



Murakami Corporation

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**Clear reassurance
inspires your actions**

/ From the President

Providing “Clear Reassurance” for a New Era with Innovative Products and Solutions

For 140 years, Murakami Corporation has continued to transition along with the times to venture into challenging new fields, enhance our technological capabilities, and provide products that contribute to the safety, security, and comfort of society, such as through our automotive safety visibility systems.

In recent years, our business environment and the very structure of the automotive industry have been changed dramatically. We intend to meet these challenges head on, and in addition to strengthening the competitiveness of our existing businesses, as our vision for our 150th anniversary, we endeavor to create “Clear Reassurance” for a new era, and we are committed to creating new products and technologies that meet evolving needs for safety, security, and comfort.



We at Murakami Corporation strive to be a company that “serves people” in local communities and throughout the world.

Utilizing the trust and cutting-edge technology we have built over the years as a safety visibility systems manufacturer, we will continue to create innovative products and solutions that guarantee safety, security, comfort, and healthy living, and can help to solve our most pressing environmental issues.

We are ever grateful for your continued support and encouragement.

October 2022

President/CEO **Taro Murakami**

/ Philosophy

Murakami Corporation aims to “serve people” through our corporate activities.

Safety, Security, and Comfort are at the core of all products and services that we deliver in our efforts to strengthen our “connection” with and bring “joy” to society in hopes of a brighter future.

/ Corporate Motto

Health

A healthy mind is nurtured by a healthy body. A healthy body begets a healthy spirit. Company development, service to society, and stability in one’s personal life are all founded in good health.

Trust

Trust is the foundation of everything we do. Be courteous, understand other points of view, and work with sincerity. From this, trust is born. We always strive to improve our work and foster personal development. This improvement leads directly to stronger trust.

Harmony

Take pride in a promoting a friendly and cheerful workplace. Maintain rules and order, always practice gratitude and inner reflection, and let individuality shine through. Let each individual actualize their ideals through their work.



REARVIEW MIRROR

Murakami Corporation has earned the highest market share in Japan for automobile rearview mirrors. We have evolved our technology and solutions to improve functionality while maintaining excellence in QCD (quality, cost, delivery) by keeping every step of the process in-house. Over the past 60 years, we have been contributing to the safety, security, and comfort of automobiles.

Product

Outer Mirror

Attaches to the car door on either side and grants visibility of the sides and rear of the vehicle. Covers driver side blind spots.



Side Turn Signal Lamp

Lights up when turning left or right to alert other vehicles and surroundings.



BSM Unit (Blind Spot Monitor)

Flashes a warning signal when another vehicle approaches from behind. Covers driver side blind spots (left/right and rear).



Power-folding Unit

Automatically folds side door mirrors in and out. Side door mirrors fold inward when parked to prevent accidental contact by pedestrians.



Mirror Actuator

Controls movement of the mirror plate. Allows for fine adjustments of the mirror angle to secure rearview visibility.



Interior Rearview Mirror

Equipped inside the vehicle and grants rearview visibility. Covers major driver side blind spots.



Blue Hydrophilic Mirror

Hydrophilic-treated mirror that spreads water droplets into a thin film. Allows for unhindered visibility during rainy weather.



Side Door Mirror Puddle Lamp

Works in conjunction with keyless entry system to illuminate the ground below the door. For smart entry systems, can automatically turn on as you approach the vehicle.



Side Door Mirror Logo Lamp

Illuminates the ground with a logo (containing manufacturer, model name, etc.) when starting or shutting off the engine to project a sense of luxury and service.



Reverse Tilt Mirror

Automatically angles the passenger side mirror downward to secure visibility of area around rear tires when the vehicle is shifted into reverse to assist with backup up into a garage or parking space.

Technology

Development / Design

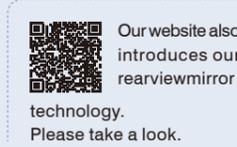
Side-door mirrors are one of the few parts situated outside the vehicle, and so require high endurance against heat and water and the durability to withstand inclement weather, strong vibrations and other harsh driving conditions. We have reliable functionality and quality in mind from the very beginnings of the design phase, combining our knowledge of mechanics circuitry design along with optics (mirror) technology. Using our expertise in rearview mirrors, we continue to tackle market issues and manufacturer needs to propose cutting-edge functionality and design, including world firsts, imbued with experience, knowhow and our proven developmental designs.



Evaluation & Analysis

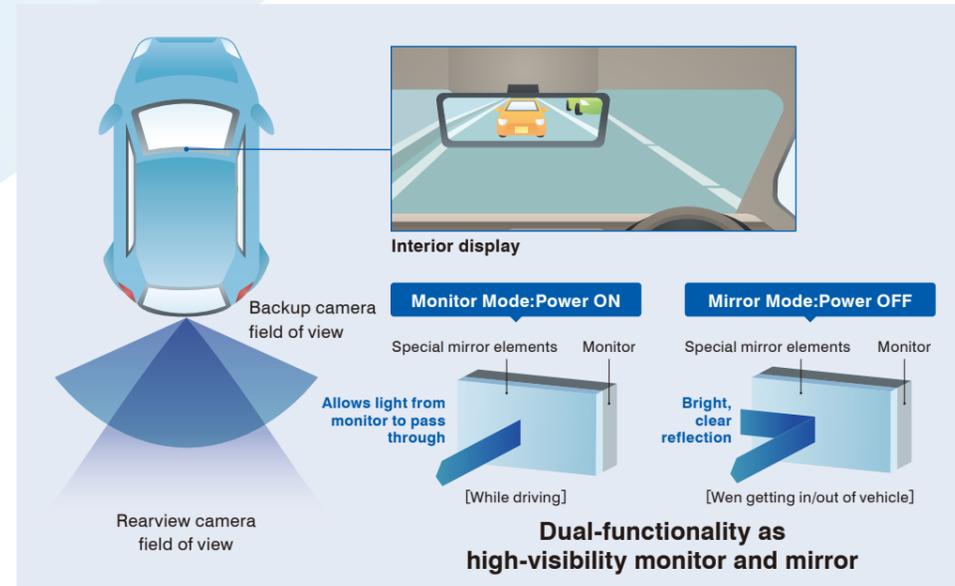


Rearview Mirror Manufacturing Process



Electronic Interior Rearview Mirror: Hybrid Inner Mirror

An electronic mirror displays a video feed of the rear provided by an onboard camera on a monitor. Our hybrid inner mirrors allow for wider coverage of blind spots typically missed by standard mirrors along with the safety of enhanced visibility when traveling at night or through tunnels. The unit can function as both a standard mirror or a monitor for the camera video feed and includes a failsafe to revert to standard mirror functionality in the event of power failure or when the engine is off.



With camera monitor function enabled

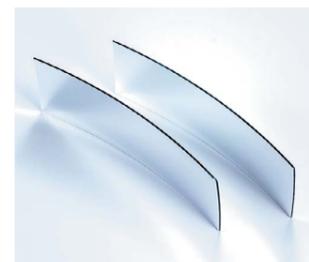


With mirror function enabled

Concave Mirror and Plane Mirror for Heads Up Display (HUD)

A concave mirror is used in HUD to enlarge image reflection, while a plane mirror reduces heat.

- Utilizing the characteristics of glass, it is resistant to temperature changes and does not deform.
- It offers clear video, and is also compatible with larger windshields.



Concave Mirror



Plane Mirror

Heated Washer

Assists driving in wintry conditions by eliminating windshield frost using warm washer fluid. An insulated container maintains fluid for use when embarking or during travel to ensure you always have desired visibility.



Heated Washer

- A vacuum-sealed structure developed by Murakami Corporation keeps washer fluid around 50°C for up to 12 hours, even in freezing conditions.
- This can be turned on or off manually as seasonal temperatures warrant.



Projection Courtesy Illumination

Illuminates the ground with a logo (containing manufacturer, model name, etc.) when starting or shutting off the engine at night to project a sense of luxury and service.

- Available logo designs include white-on-black, black-on-white or color and are customizable for the vehicle model.
- Displays a crisp image of the vehicle logo using a unique blend of LED light sourcing and projector lens technology developed at Murakami Corporation.



Courtesy Illumination Unit



Logo Projection



Lock Actuator for EV/PHV Charging Connector

A lock actuator prevents disconnection of the charging connector for electric vehicles (EV) and plug-in hybrid vehicles (PHV). It fixes the charging connector to the vehicle inlet so that the charging gun does not come off while charging. This product offers excellent safety and reliability, using technology cultivated in the opening and closing unit for adjusting the surface of door mirrors for automobiles.

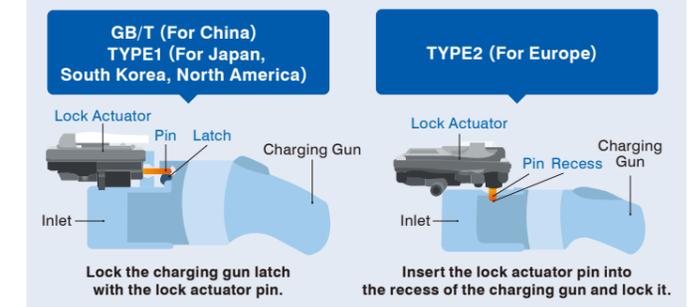
- Compliant with various standards (IEC62196: TYPE1, TYPE2 GB/T20234, SAE1772)
- One unit can share TYPE1 and GB/T
- Can be customized according to the customer's request.



TYPE1 (available shared with GB/T)

TYPE2

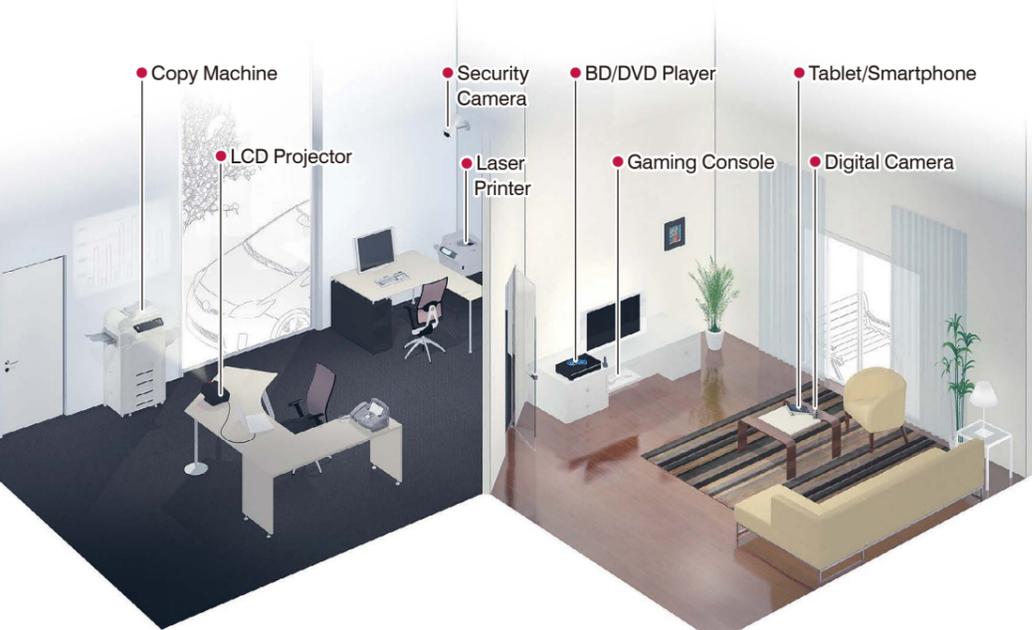
TYPE1 & 2 share



OPT-ELECTRONICS

Using technology cultivated in automobile rearview mirrors, we provide optical thin film products for various fields such as OA products, on-board equipment, and video equipment. Our flexible development capabilities enable us to add functions such as light transmission, reflection, and polarization to glass and resin according to customer needs.

Opt-electronics Technology in the Home and Office



Imaging Devices

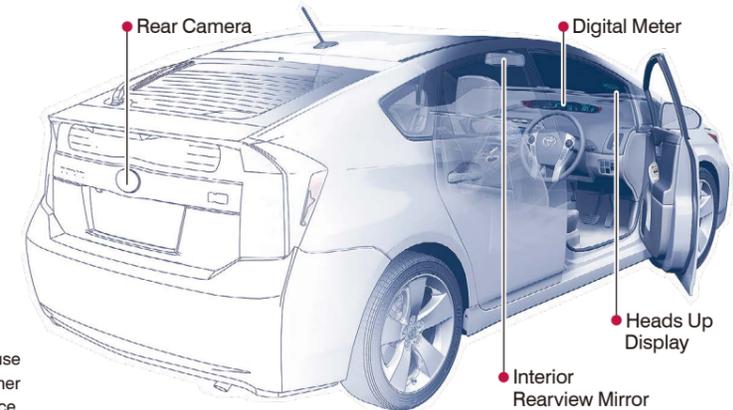
A wide variety of optical filters are used to power devices such as digital cameras, LCD projectors, HD-capable TV cameras, and more. Specialized parts can be made in bulk or as single units.

OA Devices

Optical filters are also a necessity part of OA devices, including workplace laser printers, scanners and photocopiers. Our optical coating products are used in devices where high-fidelity is essential.

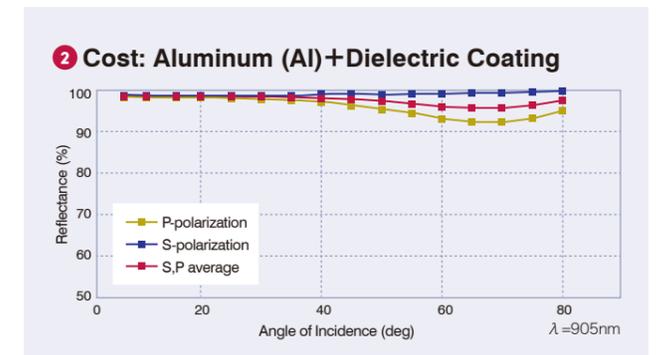
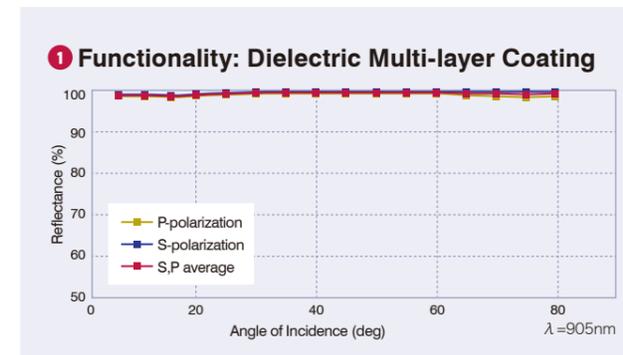
Vehicle-mounted Devices

Information from the windshield odometer feeds into a heads-up display. Camera units that fold into the dashboard utilize our optical coating technology and products.

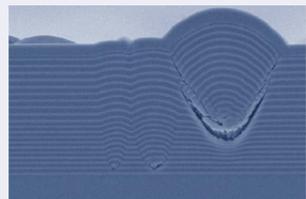


LiDAR and Highly Reflective Mirrors for Wide Angles of Incidence

Recently, LiDAR (Light Detection and Ranging) has garnered much attention for its use in automobile sensors. Accurate detection of obstacles at wider angles and farther distances requires mirrors with high reflectivity across a greater angle of incidence. Murakami Corporation propose two main applications regarding functionality and cost.



Evaluation & Analysis



Scanning Electron Microscope (SEM)

Fires a beam of electrons on the material surface to release secondary electrons, which are used to map the surface. An energy dispersive spectrometer (EDS) used can then image the distribution of elements on the surface.



X-ray Photoelectron Spectrometer (XPS)

Uses X-rays to measure photoelectron energy distribution and analyze the elements and chemical bonds on the outermost surface.



Laser Interferometer

Uses a precise laser to scan the product surface with the resulting data checked for any irregularities.



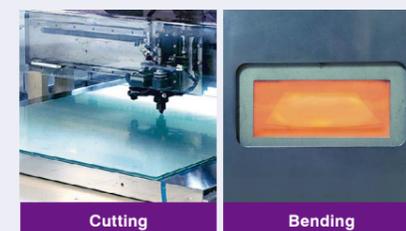
Other Analysis

- Spectrophotometer
- X-ray Fluorescence Spectrometer
- Optical Microscopes
- Temperature and Humidity Control / Temperature and Shock Resistance / Misc. Testing Equipment (Salt Sprayer, etc.)

Optical Coating Manufacturing Process

STEP 01 Plate Fabrication

Substrates are manufactured from glass plates as original material. The glass is cut and bent, before it is arranged into the product shape.



STEP 02 Cleansing

Foreign matter is removed from the substrate surface with autonomous processing, in the processes from beveling edges to polishing and washing.



STEP 03 Thin-film Deposition

Dedicated machines with nanometer precision add layers of film to the surface to achieve desired functionality.



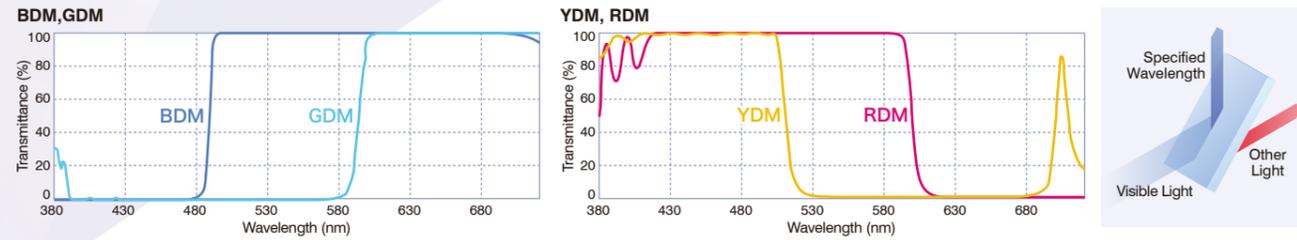
MAIN OPT-ELECTRONICS PRODUCTS

We can propose optical coating according to customer requests.
Please contact us from our website.



Dielectric Multi-layer Film

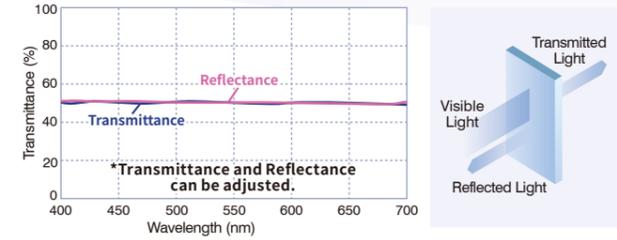
Dichroic Mirror



Reflects only certain wavelengths within visible light while transmitting other light, making it effective for separating colors. The combination of two or more dichroic mirrors allows white light to be separated into three base colors (blue, green, red).

Optical Coating Technology Usage Case: Projector, In-Vehicle HUD

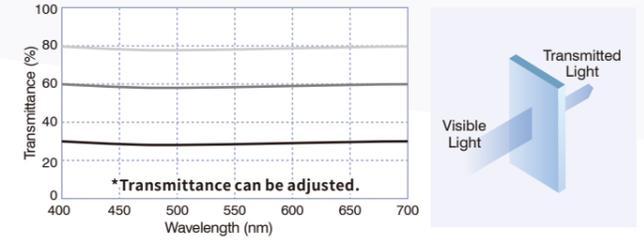
Half Mirror



Both desired wavelength range and reflectance (transmittance) ratio are adjustable. Dielectric multi-layer coating can reflect or transmit nearly 100% of incident light.

Optical Coating Technology Usage Case: In-Vehicle Meter, Optical Devices, Sensors, etc.

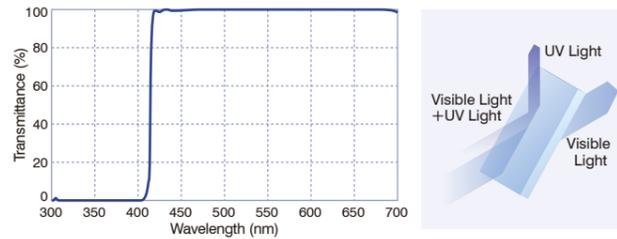
Neutral Density Filter



Reduces transmitted light by desired amount. Reduces light of all wavelengths evenly.

Optical Coating Technology Usage Case: Camera

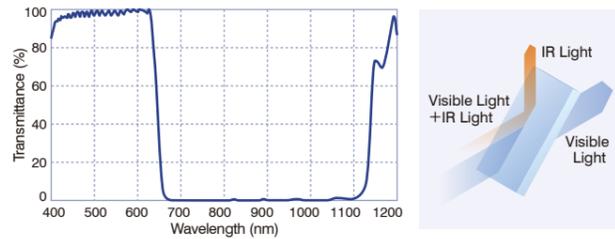
UV Filter



Transmits visible light and reflects UV rays. Placed between a light source and an illuminated object, the filter can block harmful UV rays.

Optical Coating Technology Usage Case: Camera, In-Vehicle

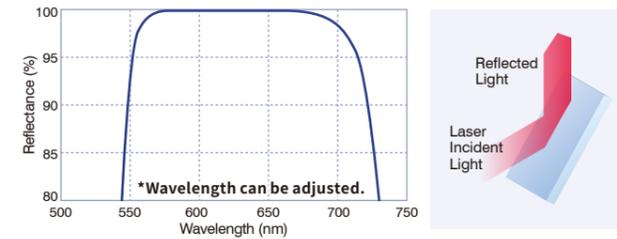
IR Filter



Transmits visible light and reflects IR rays. Placed between a light source and an illuminated object, the filter can block harmful IR rays.

Optical Coating Technology Usage Case: Camera, In-Vehicle

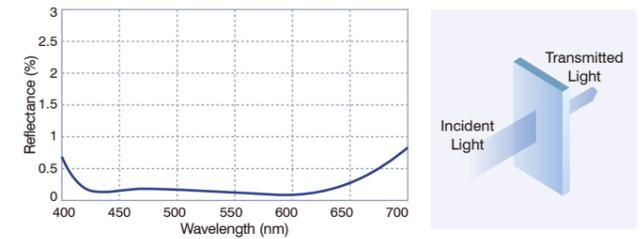
Laser Mirror



Efficiently reflects nearly 100% of incident laser light with low-absorption dielectric multi-layer coating. Can be adjusted to desired wavelength (YAG, HeNe, semiconductor, etc.)

Optical Coating Technology Usage Case: Laser Devices

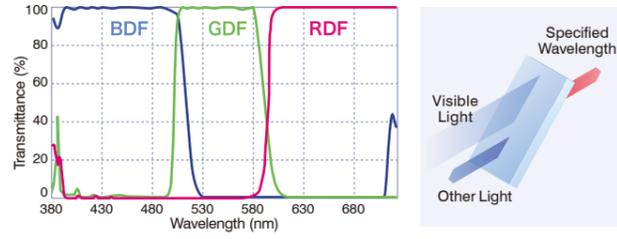
Anti-Reflection Coating



Lowers reflectance of target substrate, reducing transmittance loss due to glare. Can be adapted for different base materials, incidence angles and oscillations.

Optical Coating Technology Usage Case: Optical Devices, Meter Cover Glass, Sensors, etc. (incl. hydrophilic coating)

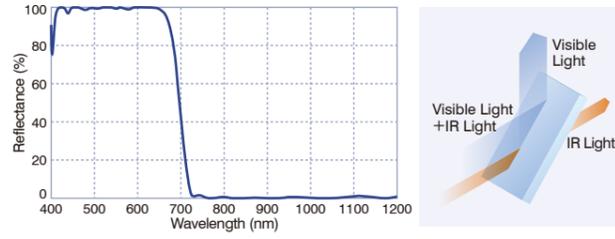
Dichroic Filter



This filter only transmits certain wavelengths of visible light and reflects all other wavelengths.

Optical Coating Technology Usage Case: Projector

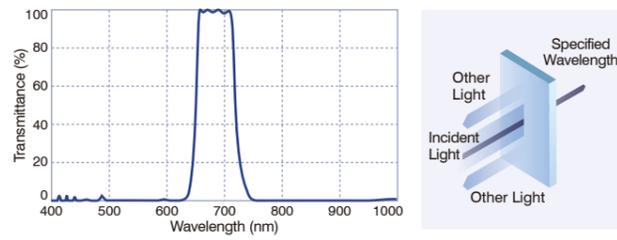
Cold Mirror



Reflects visible light and transmits IR rays. The dielectric multi-layer coating allows for the efficient reflection of visible light while allowing heat-generating IR rays to pass through.

Optical Coating Technology Usage Case: In-Vehicle HUD, Projector

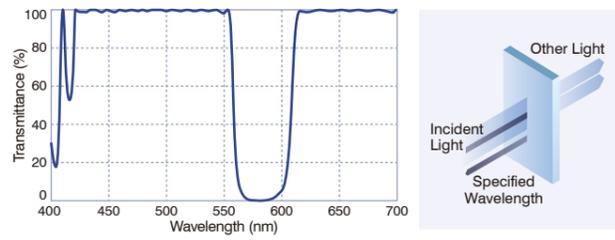
Bandpass Filter



Transmits only specific wavelengths of light while reflecting all other wavelengths. Has a wide variety of uses and is customizable to desired range of wavelengths.

Optical Coating Technology Usage Case: Sensors (In-Vehicle, Consumer-use and Laboratory Analytical Devices, etc.)

Trimming Filter

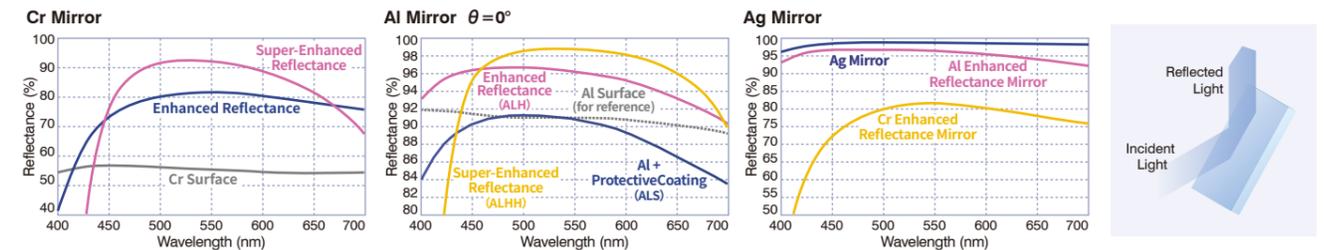


Reflects only specific wavelengths of light while transmitting all other wavelengths. Has a wide variety of uses and is customizable to desired range of wavelengths.

Optical Coating Technology Usage Case: Sensors (In-Vehicle, Consumer-use and Laboratory Analytical Devices, etc.)

Metal + Multi-layer Coating

High-Reflectance Mirror (Metallic Surface Mirror)



Combines high-reflectance metal film with dielectric multi-layer coating into a transmittance protective surface. Multiple variations are offered, including Chrome (CR), Aluminum (Al) and Silver (Ag) to meet different reflectance and cost needs.

Optical Coating Technology Usage Case: Copy Machine, Projector, In-Vehicle Devices, etc.

Curved Glass Mirrors

Flat plate glass is superheated and shaped based on 3D data and curved to fit a mold. Options include concave, convex, spherical and aspherical. The desired mirror can then be deposited upon the molded glass. Boasts high durability compared with resin-based mirrors.

Glass Molding Usage Case: In-Vehicle HUD, Projector, etc.



SUSTAINABILITY

Murakami Corporation contributes to development of the economy and society through business activities that "serve people", and as a sound corporate citizen with high ethical standards, we are working to realize a sustainable society.

We also introduce our sustainability activities on our website. Please take a look.



Commitment to Quality

Philosophy

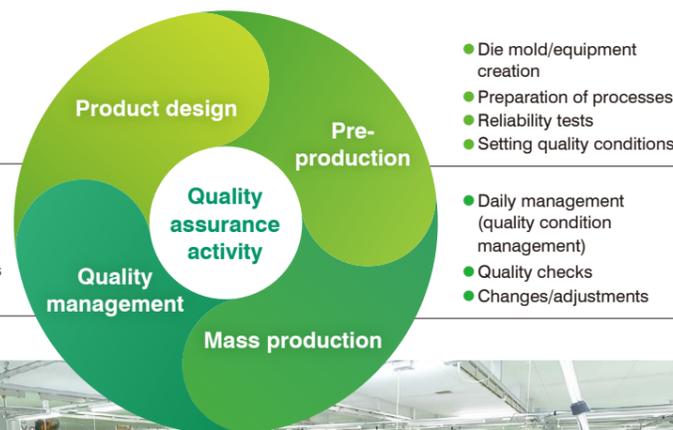
The Murakami Corporation Corporate Charter states under Safety & Quality, that we strive to earn the satisfaction and trust of customers and society as a whole by providing beneficial and safe products and services. In response to this, we have set forth "customer first" and "creation of a quality assurance system for the entire group" in our "Global Quality Policy". We strive to achieve stable and continuous high quality that meets the needs of our customers.

Global Quality Policy
Obtain customer's trust by assured quality and new value!

Main Initiatives

Our philosophy of "Quality born from process" drives us to aim for zero flaws in our product by having every department work in unison from design to manufacture.

- DR·DRBFM, etc. Improvement of design plan completion
- Testing and auditing
- Surveying for defects and upstream feedback
- Overseeing from materials to final product



Step-by-step quality verification



Reliability tests

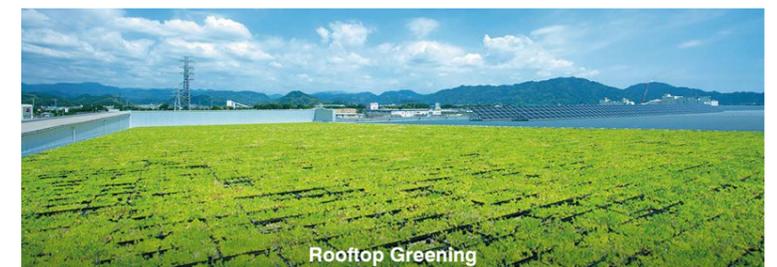


Production process completion verification

Commitment to the Environment

Murakami Corporation strives for human and Earth friendly monozukuri and to serve people through all its corporate endeavors.

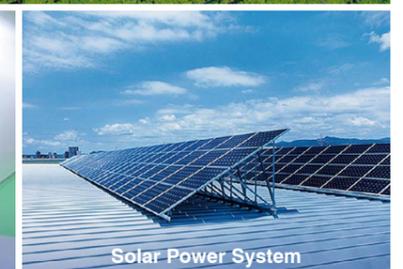
- **Environmental Regulation Compliance and Pollution Prevention**
We follow all environmental laws and regulations and undergo proactive preventative measures regarding environmental pollution.
- **Environmentally-aware Product Development and Production**
From the very start of product development, we keep environmental impact and recycling in mind and maintain strict management throughout the production process.
- **Regional Coexistence**
We build bonds with local communities through environmental maintenance and protection efforts.
- **Carbon Neutral Initiatives**
The entire Murakami group works in unison towards achieving carbon neutrality.



Rooftop Greening



Solvent Recovery Apparatus



Solar Power System

Social Contribution Activities

Founded in Shizuoka, we have 140 years of history with the local community. Through continuous efforts to "serve people", we build good relationships with the local community, and strive toward coexistence and co-prosperity.



Public Beautification

A key policy of Murakami Corporation is "Regional Coexistence," which drives efforts to benefit local environments. Every factory serves as a base for public beautification efforts.



Installation of a Multifunctional Corner Mirror

In cooperation with Fujieda City, we have installed "multifunctional corner mirrors". Drivers are warned of approaching vehicles by blinking LED lights that apply rearview mirror technology. This helps to prevent accidents at intersections.



Conducting welfare concerts

We hold an annual welfare concert at Shizuoka Music Hall AOI as part of our community service events. This concert is designed to be enjoyed by everyone without hesitation, and we invite people who use welfare facilities in the community.

GLOBAL NETWORK

Overseas Bases

Overseas Subsidiary

● Murakami Germany GmbH
Business details
Market research and analysis for European business development

● Murakami Manufacturing India Private Ltd.
Business details
Production and sales of rearview mirror



● Jiaxing Murakami Automotive Parts Co., Ltd.
Business details
Production and sales of rearview mirror

● Foshan Murakami Automotive Parts Co., Ltd.
Business details
Production and sales of rearview mirror

● Tianjin Murakami Automotive Parts Co., Ltd.
Business details
Production and sales of rearview mirror

● Murakami Manufacturing U.S.A. Inc.
Business details
Production and sales of rearview mirror

● Murakami Manufacturing Mexico, S.A. de C.V.
Business details
Production and sales of rearview mirror



● Murakami Ampas (Thailand) Co., Ltd.
Business details
Production and sales of rearview mirror

● Murakami Corporation (Thailand) Ltd.
Business details
Contract work for rearview mirror design and production preparation

● Murakami Manufacturing (Thailand) Co., Ltd.
Business details
Production and sales of rearview mirror

● Murakami Mold Engineering (Thailand) Co., Ltd.
Business details
Production and sales of mold

Domestic Bases

Domestic Subsidiary

● Eiji Corporation
Business details
Production and sales of rearview mirror

● Murakami Business Service Corporation
Business details
Temporary staffing

● Murakami Express Corporation
Business details
General truck transportation business

● Murakami East Japan Corporation
Business details
Production and sales of rearview mirror and lamp

● Murakami Kasei Corporation
Business details
Wholesale of resin products

● Murakami Kyushu Corporation
Business details
Production and sales of rearview mirror

Domestic Offices

● Tokyo office



HISTORY

- **1882**
KAIMEIDO founded in Shichiken-cho, Shizuoka City.
Began manufacturing metal ornaments and tin work.
- **1887**
Began production of mirrors using mercury printing method.
- **1897**
Began production of mirrors using mercury printing method.
- **1948**
Underwent reorganization and became Murakami Corporation.
- **1958**
Started production of rearview mirrors for automobiles.
- **1967**
Opened Fujieda factory in Fujieda City, Shizuoka Prefecture.
- **1967**
Opened Fujieda factory in Fujieda City, Shizuoka Prefecture.
- **1989**
Entered fine glass business (now opt-electronics business).
- **1995**
Listed on the 2nd Section of the Tokyo Stock Exchange.
- **1996**
Opened Oigawa factory in Fujieda City, Shizuoka Prefecture.
Established Murakami Ampas (Thailand) Co., Ltd. as a joint venture.
- **2000**
Established Murakami Manufacturing U.S.A. Inc.
- **2002**
Established Jiaxing Murakami Ishizaki Automotive Parts Co., Ltd. as a joint venture (now Jiaxing Murakami Automotive Parts Co., Ltd.).
- **2007**
Established Murakami Kyushu Corporation.
- **2010**
Moved Head Office to Tenma-cho, Aoi-ku, Shizuoka City.
- **2011**
Opened Tsujii factory in Fujieda City, Shizuoka Prefecture.
- **2012**
Made PT DELLOYD a subsidiary (now PT. Murakami Delloyd Indonesia).
- **2014**
Established Murakami Manufacturing Mexico, S.A. de C.V.
- **2016**
Established Murakami Manufacturing India Private Ltd.
- **2017**
Established Murakami Germany GmbH.
- **2022**
Shifted from Second Section to Standard Market listing on Tokyo Stock Exchange.
Made Oshima Electric Works Co., Ltd. a subsidiary (now Murakami East Japan Corporation).

