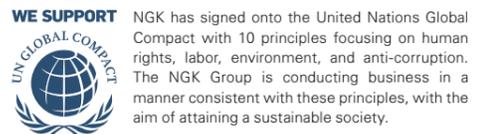




CORPORATE PROFILE



NGK has signed onto the United Nations Global Compact with 10 principles focusing on human rights, labor, environment, and anti-corruption. The NGK Group is conducting business in a manner consistent with these principles, with the aim of attaining a sustainable society.

# April 1, 2026, NGK Insulators Becomes NGK

NGK will change.

Each and every one of us will change.

As those individual changes build upon one another,  
we will reshape the world.

Our foundation is ceramic technology—  
a discipline that has enabled us  
to overcome significant challenges throughout our history.  
Yet the greatest challenges still lie ahead.  
Let us keep questioning the limits of our technology  
and the limits we place on ourselves.

A carbon-neutral world and a digital society  
will not be handed to us by others.

They must be created by us.

Now, it is time to make a decisive change to what  
stands right before us.



**Surprising Ceramics.**



©NGK

## Corporate Outline

Company name	NGK Corporation	
Address	2-56 Suda-cho, Mizuho, Nagoya 467-8530, Japan Telephone + (81) 52-872-7181	
Establishment	May 5, 1919	
Top Management	Chairman President	Taku Oshima Shigeru Kobayashi
Business	Manufacture and sale of ceramic products for automotive exhaust gas purification, various industrial equipment and devices, ceramic products for electronic components and devices, special metal products, insulators, and electric power related equipment.  <b>[ Environment Business Group ]</b> NGK provides ceramic catalyst carriers and NOx sensors essential to emission control. It also provides industrial equipment and devices that contribute to innovations in manufacturing processes and productivity improvement. NGK is currently focusing on developing next-generation products and technologies for the growing global carbon neutrality-related market.  <b>[ Digital Society Business Group ]</b> NGK provides various products that support advance technological innovations in the field of electronics, including semiconductors and electronic devices. Through its extensive range of products, NGK contributes solutions to the issues confronting our rapidly evolving digital society.  <b>[ Energy &amp; Industry Business Group ]</b> We are engaged in the energy plant business, which includes not only insulators and power distribution equipment that support a stable electricity supply, but also Hot-line insulator washing equipment for power generation and substations, as well as radioactive waste treatment systems. Leveraging NGK's unique ceramic technologies cultivated over many years, we contribute to the advancement and efficiency of sustainable power infrastructure.	

## NGK Group Philosophy

### Our Mission

**Enriching Human Life  
by Adding New Value to Society.**

### Our Values

Quality of  
**People Embrace challenges and teamwork.**

Quality of  
**Product Exceed expectations.**

Quality of  
**Management Social trust is our foundation.**

The NGK Group Philosophy is a signpost that guides every employee of the NGK Group. Formulated in 2019 to mark our 100th anniversary, it encompasses our desire to use our proprietary ceramic technology to contribute to future energy, environmental protection, and industrial progress, and to help people around the world live a happy, comfortable life.



# NGK Group Vision: Road to 2050

The NGK Group Vision announced in 2021 presents a picture of 'what we want to be' by 2050 along with the path we will take to get there. For NGK Group, 2021 is the year of our 'Third Foundation' as we pursue the self-transformation that will enable us to realize our vision.

## What we want to be

**A company to contribute to carbon neutrality and digital society with our unique ceramic technologies**

## What we must do

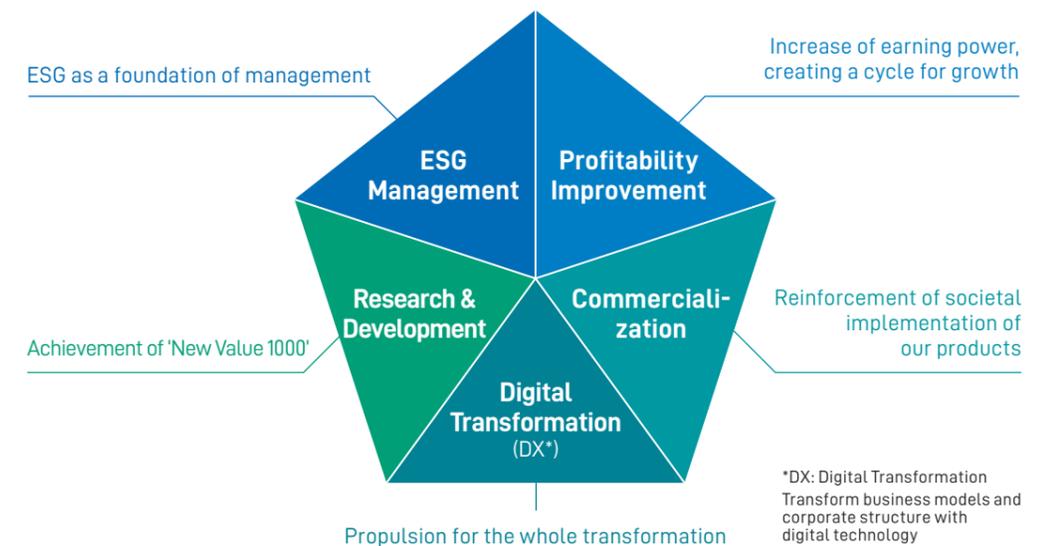
**Convert our business structure through 5 Transformations**

This Medium- to Long-term Vision outlines the kind of society we may attain by 2050 and positions the shift to carbon neutrality and a digital society as the most urgent issues we need to work on. The vision also identifies five areas of transformation that must be achieved: (1) ESG Management, (2) Profitability Improvement, (3) R&D, (4) Commercialization, and (5) Digital Transformation. Specific goals include realizing net zero CO<sub>2</sub> emissions by 2050 and developing new technologies and products for the areas in focus. The NGK Group will continue to build on its unique ceramic technology to create value in various forms, enabling sustainable business growth and contributions to society.

▶ NGK Group Vision



## 5 Transformations



<b>ESG Management</b>	Our foundation of management is to contribute to society through our business as a member of society. In particular, with regard to E (Environmental), we have formulated the 'NGK Group Environmental Vision' along with the 'NGK Group Vision.' In that Environmental Vision, we stipulate our targets as contributing to carbon neutrality through products and services as well as achieving net zero CO <sub>2</sub> emissions in our own activities by 2050.
<b>Profitability Improvement</b>	Regarding improvement in earning power, we are going to take on the following initiatives: -Generating cash by securely increasing our earning power over the next five years -Instilling management utilizing ROIC and analysis and improvement of profitability in each business within the entire NGK Group -Starting new actions in production processes to continue to reinforce our strengths as a manufacturer
<b>Research &amp; Development</b>	We will aim and work on to create a business with sales of 100 billion yen by 2030 through new business development, which we call 'New Value 1000.' In order to achieve this, we will invest 300 billion yen in R&D over the next 10 years with 80% allocated to carbon neutrality and digital society.
<b>Commercialization</b>	In order to make ceramic products born from our strength more widely used in society, we will focus on expanding to solution business, not limited to just selling things, by improving our marketing capabilities and expanding collaboration with the outside partners.
<b>DX</b>	We will use the power of digital to accomplish the above business transformation.

▶ NGK Group Environmental Policy / Environmental Vision



▶ NGK Group Digital Vision



# Surprising Ceramics.

NGK Group Vision: Road to 2050

**C**arbon **N**eutrality  
×  
**D**igital **S**ociety

The NGK Group supports the future of the global environment and human society with our surprising ceramic technology.

We are pioneering the next generation of advanced technologies and contributing to carbon neutrality and a digital society.

**DS** Supporting Communications Infrastructure

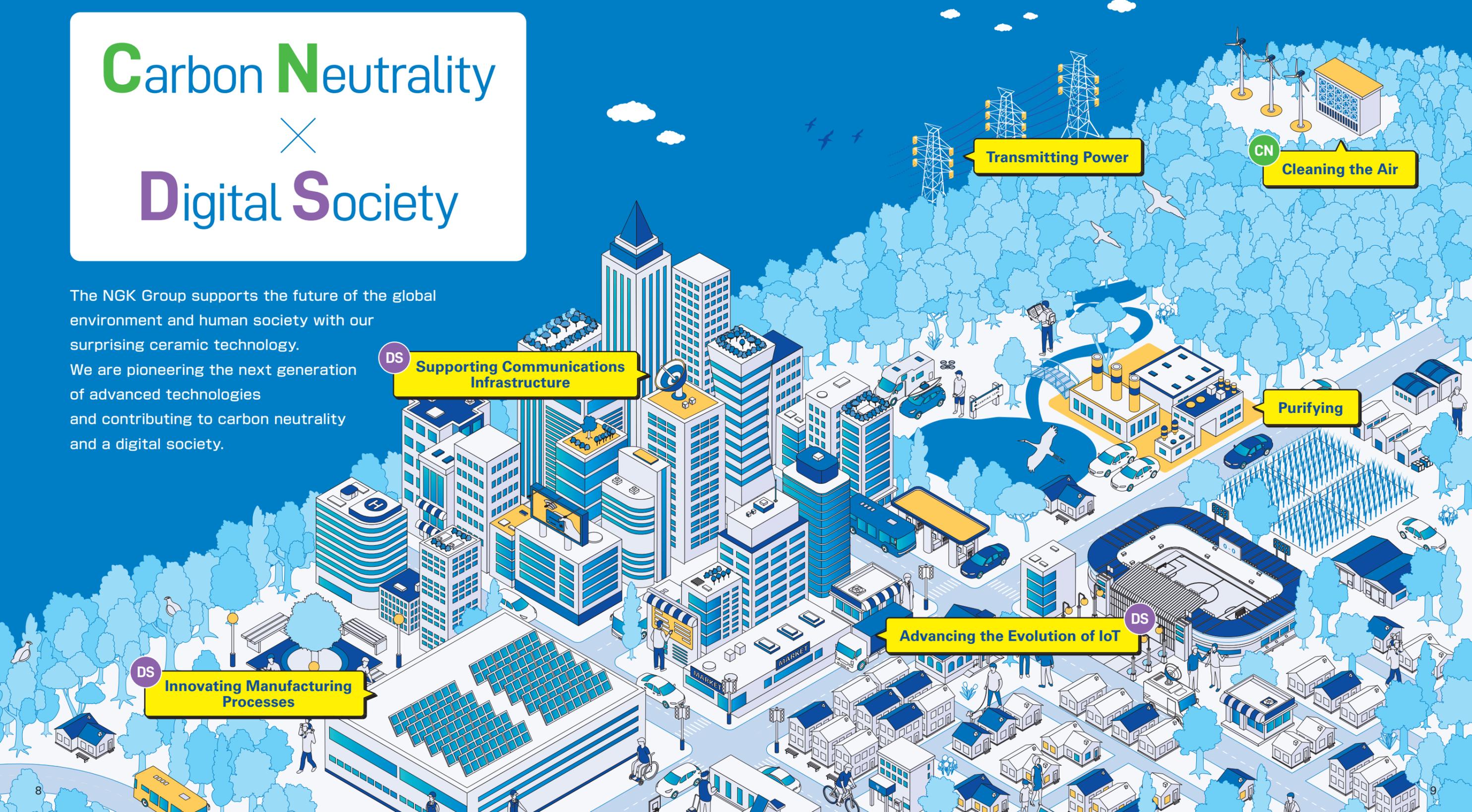
Transmitting Power

**CN** Cleaning the Air

Purifying

Advancing the Evolution of IoT **DS**

**DS** Innovating Manufacturing Processes



# Protecting Clean Air and Supporting the Evolution of Industry

We contribute to environmental conservation through our world-leading, proprietary ceramic technology. We are also driving innovation in manufacturing and supporting the advancement of industry.



## NGK's fine ceramic technology keeps satisfying the needs of the world

### HONEYCERAM® Ceramic substrates for automotive catalytic converters Large-size HONEYCERAM

HONEYCERAM with a very compact installation has a honeycomb structure which covers an area equivalent to two soccer grounds. It can carry catalysts for neutralizing harmful substances in automotive exhausts. The product steadily meets ever more rigorous emission regulations and has been adopted by automakers around the world.



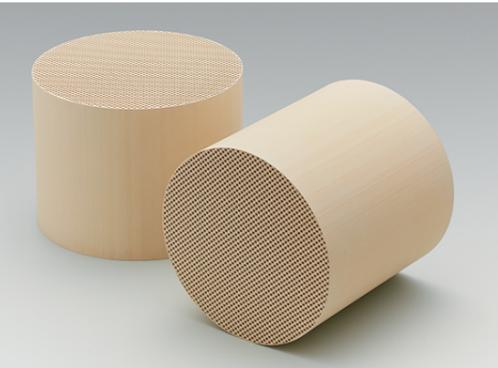
### Diesel particulate filters (DPFs)

The filters are effective in catching particulate matter (PM) in their fine pores and remove up to 99% of PM. Highly heat-resistant silicon carbide (SiC) filters are used in passenger cars, while lightweight cordierite filters are mainly used in larger vehicles.



### In-vehicle high-precision NOx sensors

NGK developed and commercialized the world's first vehicle-mounted sensor capable of measuring nitrogen oxide (NOx) concentrations in automotive exhaust gas at the parts per million (ppm) level. Measuring real-time NOx concentrations and feedback enables precise control of the exhaust gas purification system to reduce NOx emissions.



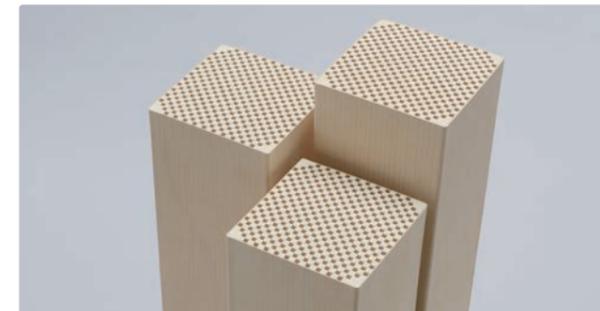
### Gasoline particulate filters (GPFs)

GPFs are particulate filters for gasoline-powered vehicles. GPFs are adopted in gasoline direct injection vehicles that are powerful yet as fuel efficient as hybrid cars. Building on its DPF technology, NGK commercialized GPFs for the first time in the world.

## Corrosion- and heat-resistant ceramic membranes with excellent separation performance

### Ceramic membranes and separators

Ceramic membranes feature excellent separation and filtering performance, making them suitable for the sterilization of mineral water and the solid-liquid separation of various substances, from organic solvents to viscous liquids including honey. The superior separation performance of these filters creates new possibilities for engineering.



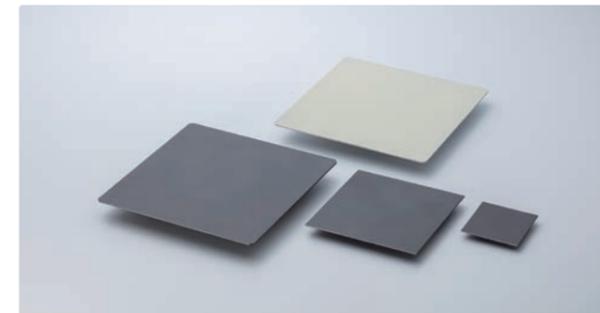
### High-Temperature Dust Collector

To address various issues found in conventional air pollution control equipment, we developed NGK's CERALLEC high temperature gas dust collector that applies honeycomb ceramic filter. Its excellent dust collection performance and compact installation footprint have been highly valued, and it is used across a wide range of fields. We also offer products for data centers, where demand has been rapidly increasing in recent years.



### Industrial heating systems (kilns and drying furnaces)

NGK's proprietary heating and drying technologies are used in industrial heating systems that cover a wide range of temperatures. They are used in advanced applications, including kiln firing of lithium-ion battery parts and electronic components and drying of functional films and gold foils.



### Refractory products

NGK's refractories include jigs for firing ceramic parts and electronic components. Notable among these is the exceptionally thin and lightweight silicon carbide (SiC) refractories which can save energy and boost the performance and productivity of final products.



### Corrosion-resistant equipment and systems

NGK manufactures exceptionally corrosion-resistant pumps and valves for chemical, pharmaceutical, and steel industries where heated acids and organic solvents are used in chemical processes. NGK also manufactures glass linings that prevent electrostatic charges and ensure safety.



# Responding to Challenges with Leading-Edge Technologies

In the rapidly advancing field of electronics, we are exploring unique technologies to address the issues of an ever-evolving digital society.



## High-performance components that assure stable quality in semiconductor manufacturing processes

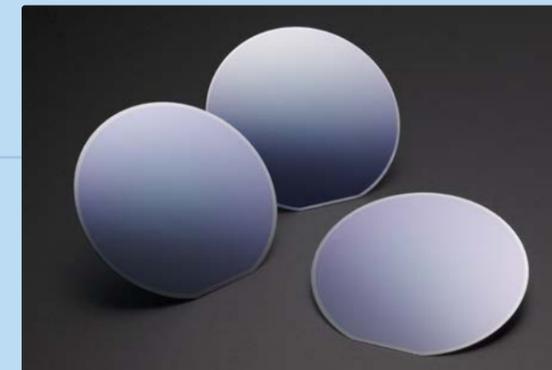
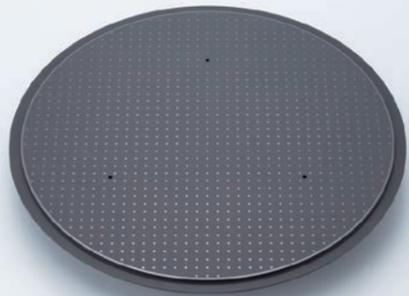
### Ceramic heaters

Our ceramic heaters are used to uniformly control the temperature of silicon wafers in the deposition process. The unique structure of a shaft bonded to the bottom of the heated pedestal, where wafers are placed, protects terminals and conducting wires from halogen gas, supporting stable supply and technological advancement of semiconductor fields.



### Electrostatic chucks

Electrostatic chucks are used to hold silicon wafers in place during etching and other processes. Our electrostatic chucks can be flexibly adapted to diverse purposes of use to significantly improve the efficiency of semiconductor production processes. For instance, they can be integrated with high-precision heaters or attached to cooling plates.



## Enhancing the communication performance and speed of ICT devices

### Bonded wafers

Drawing on its proprietary ceramic bonding technology and ultra-high-precision thin polishing technology, NGK manufactures bonded wafers specifically developed for use in electronic devices. Bonded wafers with layers of different materials can yield performance and functions that are not possible with single-material wafers.

## The key device that enables large capacity and superior reliability in hard disk drives (HDDs)

### Piezoelectric micro-actuators for HDDs

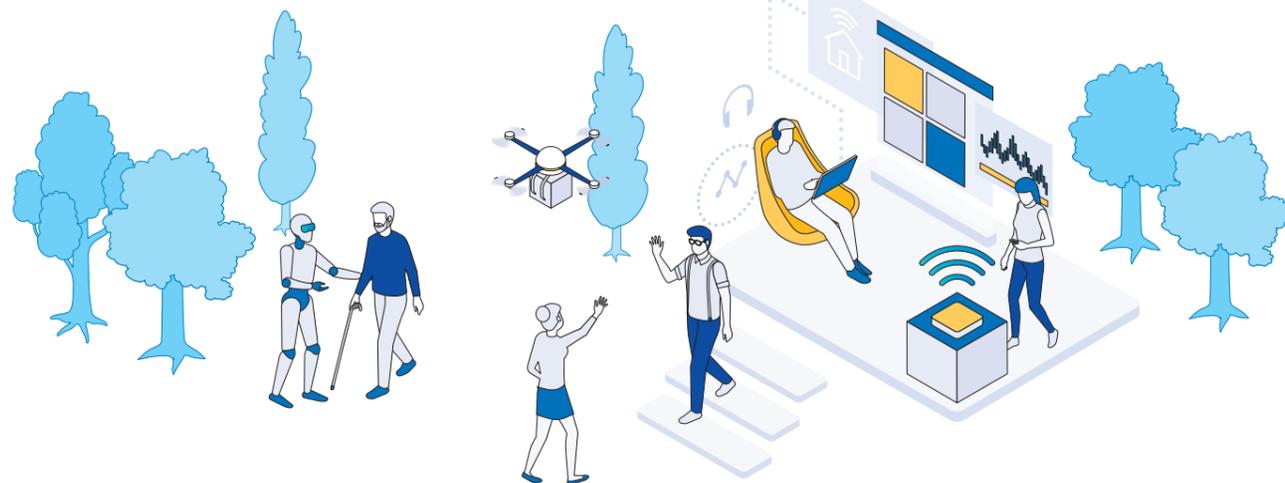
NGK's laminated piezoelectric actuators are among the smallest in the world, and they can precisely control the magnetic head of HDDs. They have been instrumental in boosting the capacity and reliability of HDDs, and are now active in data centers around the world.



## Making electronics components smaller, lighter, and more reliable

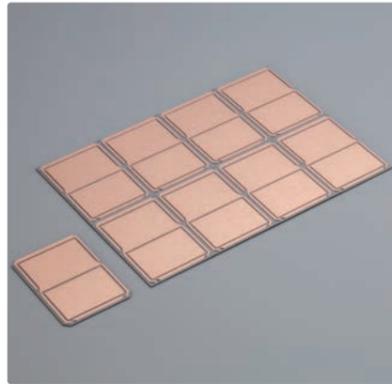
### Beryllium copper products

Beryllium copper alloy features excellent electrical and thermal conductivity of copper coupled with superior strength and durability comparable to special steel products. Beryllium copper strips are used as high-performance conductive springs in many advanced applications, including cars, industrial equipment, home appliances, and mobile devices.



# Supporting Global Power Supply

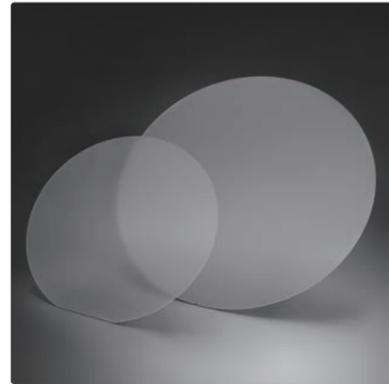
We ensure stable electricity supply and explore new potentials for energy, responding to changes in the electricity infrastructure to achieve a carbon neutral society.



## AMB<sup>®</sup> Substrates for Power Modules

These circuit boards combine the superior heat dissipation and high electrical conductivity of copper with the excellent insulation performance of ceramics. They can carry large electrical currents and have high dielectric strength, and can be optimally designed for industrial and automotive applications.

\* AMB: Active Metal Brazing



## Translucent alumina ceramics

Translucent alumina ceramics superior translucence and high strength are achieved by sintering high-purity alumina ceramics at high density. These are used to secure semiconductor chips in the semiconductor packaging process, and they are utilized to improve the productivity of cutting-edge semiconductor manufacturing, where exceptional reliability is required.



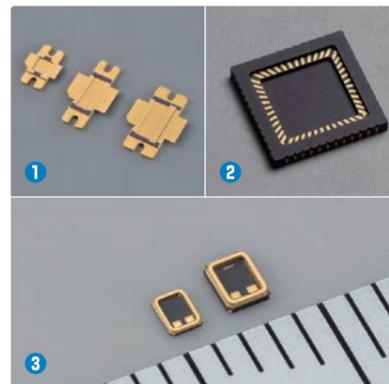
## Lithium-ion rechargeable battery "EnerCera<sup>®</sup>"

Using NGK's proprietary crystal-oriented ceramic plates as electrodes, these small and thin lithium-ion batteries feature high energy density. It can produce large enough current to support wireless communication, and can be mounted on devices through high-temperature processes due to its high heat resistance. It is expected to boost the widespread adoption of IoT devices and other next-generation appliances.



## Micro-lenses for ultraviolet LEDs

These micro-lenses adjust the irradiation area of ultraviolet LEDs—which are used in sterilization, hardening of resins, etc.—to enhance their effectiveness. Micro-lenses for ultraviolet LEDs may be used as a light source to replace mercury lamps at water treatment plants and also in equipment such as air purifiers.



## Ceramic packages

We provide a variety of ceramic packages, including world-leading ceramic packages for high-frequency (RF) devices (1), as well as ceramic packages for CMOS image sensors (2) and crystal packages (3).



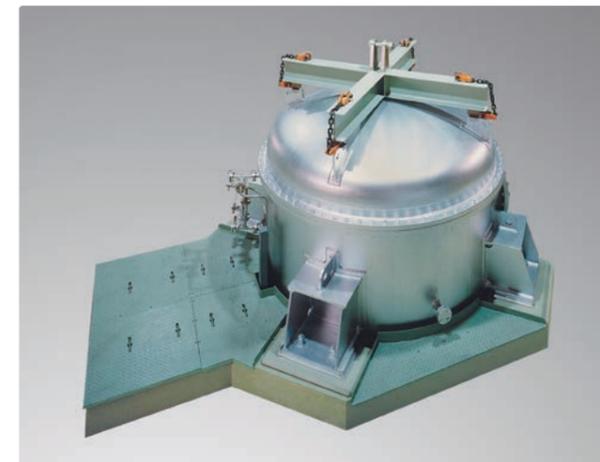
## Copper-nickel-tin products

Composed of adding nickel and tin to copper, this high-performance alloy has excellent characteristics comparable to beryllium copper, as well as high heat resistance and wear resistance. It is widely used for contact springs, bearings, etc.

## Delivering power safely and reliably through unwavering quality and technical excellence

### Insulators

The insulators play a critical role in supporting transmission lines and steel towers and equipments insulated. NGK offers the products of uncompromising quality capable of withstanding the harshest conditions such as earthquakes, typhoons, and heavy accumulations of snow, ensuring the safe and secure supply of electricity.



## Low-level radioactive waste treatment systems

This system safely treats low-level radioactive wastes from nuclear power facilities using NGK's proprietary incineration and exhaust gas treatment technologies. Coupled with wide-ranging engineering support and maintenance services, the system effectively and reliably removes radioactive materials from wastes, contributing to the safe operation of nuclear power facilities.



## Hot-line insulator washing equipment

Hollow insulators, station post insulators, bushings, and other devices are used at substations. Dust and salt tend to accumulate on the surfaces of insulators installed close to the sea or in an industrial area, which can lead to flashovers. The hot-line insulator washing equipment uses water jet spray to clean the insulators so they can maintain their performance.

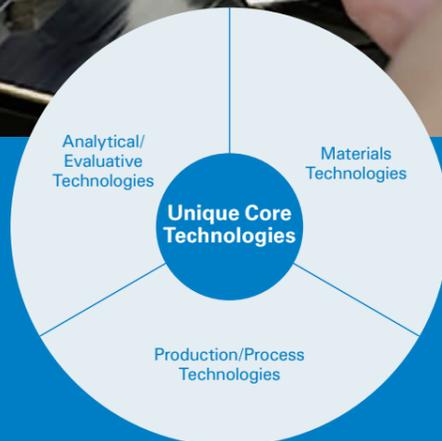
HONEYCERAM and EnerCera are trademarks of NGK Corporation, registered in the United States.



# Creating the Future with the Potentials of Ceramics

NGK Group is committed to achieving Carbon Neutrality and a Digital Society through the tireless pursuit of new technologies that can change the world.

From its very beginning, the NGK Group has sought to reexamine conventional ceramic manufacturing practices in light of the latest science and technologies in order to help it identify the optimal combination of process conditions for each of its products. And after nearly 100 years, this pursuit of optimization has accrued a wealth of technology and expertise from which the NGK Group draws its competitive strength.



**Ceramic substrates for Direct Air Capture (DAC) systems**

Ceramic Substrate for Direct Air Capture (DAC) is substrate used in DAC devices and similar applications to capturing CO<sub>2</sub> contained in the atmosphere via adsorption or absorption. NGK offers compact dimensions, large surface area, and low-pressure loss (ability to efficiently treat large volumes of air) by applying the ceramic honeycomb structure technology and contributes to carbon neutrality.



**Sub-nano ceramic membranes**

Sub-nano ceramic membranes are separation membranes made of ceramics (ceramic filters) that characterized by especially fine sub-nano sized pores. They are capable of separation of molecules from each other, for example, specific gas from a mixed gas. These new ceramic filters make possible innovative separation processes that have the potential to save energy and reduce costs.



**Nicel-zinc rechargeable battery**

Nickel-zinc rechargeable battery is storage battery that use zinc for the negative electrode and NGK's proprietary ceramics for the separator between the positive and negative electrodes. This battery is characterized by high energy density, high safety, long service life, and maintenance-free features including remote monitoring and preventative maintenance, making it ideal for indoor installation and as a backup power source for key equipment.



**Next-generation wafers**

NGK is currently developing next-generation wafers by applying a proprietary crystal growth method, ultra-precision-polishing technology, and direct bonding technology. NGK's wafers will contribute to the development and production of ultracompact, ultra high-speed devices for telecommunications and base stations, and as well as enhance the reliability and reducing costs of the power devices used in data centers and other applications.

► Innovation



# It Started with a Fragment of Insulator

When electricity was beginning to be widely spread in Japan during the Meiji Period (1868-1912), all high-voltage insulators were imported. Kazuchika Okura, who later became the first president of NGK Insulators, decided that insulators should be manufactured in Japan, declaring that "we do this for the sake of society's future, and not for our own profit." A study of special high-voltage insulators followed, which started with the examination of a fragment of a U.S.-made insulator and resulted in the establishment of NGK Corporation. Ever since then, the company has embraced original ceramic technologies as its core, responding to the needs of society through cutting-edge manufacturing and contributing to the advancement of the world.

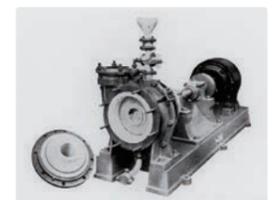


The fragment of insulator that played a part in the foundation of NGK Insulators (1905)

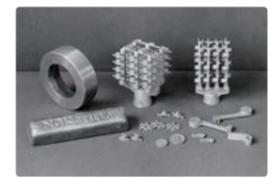
Year	Event
1919	NGK INSULATORS LTD. was established as a spin-off of Insulator Division in Nippon Toki, Ltd. (now Noritake Co., Limited)
1923	Bushing production operations began.
1929	1,000 kV-class high voltage insulator testing facilities were completed.
1931	Started production and marketing of sulfuric acid corrosion-resistant apparatus for the chemical industry.
1935	Exported suspension insulators to India, marking the start of full-scale product export.
1958	Started manufacture and sale of beryllium copper products.
1965	NGK INSULATORS OF AMERICA, LTD. (now NGK-LOCKE, INC.) was established in the U.S. as the first overseas marketing company.
1968	High Voltage Laboratory was completed.
1971	Started manufacture and sale of translucent alumina ceramics.
1973	LOCKE INSULATORS, INC. was established in the U.S. as the first overseas production base (now closed).
1976	Started manufacture and sale of ceramic substrates for automotive catalytic converters HONEYCERAM®.
1978	Delivered the first low-level radioactive waste treatment systems.
1986	Characters used in Japanese company name changed; English name remained the same.
1989	Started production of diesel particulate filters (DPFs).
1995	Delivered UHV transmission gas bushings that were among the largest in the world (11.5 m in length).
1996	Started mass production of ceramics for semiconductor manufacturing equipment. Started development of vehicle exhaust gas NOx sensors.
1998	Established NGK Foundation for International Students.
2007	Developed subnano-ceramic membranes that were among the largest in the world.
2012	Started production of gasoline particulate filters (GPFs).
2014	Started production of bonded wafers.
2015	Started mass production of piezoelectric micro-actuators for hard disk drives (HDDs).
2016	Started mass production of copper-nickel-tin products.
2018	Commercialized gallium nitride (GaN) wafers and micro-lenses for ultraviolet LEDs.
2019	Established NGK Group Philosophy. Commercialized Lithium-ion rechargeable battery "EnerCera®".
2021	Formulated NGK Group Vision: Road to 2050 as a mid-to long-term vision.
2023	Revised the NGK Group Corporate Business Principles and established the NGK Group Code of Conduct
2025	Cumulative production of HONEYCERAM reached 2 billion units.
2026	Change the company name to "NGK Corporation."



A special high-voltage insulator made around the time the company was founded.



Sulfuric acid corrosion-resistant apparatus (1931)



Beryllium copper products (1958)



The first unit of HONEYCERAM that came off the production line in 1976. This item has been registered as an essential historical material for science and technology by the National Museum of Nature and Science in 2009.

North and Central  
America

Europe

Asia  
Oceania

# NGK Group Network

Japan

## NGK Corporation

2-56, Suda-cho, Mizuho-ku, Nagoya, 467-8530

Headquarters / Nagoya Site

Chita Site / Komaki Site / Ishikawa Plant

Tokyo Main Office / Osaka Branch / Sapporo Sales Office / Sendai Sales Office  
Hokuriku Sales Office / Hiroshima Sales Office / Takamatsu Sales Office / Fukuoka Sales Office

### NGK OKHOTSK, LTD.

Manufacture of jigs for producing ceramic products, etc.

Environment

### NGK CHEMITECH, LTD.

Design, manufacture, sale, and maintenance service of glass linings and corrosion-resistant pumps and valves

Environment

### NGK FILTECH, LTD.

Design, manufacture, and sale of pharmaceutical water purification systems and membrane filtration systems

Environment

### NGK ADREC CO., LTD.

Manufacture of refractory products

Environment

### NGK KILNTECH CORPORATION

Design, manufacture, and sale of industrial heating systems

Environment

### NGK METEX CORPORATION

Processing of beryllium copper products

Digital Society

### NGK CERAMIC DEVICE CO., LTD.

Manufacture of ceramics for automobiles and semiconductor manufacturing equipment, ceramic packages, electronic functional components, etc.

Environment Digital Society

### NGK FINE MOLDS, INC.

Manufacture and sale of metal molds

Digital Society

### ABASHIRI ELECTRIC POWER CO., LTD.

Generation and sale of power from solar panels and Storage batteries

Energy & Industry

### ENERGY SUPPORT CORPORATION

Manufacture of insulators for power distribution and other ceramic products

Energy & Industry

### AKECHI INSULATORS, LTD.

Manufacture of insulators for power distribution and other ceramic products

Energy & Industry

### ENA ELECTRIC POWER CO., LTD.

Generation and sale of power from solar panels and Storage batteries

Energy & Industry

### NGK LIFE CO., LTD.

Insurance agency  
Management of golf course business

### NGK YU-SERVICE CO., LTD.

Welfare services  
Management of tennis club business  
Building management/maintenance services

North and Central America

### NGK CERAMICS USA, INC.

Manufacture of automotive ceramics

Environment

### NGK AUTOMOTIVE CERAMICS USA, INC.

Sale of automotive ceramics

Environment

### NGK METALS CORPORATION

Manufacture and sale of beryllium copper products

Digital Society

### FM INDUSTRIES, INC.

Metal parts processing, coating and assembly for semiconductor manufacturing equipment

Digital Society

### NGK ELECTRONICS USA, INC.

Sale of ceramics for semiconductor manufacturing equipment

Digital Society

### NGK-LOCKE, INC.

Manufacture and sale of insulators and other products related to power supply

Energy & Industry

### NGK CERAMICS MEXICO, S. DE R. L. DE C. V.

Manufacture of automotive ceramics

Environment

Europe

### NGK BERYLCO U.K. LTD.

Processing and sale of beryllium copper products

Digital Society

### NGK CERAMICS EUROPE S.A.

Manufacture of automotive ceramics

Environment

### NGK EUROPE GMBH

Sale of automotive ceramics, etc.

Environment Digital Society

Asia, Oceania

### NGK (CHINA) INVESTMENT CO., LTD.

Sales support of insulators and other products related to power supply, beryllium copper products, and ceramics for semiconductor manufacturing equipment

Digital Society Energy & Industry

### NGK CERAMICS SUZHOU CO., LTD.

Manufacture and sale of automotive ceramics

Environment

### NGK TECHNOCERA SUZHOU CO., LTD.

Design, manufacture, and sale of industrial heating systems

Environment

### NGK AUTOMOTIVE CERAMICS KOREA CO., LTD.

Sales support of ceramics for automobiles and semiconductor manufacturing equipment, electronic functional components

Environment Digital Society

### P.T. NGK CERAMICS INDONESIA

Manufacture and sale of automotive ceramics

Environment

### NGK CERAMICS (THAILAND) CO., LTD.

Manufacture and sale of automotive ceramics  
Manufacture of metal parts for semiconductor manufacturing equipment

Environment Digital Society

### NGK DEUTSCHE BERYLCO GMBH

Sales support of beryllium copper products

Digital Society

### NGK BERYLCO FRANCE

Manufacture and sale of beryllium copper products

Digital Society

### NGK CERAMICS POLSKA SP. Z O.O.

Manufacture of automotive ceramics

Environment

### SIAM NGK TECHNOCERA CO., LTD.

Manufacture and sale of refractory products

Environment

### NGK TECHNOLOGIES INDIA PVT. LTD.

Sales support of automotive ceramics and beryllium copper products

Environment Digital Society

### NGK STANGER PTY LTD.

Manufacture and sale of power distribution equipment, sale of insulators for power substations/transmission

Energy & Industry

### NGK ELECTRONICS DEVICES(M) SDN.BHD.

Manufacture of ceramic packages and functional circuit boards

Digital Society

### NGK GLOBETRONICS TECHNOLOGY SDN.BHD.

Manufacture and inspection of ceramic packages and lids

Digital Society

Environment Environment Business Group

Digital Society Digital Society Business Group

Energy & Industry Energy & Industry Business Group

Network

