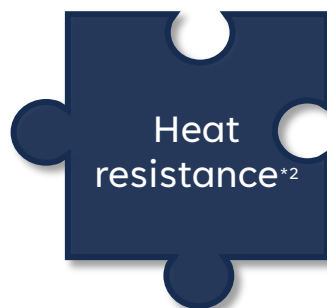
Rechargeable Lithium-ion Battery



Thickness : 1.3 - 2mm
Weight : Less than 1g - 3g



Thickness : 0.45mm
Weight : Less than 1g



*1 At least certified by UN38.3 and IEC62133-2. *2 Operating temp.: Depending on the part number, it can be used at -40°C, 105°C.

The electrolyte is in such a small amount that even if pierced with a nail, it will not ignite. This is a highly safe battery that you can use and wear without putting strain on the body.

With a thickness of 0.45mm and a weight of less than 1g, the lightweight **EnerCera Pouch** can be used in wearable devices and card-type devices without burdening the body!

The **EnerCera Coin**, with its high heat resistance and excellent float resistance, is ideal for backup power supplies.

EnerCera, with its various features, enhances product value!

Check the special website for lots of information!

[Contents]

- User guide
- Mounting method
- Use cases
- Reference electronic circuits
- Power supply IC
- Solutions for energy harvesting

<https://enercera.ngk-newvalue.com/en>



Lineup

		EnerCera® Pouch			EnerCera® Coin	
		• Ultra thin (thickness: 0.45mm) and can be embedded in IC card by hot lamination process • Large current output (several 100mA)			• Reflow soldering applicable (ET1210C-H) • No current control required	
Model Number		EC382704P-T	EC382704P-Hr	ET382704P-H	ET2016C-R	ET1210C-H
						
Features		High Power	High heat resistance*1	Fast charging*2	Reflow soldering unapplicable	Reflow soldering applicable*3
Point		-			No current control required Excellent float resistance and over-discharge resistance	
Dimensions/Diameter (Without terminals)		38 × 27mm			20mm	12.5mm
Thickness (With terminals)		0.45mm			2.05mm	1.3mm
Bendability		Conforming to ISO/IEC 10373-1 standard No deterioration after bending and torsion tests			-	
Nominal Capacity		27mAh (4.3V) 24mAh (4.2V)	20mAh	20mAh	25mAh	4mAh
Nominal Voltage		3.8V			2.3V	
Charge	Charging Method	Constant Current (CC) – Constant Voltage (CV) charging			Constant Voltage (CV) charging (No current control required)	
	Charging Voltage	4.3V 4.2V	4.2V		2.7V	
	Standard Charge Current	13.5mA (4.3V) 12.0mA (4.2V)	10mA		-	
Discharge	End Voltage	3.0V			1.5V	
	Standard Discharge Current*4	27mA (4.3V) 24mA (4.2V)	10mA	40mA	2.5mA	0.8mA
	(Ref.) Peak Discharge Current*5	560mA	130mA	300mA	60mA	20mA
Operation temperature		Discharge: -20°C~45°C (Charge: 0°C~45°C)	Discharge: -20°C~60°C (Charge: 0°C~60°C)	-40°C~70°C		-20°C*6~105°C

*1 Compatible with hot lamination for IC card manufacturing.

*2 Can be charged from 0% to 80% capacity in 14min.

*3 Recommended conditions Max.240°C x 1 time.
Please check the user guide for details.

*4 Current with which nominal capacity can be used

*5 Voltage drop is less than 0.5V with continuous discharge for 0.1 sec. (at 25 °C)

*6 From -40°C to 105°C for RTC backup applications.