

KYOCERA MEXICANA, S.A. de C.V.


 **KYOCERA** | 2019

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KMX GENERAL INFORMATION & HISTORY



KYOCERA QUICK FACTS

KYOCERA CORPORATION



- Headquartered in Kyoto, Japan
- Est. 1959 by Dr. Kazuo Inamori
- \$14B in revenue
- Over 70,000 employees worldwide
- Over 240 companies across 45 countries
- Sponsors the Kyoto Prize
 - Founded by Dr. Inamori
 - 3 laureates/year in Sciences, Technology and the Arts

KYOCERA INTERNATIONAL, INC.



- Headquartered in San Diego, CA
- Est. 1969
- Over 2000 employees
- 6 North American subsidiaries
- Products:
 - Industrial Ceramics
 - Semiconductor Packaging
 - LCDs
 - Thermal Printheads
 - Cutting Tools
 - Kitchen Tools & Cutlery
 - Wireless Communications
 - Orthopedic Implants

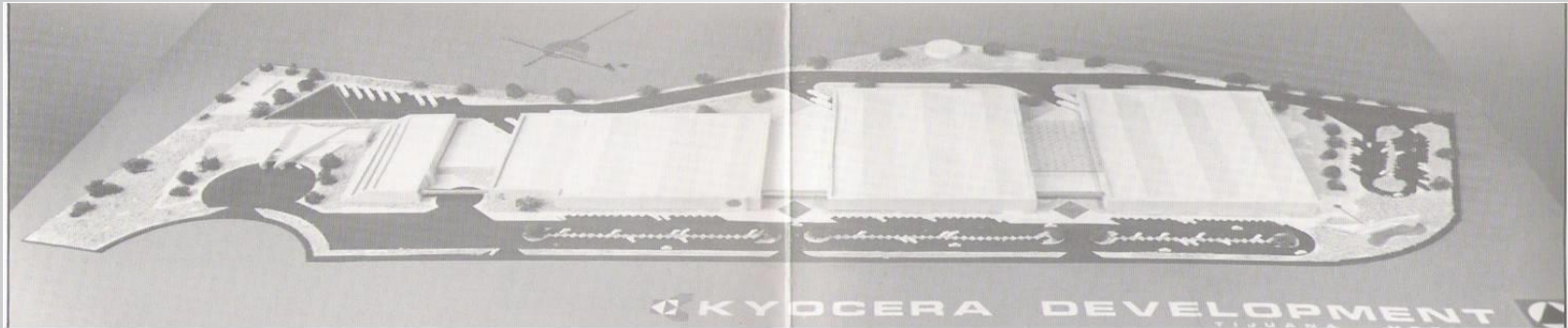
KYOCERA MEXICANA, S.A. de C.V.



- Headquartered in Tijuana, BC, Mexico
- Est. 1987; Prod. 1989
- 400+ employees (incl. temps)
- Products -- Semiconductor Packages for:
 - Power Amps – cell phone base stations
 - Power Mods – radar and communications
 - Power Transistor Packaging

KMX PROPERTY – HISTORY

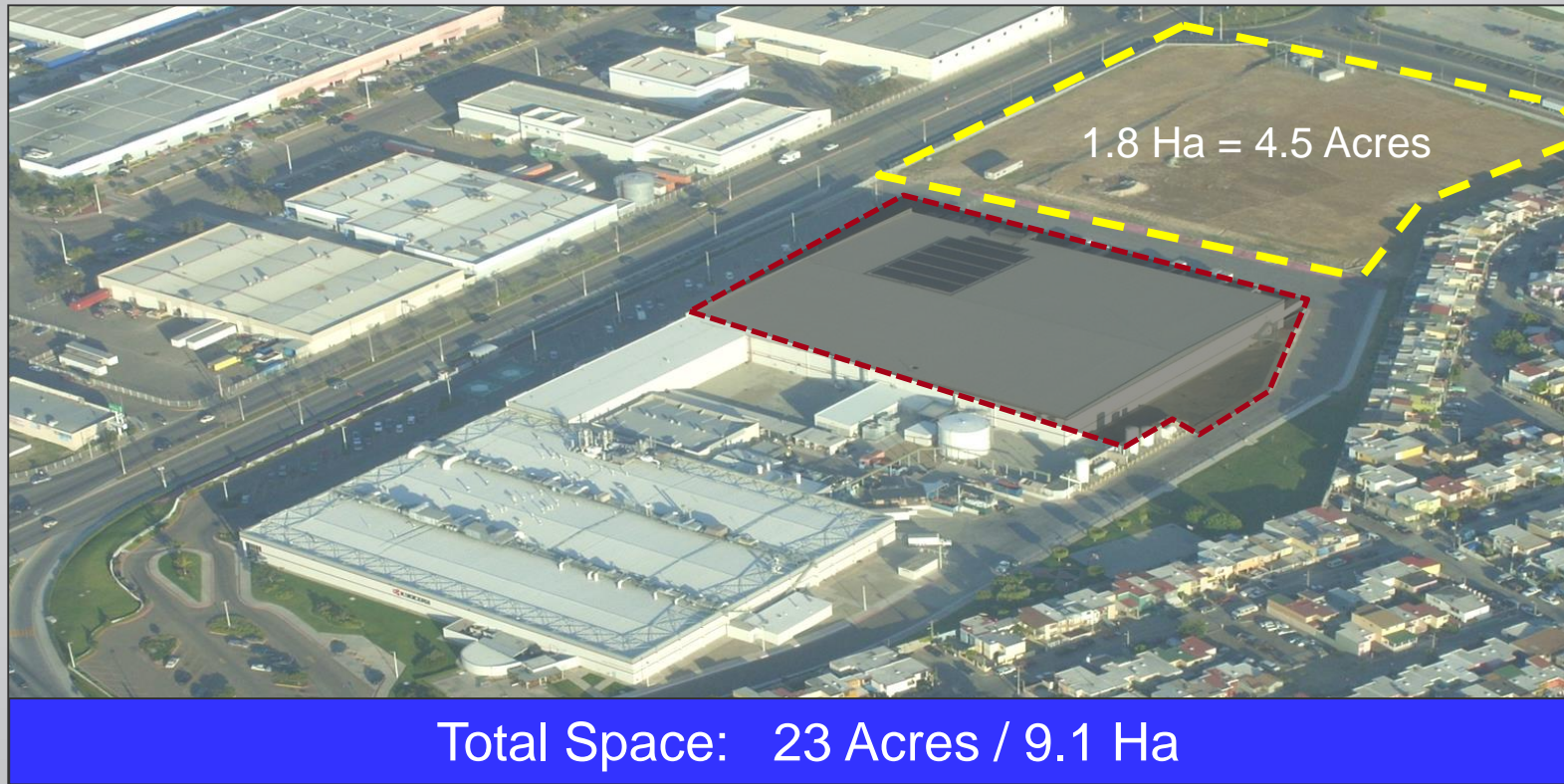
Kyocera Mexicana S.A. de C.V. was established in October 1987 and officially started operations in February 1989.



Early architectural rendering



KMX PROPERTY – CURRENT AERIAL VIEW



KMX PROPERTY – BUILDINGS



Building 1: 120,014 ft² 11,149 m²



Connecting Building: 27,146 ft² 2,522 m²



Building 2: 100,000 ft² 9,200 m²

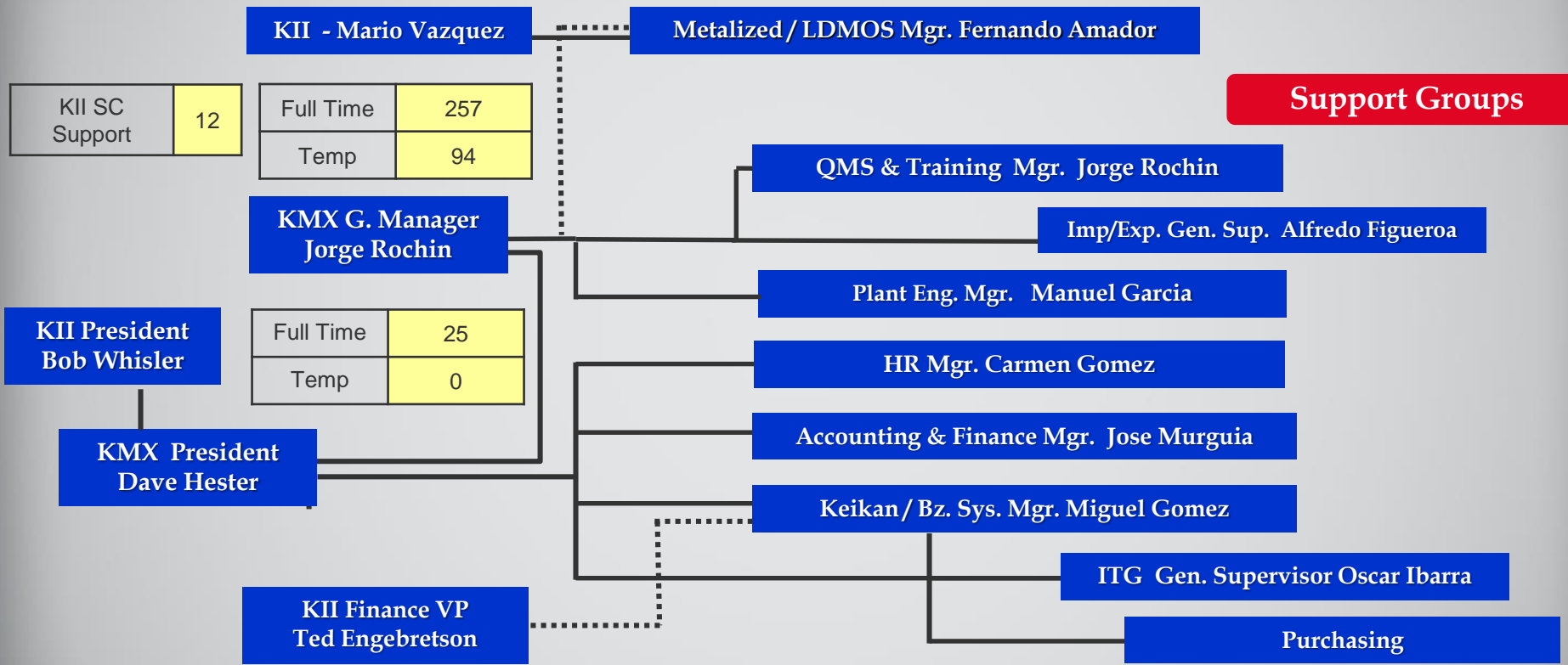


Building Total: 247,160 ft² 22,871 m²

KMX ORGANIZATIONAL CHART

Operational Divisions

Support Groups



KYOCERA PROPRIETARY & CONFIDENTIAL

KMX ADVANTAGES



- Established technologies and processes
- Shortest time to market and volume
- Established and effective systems
 - Certifications and regulations, ISO 45001:2018, QMS/EMS Policy, Quality Support, Document Control, SPC, Auditing, Training & Development

METALIZED TECHNOLOGIES & PROCESSES



- Pre-assembly processes
- Brazing
- Clipping-rack
- Visual inspection
- Automated inspection
- Final inspection
- Wet processes
- Plating: Au, Ni, Pd

SHORTEST TIME TO MARKET & VOLUME

Multiple Business Start Ups With Fast Ramps:

- Glazed Ceramic CER-DIP Packages (1989)
- **RF Packages (1990)**
- **Ceramic Packages (1991)**
- **MW Packages (1995)**
- Fiber Optic Jumper Assembly Connectors (1997)
- **LDMOS TO & Ni Plating (1998)**
- **BEO Printing & Medical Division (2000)**
- Mobile Phone Assembly (2003)
- Solar Module Assembly (2004)
- LCD Assembly
- **Automatic Gold Plating (2010)**
- Drill re-sharpening (2011)

SHORTEST TIME TO MARKET & VOLUME

Cell Phone Assembly

- Started operations in June, 2003 with 30 people
- 1500 Hourly employees after 1 year of operation
- 6 SMT (surface mount technologies) Lines
- Ramp to 1M phones/month in 1 year
- BOM – 400 to 600 components
- Shifts – 24/7operation



ESTABLISHED & EFFECTIVE SYSTEMS

KMX CERTIFICATION & REGULATIONS

ISO 9001

Certified to ISO 9001:
2008 since 1993

ISO 45001

Certified to ISO 45001:
???

OHSAS 18001

Certified to OHSAS 18001
since 2013



ESTABLISHED & EFFECTIVE SYSTEMS

KMX ENVIRONMENTAL & QUALITY POLICY

At Kyocera Mexicana SA de CV, we are guided by 2 Kyocera principles:

Corporate Motto:
*“Respect the Divine
and Love People”*

Management Rationale:
Do the Right Thing as
a Human Being

Our customers and the environment are our first priority. We are committed to:

- Meeting or exceeding all applicable and regulatory requirements
- Preventing pollution and global warming
- Saving energy and preserving natural resources
- Continually improving our environmental and quality management systems

ESTABLISHED & EFFECTIVE SYSTEMS

QUALITY SUPPORT

QUALITY ASSURANCE

QA provides support with:

- Product quality
- Customer communication
- Customer complaints
 - 8D's analysis
- New products
 - 1st article validation

QUALITY MANAGEMENT SYSTEM

QMS provides support with:

- Document control
- Internal audits on QMS & EMS
- Corrective & preventative actions management
- Quality management review
- ISO 9000 rep.
- KMX training coordination

QUALITY CONTROL

QC Controls:

- Final inspection
- Dimensions
- Finished product certification
- Packing & shipping
- SPC
- Operators & inspector training

ESTABLISHED & EFFECTIVE SYSTEMS

AUDITING SYSTEMS

- Quality Management System (QMS)
- Environmental Management System (EMS)
- Occupational Health and Safety Management System (OHSAS)
- In Process (used by each division)
- P5S

SOCIAL RESPONSIBILITIES

- ❑ TIP Daycare Donations
 - ❑ Children's Day
 - ❑ Christmas
- ❑ CECUT
- ❑ Tijunana Agradecida Association
- ❑ Local Fire Department
- ❑ Local Non-Profit (currently nominating)

SOCIAL RESPONSIBILITIES

- ❑ Children's/Mother's/Father's Day
- ❑ Dia de los Muertos
- ❑ Christmas Gifts
- ❑ Seniority Ceremony and Gifts
- ❑ Sports Activities
- ❑ Flu Shots
- ❑ Health Campaigns (hearing, sight, diabetes, women's health)
- ❑ INEA (Primary, Secondary, High School Education)
- ❑ Tuition Aide
- ❑ JMA (Japanese Maquiladora Association)
- ❑ AIM (Tijuana Maquiladora Association)
- ❑ ARHITAC (Tijuana Human Resources Association)
- ❑ WMTA (Western Maquiladora Trade Association)

SOCIAL RESPONSIBILITIES

- ❑ Global Philanthropy Examples:
 - ❑ Kyoto Prize
 - ❑ Kyoto
 - ❑ San Diego (Scholarship TJ/SD)
 - ❑ Solar for Schools
 - ❑ Cultural Exchange
 - ❑ Kyoto University and Alfred University Chairs
 - ❑ Environmental
 - ❑ Recycling, tree planting

ADVANTAGES OF DOING BUSINESS IN MEXICO



DOING BUSINESS IN MEXICO

- Industrialized City with broad Manufacturing
- Infrastructure and High Quality Facilities
- Tijuana has over 40 Industrial Parks
 - Over 58 millions square feet of Industrial Real State
 - Nearly 5,600 acres of Developed Industrial Area
- Three Major Manufacturing Clusters; Electronics, Medical and Aerospace, with a highly skilled work force:
 - 59,000 employees in Electronics Cluster - over 110 companies
 - 34,000 employees in Medical Cluster – nearly 40 companies
 - 15,000 employees in embryonic Automotive Cluster – over 51 companies
 - 7,000 employees in Aerospace & Defense – over 24 companies
- Tijuana has 20+ accredited Universities, with over 10,000 highly bilingual engineering students enrolled every year
- Tijuana has implemented Mind-Hub
- Tijuana has implemented BIT Center

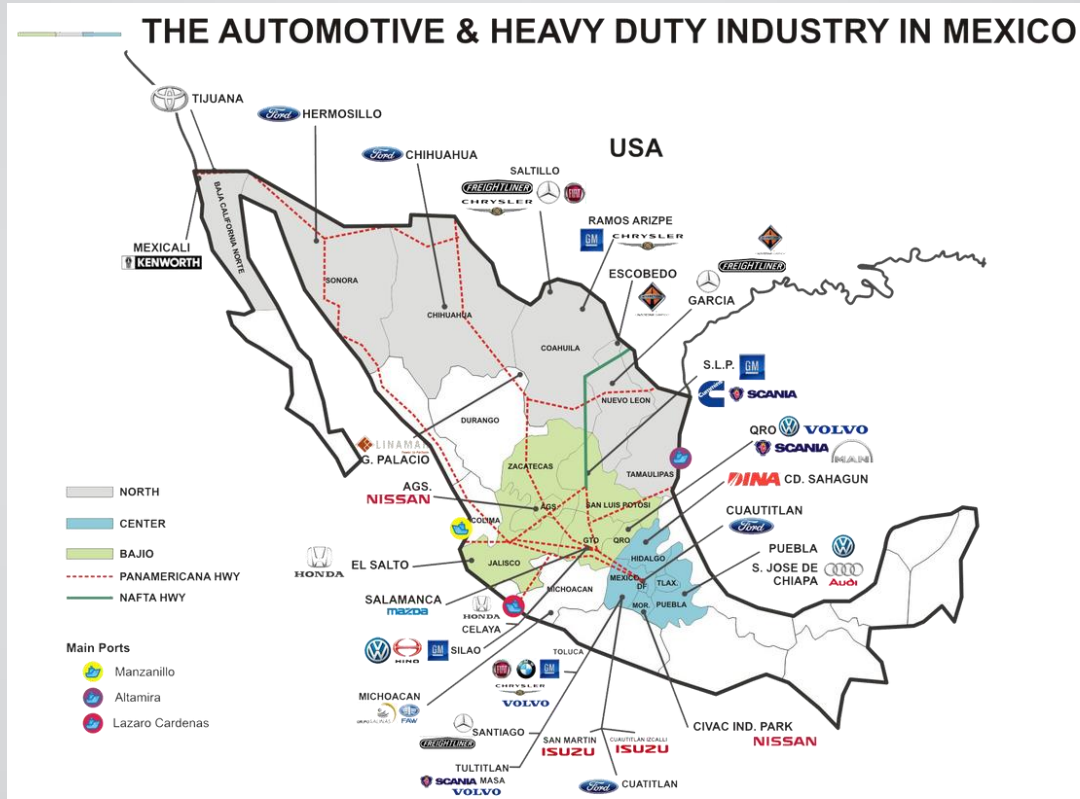
DOING BUSINESS IN MEXICO

- Three major Sea-ports within 140 miles for supplies and shipments (EN, SD, LB).
- Three International Airports within 140 miles for customers, employees and shipments (TJ, SD, LA).
- Opportunities exist for duty savings utilizing Mexico's trade agreements with other foreign countries. Mexico has more international trade agreements than any other country in the world.
- Products qualified under NAFTA are subject to Preferential Treatment.
- Sell/Buy between other Mexican Maquiladoras.

TRATADO	PAISES	PUBLICACION D.O.F	ENTRADA EN VIGOR
TLCAN	Estados Unidos y Canadá	20 de diciembre de 1993	1de enero de 1994
TLC-G3	Colombia y Venezuela	9 de enero de 1995	1 de enero de 1995, desde el 19 de noviembre de 2006 ya no participa Venezuela
TLC México - Costa Rica	Costa Rica	10 de enero de 1995	1 de enero de 1995
TLC México - Bolivia	Bolivia	11 de enero de 1995	1 de enero de 1995
TLC México - Nicaragua	Nicaragua	1 de julio de 1998	1 de julio de 1998
TLC México - Chile	Chile	28 de julio de 1999	1 de agosto de 1999
TLCUEM	Unión Europea	26 de junio de 2000	1 de julio de 2000
TLC México - Israel	Israel	28 de junio de 2000	1 de julio de 2000
TLC México - TN	El Salvador, Guatemala y Honduras	14 de marzo de 2001	15 de marzo de 2001 con El Salvador y Guatemala y 1 de junio de 2001 con Honduras.
TLC México - AELC	Islandia, Noruega, Liechtenstein y Suiza	29 de junio de 2001	1 de julio de 2001
TLC México - Uruguay	Uruguay	14 de julio de 2004	15 de julio de 2004
AAE México - Japón	Japón	31 de marzo de 2005	1 de abril de 2005



AUTOMOTIVE MARKET



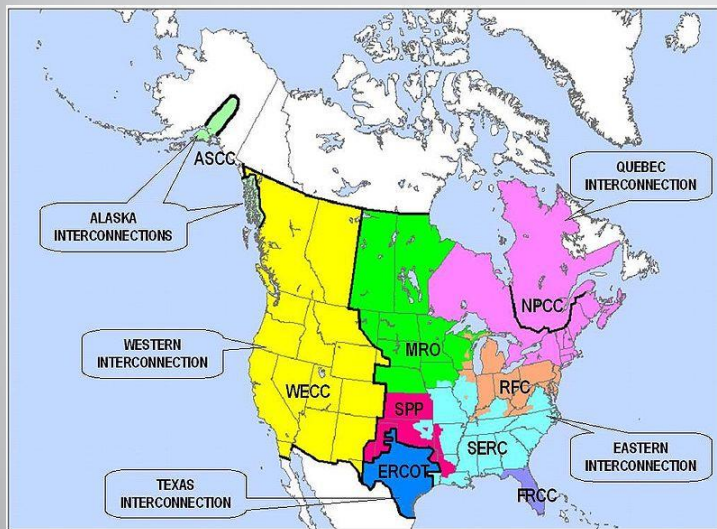
RELIABLE INFRASTRUCTURE & ENVIRONMENTAL RESPONSIBILITY



ELECTRICITY SUPPLY



- ❑ Power supply is high-voltage 69,000V up to 12.5MW. Initial connection is still 100%.
- ❑ Connected to the North America Grid (USA, Canada & Mexico).



WATER TREATMENT

- ❑ Production of DI water for processes: up to 75GPM
- ❑ Reclaimed water from process: up to 50GPM
- ❑ Filtered water for processes: up to 60GPM
- ❑ Wastewater treatment: up to 160GPM
- ❑ Drinking water: up to 20GPM



KMX ENVIRONMENTAL SYSTEM

Waste Water Treatment Plant (WWTP)



KMX chemical processes production output increase and its impact on KMX-WWTP CAPABILITY

	Current	With	With	WWTP
Facilities Utilization		e-less Plating	Gold Plating	CAPACITY
Waste Streams	gpm	gpm	gpm	gpm
Cyanide General	10.6	14.2	23.1	50.0
Rinse	31.8	36.0	58.4	60.0
Soaps	24.5	24.5	24.5	25.0
TOTAL	66.9	74.6	106.0	135.0

ASSUMPTIONS:

1. ALL THE PROCESSES WERE CONSIDERED AT 85% AVERAGE PRODUCTION RATE
2. FLOWS FOR WASTE WATER TREATMENT FACILITY WAS CONSIDERED AT CONTINUOUS RATE
3. WWTP CAN DEAL WITH PEAKS AS HIGH AS 25% OVER

Control of Emissions from Production Areas



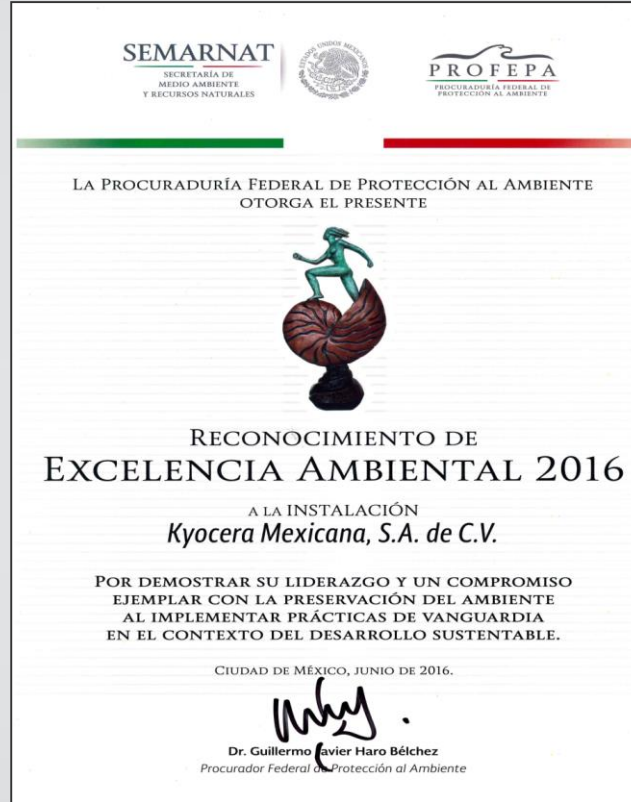
Chemical and Hazardous Waste Storage



Waste and Recyclables Collecting Areas



MEXICO'S TOP ENVIRONMENTAL AWARDS

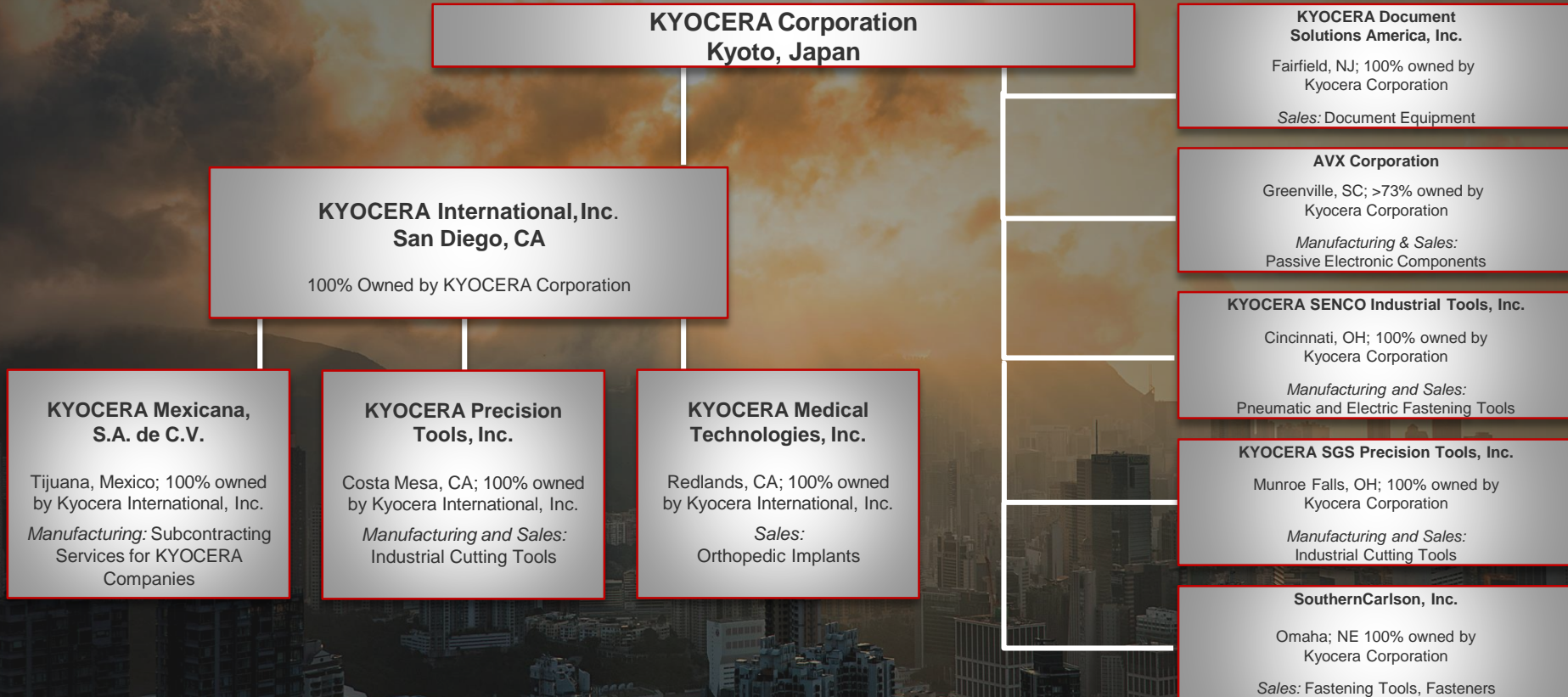


KYOCERA PROPRIETARY & CONFIDENTIAL

KYOERA INTERATIONAL, INC. OVERVIEW



KYOCERA CORPORATION IN NORTH AMERICA





= **KYO** TO, JAPAN + **CERA** MICS

1959

ESTABLISHED

75,000+

EMPLOYEES
WORLDWIDE

\$14.6 BILLION

FY2019
REVENUE

60 YEARS

OF GROWTH –
PROFITABLE
EVERY YEAR

265 COMPANIES IN OVER **40**

COUNTRIES

(Total companies and employees as of March 31, 2018)

KYOCERA INTERNATIONAL, INC.

KYOCERA Corporation

Kyoto, Japan

KYOCERA International, Inc. (KII)

San Diego, CA

(100% Owned by KYOCERA Corporation)

- Fine Ceramics Group (KII-FC)
- Semiconductor Components Group (KII-SC)
- Communication Equipment Group (KII-CE)
- Consumer Products Division
- Optical Division
- Display Division (KII-Display)
- Automotive Components Division (KII-Auto)
- Electronic Components Division (KII-EC)
- Printing Device Division (KII-PD)

**KYOCERA Mexicana,
S.A. de C.V.**

**KYOCERA Precision
Tools, Inc.**

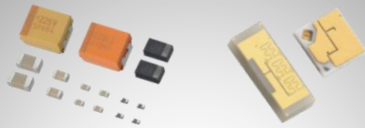
**KYOCERA Medical
Technologies, Inc.**

KII GROUP OVERVIEW

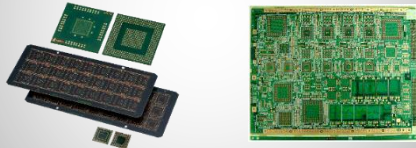
**KYOCERA International, Inc.,
San Diego, CA**
100% Owned by KYOCERA Corporation

Semiconductor Components Group

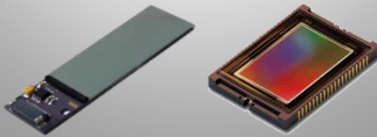
Ceramic Packages & Substrates



Organic Packages & Printed Wiring Boards



Assembly Technology Division



Communications Equipment Group

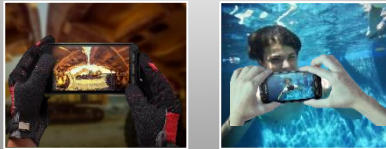
Rugged Smartphones & Flip Phones



Waterproof & Sapphire Shield Displays



Consumer & B2B Markets



Fine Ceramics Group

Medical Equipment & Devices



Industrial Machinery



Ultra-high Vacuum Applications



KII DIVISION OVERVIEW

KYOCERA International, Inc.,
San Diego, CA
100% Owned by KYOCERA Corporation

Consumer Products Division



Display Division



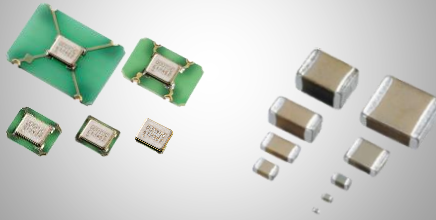
Automotive Components Division



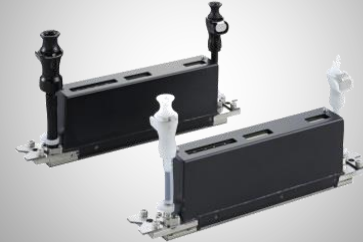
Optical Division



Electronic Components Division



Printing Device Division



KII SUBSIDIARY OVERVIEW

**KYOCERA International, Inc.,
San Diego, CA**
100% Owned by KYOCERA Corporation

Kyocera Precision Tools, Inc.

Solid Round Products



Printed Circuit Board Cutting Tools



Kyocera Mexicana, S.A. de C.V.



KYOCERA MEXICANA PRODUCTION ADVANTAGES:

- Quality, Cost and Delivery
- Established Technologies and Processes
- Short Time to Market and Volume – Multiple Experiences
- Established and Effective Systems & Reliable Infrastructure

Kyocera Medical Technologies, Inc.



Knee Products



Spine Products

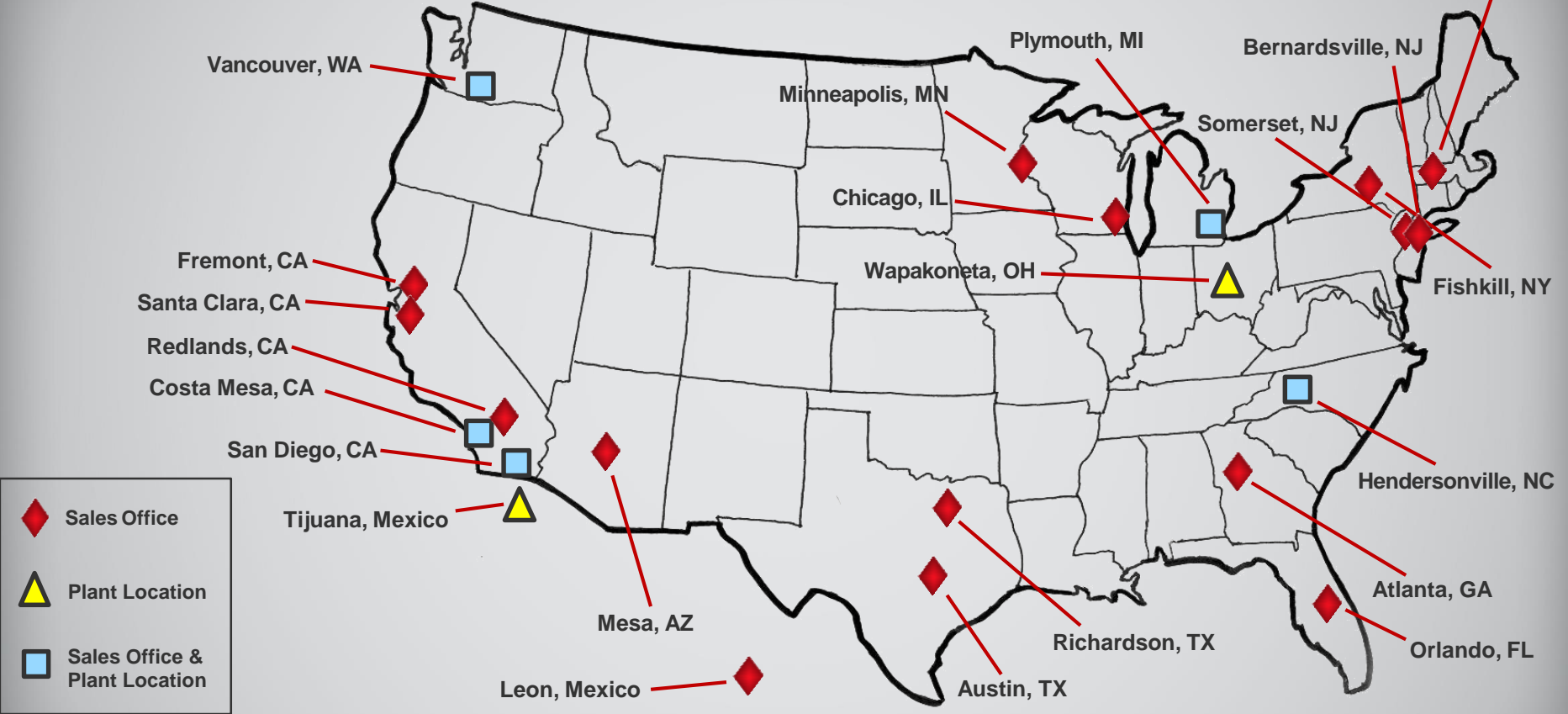


Hip Products



Trauma Products

KII GROUP PLANT & SALES OFFICES



KYOCERA PROPRIETARY & CONFIDENTIAL

KII MANUFACTURING PLANTS

SEMICONDUCTOR COMPONENTS



San Diego, CA (1971): 268k ft²



Tijuana, Mex (1989): 348k ft²



Hendersonville, NC (1987): 100k ft²



Vancouver, WA (1990): 62k ft²

CUTTING TOOLS



Wapakoneta, OH (2015): 26k ft²



Costa Mesa, CA (2001): 60k ft²

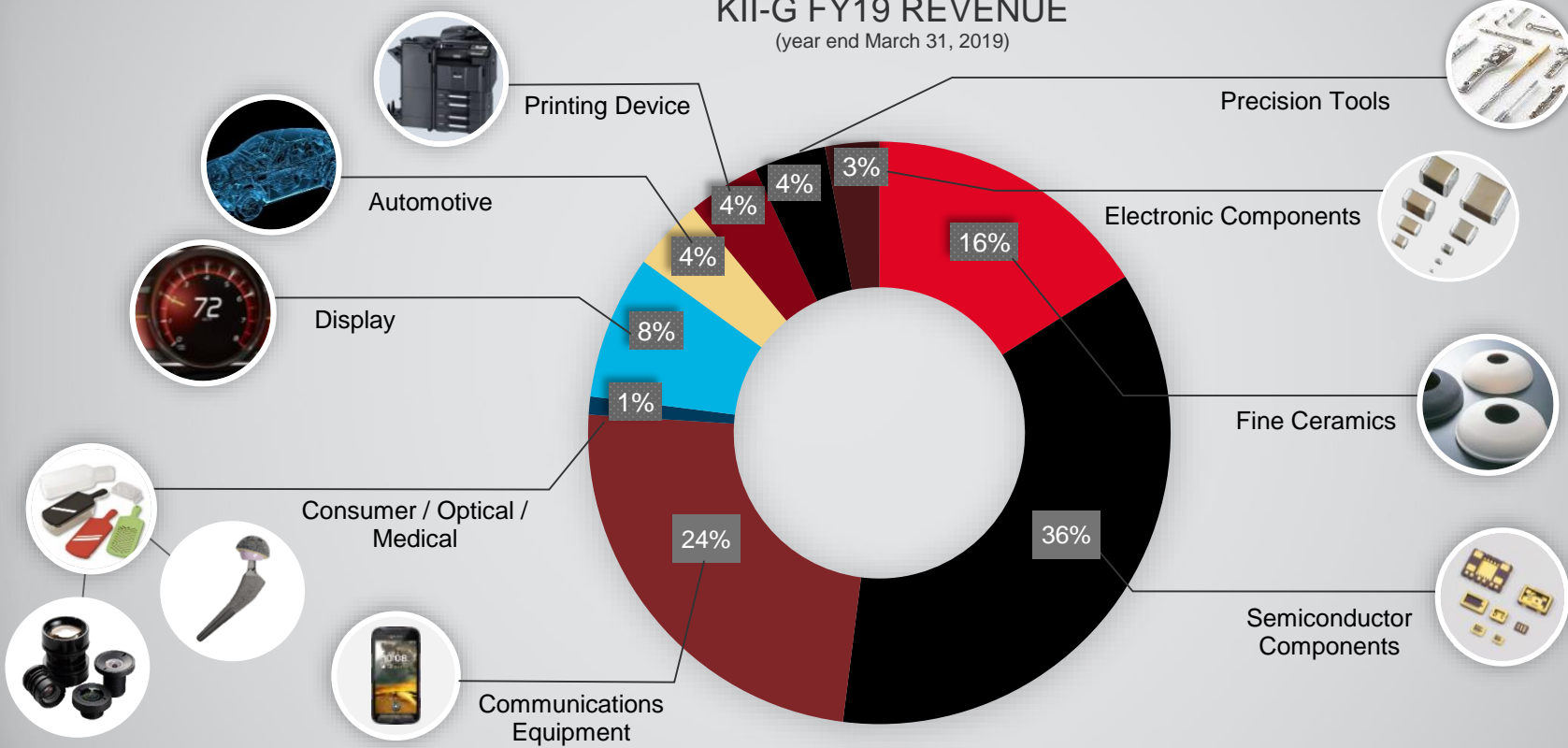
AUTOMOTIVE / INDUSTRIAL DISPLAYS



Plymouth, MI (2012): 59k ft²

KII FINANCIAL OVERVIEW

KII-G FY19 REVENUE
(year end March 31, 2019)



KYOCERA PROPRIETARY & CONFIDENTIAL

KYOCERA INTERNATIONAL, INC. BUSINESSES & PRODUCTS

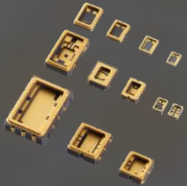


SEMICONDUCTOR COMPONENTS GROUP

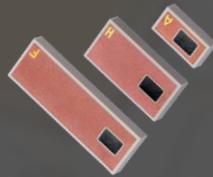
CERAMIC PACKAGES & SUBSTRATES

High-reliability ceramic packages and substrates help to miniaturize components used in smartphones, fiber optics, automotive electronics, headlight LEDs and a wide range of other products. Kyocera utilizes its broad expertise in materials, processing and design technologies to ensure unparalleled substrate and package performance.

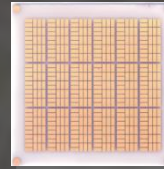
Ceramic Surface-Mount Packages for Electronic Devices



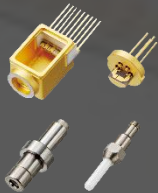
Company Ceramic RFID Tags



Metallized Packages and Substrates



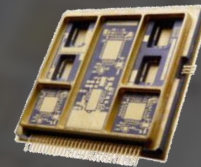
Optical Components



Ceramic Packages for LEDs

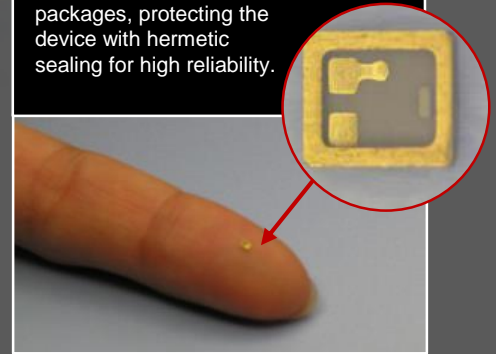


Multi-layer Ceramic Substrates for Automotive & Aerospace



Ultra-small Ceramic Packages Help Minimize Crystal Devices

Crystal devices are used in many types of electronic equipment. Kyocera's ceramic packages enhance crystal performance in a condensed size. Below is an example of a ceramic package measuring 1.2mm x 1mm. Multi-layer ceramic technology allows designers to build internal wiring and a cavity structure within these tiny packages, protecting the device with hermetic sealing for high reliability.

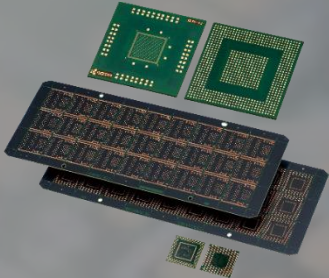


SEMICONDUCTOR COMPONENTS GROUP

ORGANIC PACKAGES & PRINTED WIRING BOARDS

Advances in communication technology and broadband Internet service require electronic devices with better functionality and performance. Kyocera's organic multi-layer packages and printed wiring boards help meet this demand.

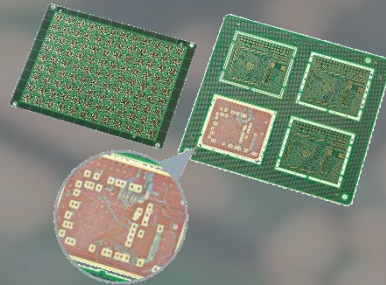
Flip-Chip Packages



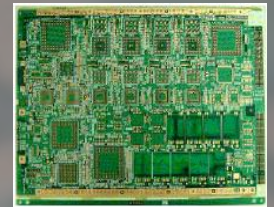
Build-up Wiring Boards



Substrates for
Wireless Communications



High-Density Multi-layer
Printed Circuit Boards



SEMICONDUCTOR COMPONENTS GROUP

ASSEMBLY TECHNOLOGY DIVISION

Kyocera's Assembly Technology Division offers Flip Chip, Wire Bond and Surface Mount Device assembly capabilities in San Diego. ATD has a dedicated customer support team for technical guidance and product realization. ATD can support prototype development with an experienced engineering staff to derive solutions for challenging product and process designs to high volume manufacturing. Kyocera is ISO, ITAR, MIL-PRF and QML certified.

System in Package



Digital X-ray Sensor

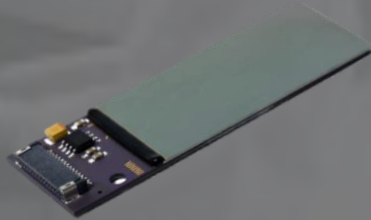
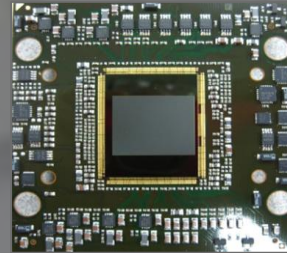
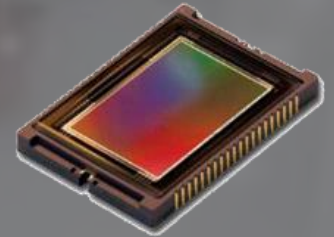


Image Sensor for SEM



Space Class Image Sensor



FINE CERAMICS GROUP

Kyocera's track record in fine ceramics is unmatched. We utilize our extensive resources in research, development and production to select the optimal raw materials and manufacturing methods for each application.

Breakthroughs and improvements in a wide range of industries are facilitated by the unique qualities of Kyocera's fine ceramics.

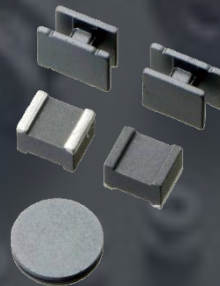
Industrial Machinery



Ultra-High Vacuum Applications



Ferrite Components



Sapphire Substrates for LEDs



Semiconductor Processing and LCD Manufacturing Equipment



COMMUNICATIONS EQUIPMENT GROUP

Mobile Enterprise Solutions – Kyocera's ruggedized phones enhance performance and productivity while reducing Total Cost of Ownership in challenging occupations like: Public Safety, Government, Construction, Healthcare, Utilities, Transportation & Logistics, Oil & Gas and Manufacturing



DuraForce PRO 2

Mobile Enterprise Markets



CONSUMER PRODUCTS DIVISION

Kyocera makes superior ceramic cutlery and kitchen tools. Crafted in Japan, *Zirconia Z206* is Kyocera's proprietary advanced ceramic. This one-of-a-kind advanced ceramic material has very dense particles and extremely tight molecules, which leave minimal voids. This translates into a stronger, denser blade that holds an edge longer than other ceramic knives. The thinner blade on a Kyocera Advanced Ceramic knife means minimal resistance. Clean, precise, less-intrusive cuts, using less pressure, are what make the Kyocera ceramic knife so unique.

Ceramic Knives



Kitchen Tools



Ceramic Cookware



OPTICAL DIVISION

Kyocera uses its industry-leading technologies to manufacture many types of optical components to meet consumer and commercial needs, focusing on lenses for digital imaging for a wide range of industries as well as automotive cameras.



DISPLAY DIVISION

Kyocera utilizes innovative technologies to achieve unequaled levels of visual performance in our displays. These include, but are not limited to: Optically bonded touch screens, anti-reflective coatings and super-high-brightness for outdoor applications. These and other innovative technologies give OEMs the ability to design and develop superior products that meet customer demands.

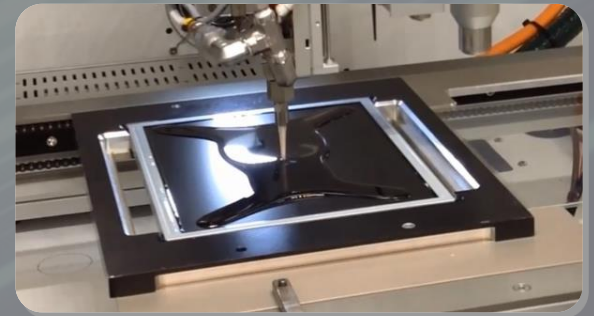
Automotive Displays



Industrial Displays



Value Added Solutions /
Optical Bonding



AUTOMOTIVE COMPONENTS DIVISION

Kyocera supplies a wide range of high-reliability products to support the rapid advancement of in-vehicle electronics — making cars smarter, safer, cleaner and more comfortable.

Ceramic Glow Plugs



Oxygen-Sensor Heaters



Piezoelectric Stacks for Fuel Injectors



Camera Modules



Fine Ceramics used in Solid Oxide Fuel Cells (SOFCs)

A fuel cell cuses hydrogen in utility gas to react with oxygen in the air, generating electricity and a heat source for hot water. Kyocera has applied its fine ceramic materials and manufacturing technologies to create an innovative cell stack for the fuel cell core, creating a next-generation power system that offers significant improvements in efficiency, durability and carbon emissions.



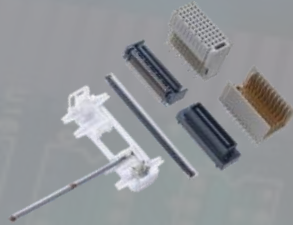
ELECTRONIC COMPONENTS DIVISION

KYOCERA Electronic Components play a key role in all digital technology, from smartphones to automotive and industrial electronics. Kyocera contributes to the advancement of electronics through cutting-edge technology and high quality throughout the manufacturing process

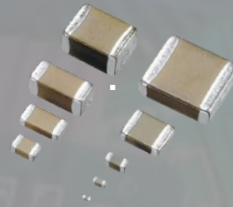
Crystal Devices



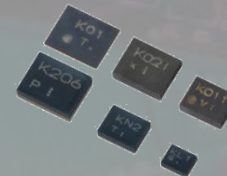
Connectors



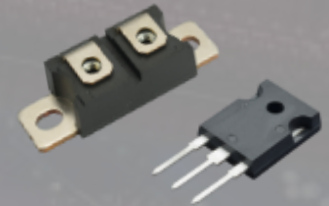
Capacitors



Saw Devices



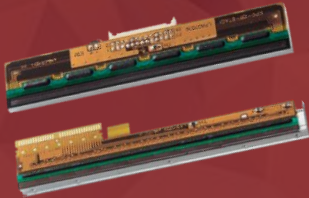
Power Devices



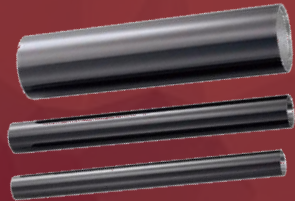
PRINTING DEVICE DIVISION

Kyocera supplies printing devices for the three main digital-imaging printing methods: electrophotographic, inkjet and thermal. Our advanced materials and process technologies allow printing equipment to deliver faster, higher-resolution output on a wider range of print media.

Thermal Printheads



Photoreceptor Drums



High-Speed, High-Resolution Inkjet Printheads

Inkjet printheads serve as the imaging component in commercial printers that apply text and graphics to media ranging from large-format paper to textiles and building materials. Kyocera's proprietary piezoelectric ceramic technology enables high-speed, full-color inkjet printing with unprecedented resolution at speeds of up to 100 meters per minute. Our printheads are also ideal for short-run and customized "print-on-demand" solutions.



KYOCERA PRECISION TOOLS, INC.

(KII SUBSIDIARY)

Our industrial cutting tools have been developed through advances in cemented carbides, cermet materials, and coating and forming technologies. They help improve quality and productivity in a number of industries.

INDUSTRIES SERVED



Medical & Dental



Power Gen



Oil & Gas



Automotive



Aerospace



Solid Round Products



Indexable Products



Printed Circuit Board Products

KYOCERA MEDICAL TECHNOLOGIES, INC.

Kyocera is committed to providing innovative products that help surgeons meet demanding patient needs. By combining advanced materials and innovative design features with tried-and-true design principles, Kyocera aims to enhance device performance and longevity..

Hip Product Group



Knee Product Group



Spine Product Group



Trauma Products



THANK YOU

