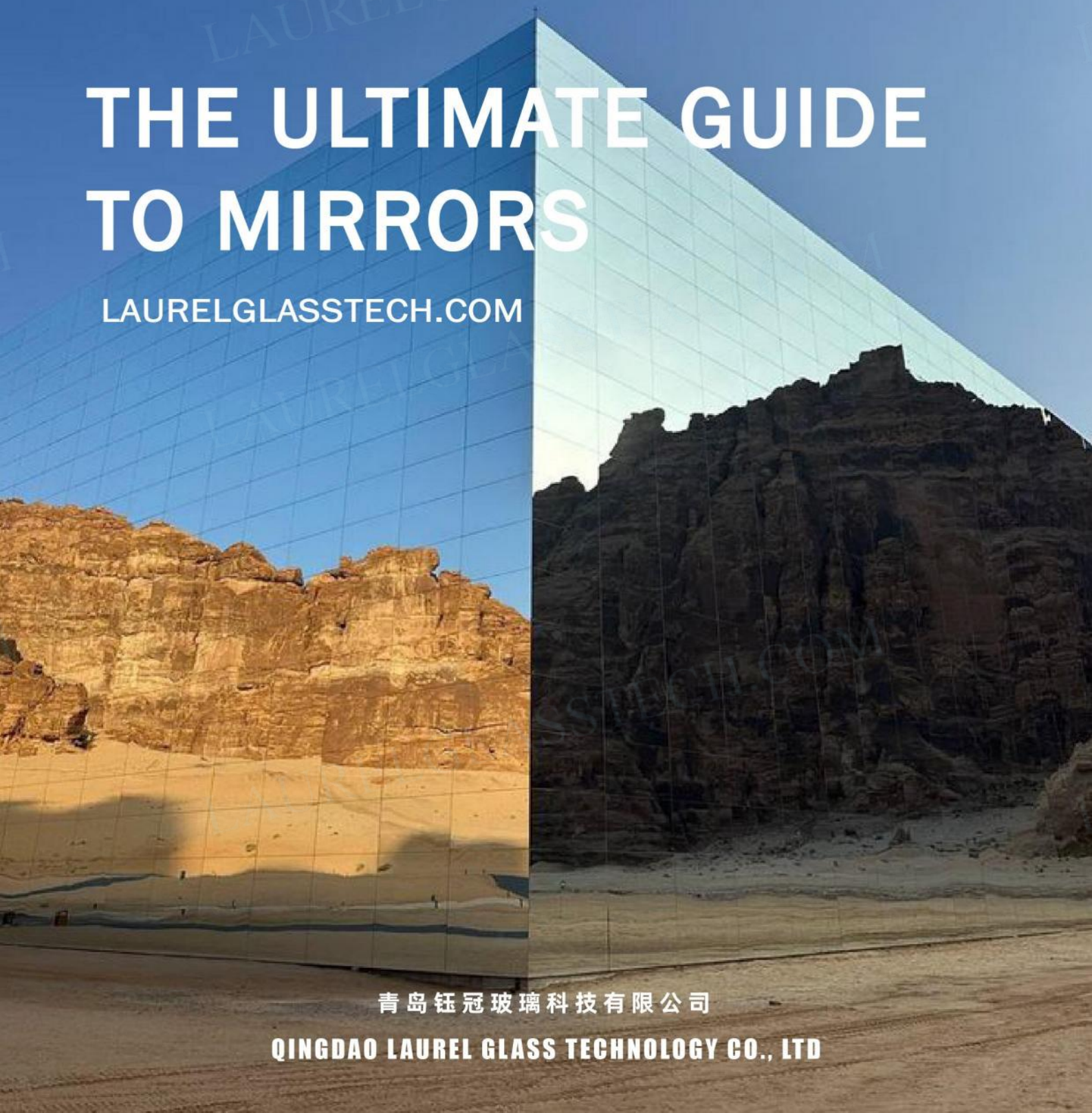
LAUREL GLASS

THE ULTIMATE GUIDE TO MIRRORS

LAURELGLASSTECH.COM



LAURELGLASSTECH.COM

青岛钰冠玻璃科技有限公司

QINGDAO LAUREL GLASS TECHNOLOGY CO., LTD

LAUREL GLASS

QINGDAO LAUREL GLASS TECHNOLOGY CO., LTD was established in 2003.

Based in Qingdao City, the North of China, we have become one of the most professional and reputable integrations of industry and trade with a wide spectrum of glass businesses in architecture facades, interior decoration, furniture, shower glass, and optical applications.

By more than 20 years of development, Laurel Glass has boomed into a powerful company with 280 skilled workers, 30 multilingual sales staff, 1000+ long-term cooperative customers from all over the world, and a 100,000m² workshop with top processing equipment, various processing methods, high capacity, and strong R&D ability.

Our premium products comply with European Standards (CE), North American Standards (SGCC), and Australian Certificates (CSI).

With excellent quality and detail-oriented service, Laurel Glass will be your best partner for glass materials and solutions.













CE CERTIFICATE

ATTESTATION CERTIFICATE

The Company mentioned below has been audited by the Notified Body UDEM, according to relevant standard given below

Company Name	: Qingdao Laurel Glass Technology Co., Ltd
Company Address	: No.17, Lianyungang Road, Shibei District, Qingdao, China
Related Standards	: EN 1036-2:2008
Product Name	: Mirrors
Report No and Date	: EASY03222398CPR
Product Brand/Model/Type	: 1.1mm,1.3mm,1.5mm,1.8mm,2mm,2.5mm,2.7mm,2.8mm, 3mm,4mm,5mm,6mm,8mm,10mm
Certificate Number	: M.2023.206.C91827
Initial Assessment Date	: 24.10.2023
Registration Date	: 25.10.2023
Reissue Date/No	: -
Expiry Date	: 24.10.2028

UDEM International Certification Auditing Training Centre Industry and Trade Inc. Co.

The validity of the certificate can be checked through www.udem.com.tr. Upon completion of EC declaration of conformity,it is used solely at the manufacturer's responsibility. This certificate remains the property of UDEM International Certification Auditing Training Centre Industry and Trade Inc. Co. to whom it must be returned upon request. The above named firm must keep a copy of this certificate for 15 years from the registration of certificate. This certificate only covers the product(s) stated above and UDEM must be noticed in case of any changes on the product(s)

Address: Mutlukent Mahallesi 2073 Sokak (Eski 93 Sokak) No:10 Çankaya – Ankara – TURKEY
Phone: +90 0312 443 03 90 Fax: +90 0312 443 03 76
E-mail: info@udem.com.tr www.udem.com.tr

Production Process

How to Produce Silver Mirror? -Video
https://youtu.be/Z3uVsIlr9iU

How to Produce Aluminum Mirror? -Video
https://youtu.be/09Zj-wSAQZM

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Production Process for Silver and Aluminium Mirrors

Premium Quality Float Glass Stock



Washing Float Glass



Drying

Sensitizing

Spraying Silver or Aluminium Nitrate



Washing



Drying

Lacquering Undercoat (for the strongest protection of the silver layer)



Drying

Re-lacquering Topcoat (standard lacquer or epoxy lacquer)



Drying

PRODUCTION STANDARD

take 6mm copper-free silver mirror for example

Thickness of paint layer＞50μm

thickness of silver layer not less than 800㎎/*SQM*

Reflectivity＞90%

Thickness (mm): 3/4/5/6

Sizes (mm): 1830*1220; 1830*2440; 3300*2140;

3660*2140; 3300*2250

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Magnetron Sputtering for Coated Mirror



Magnetron sputtering is a deposition technology involving a gaseous plasma which is generated and confined to a space containing the material to be deposited - the 'target'. The surface of the target is eroded by high-energy ions within the plasma, and the liberated atoms travel through the vacuum environment and deposit onto glass to form a thin film.

It is a widely used process in mirror production for applying thin, high-quality coatings for reflective glass and coated mirrors.

Mirror Process Services We Offer:

Mirror Panels

Mix Container Shipping

Cut-to-Size

Custom Shapes

Flat/ Bevel Polish

Safety Film Application

Tempered (Temperable Mirror)

Framed Mirrors

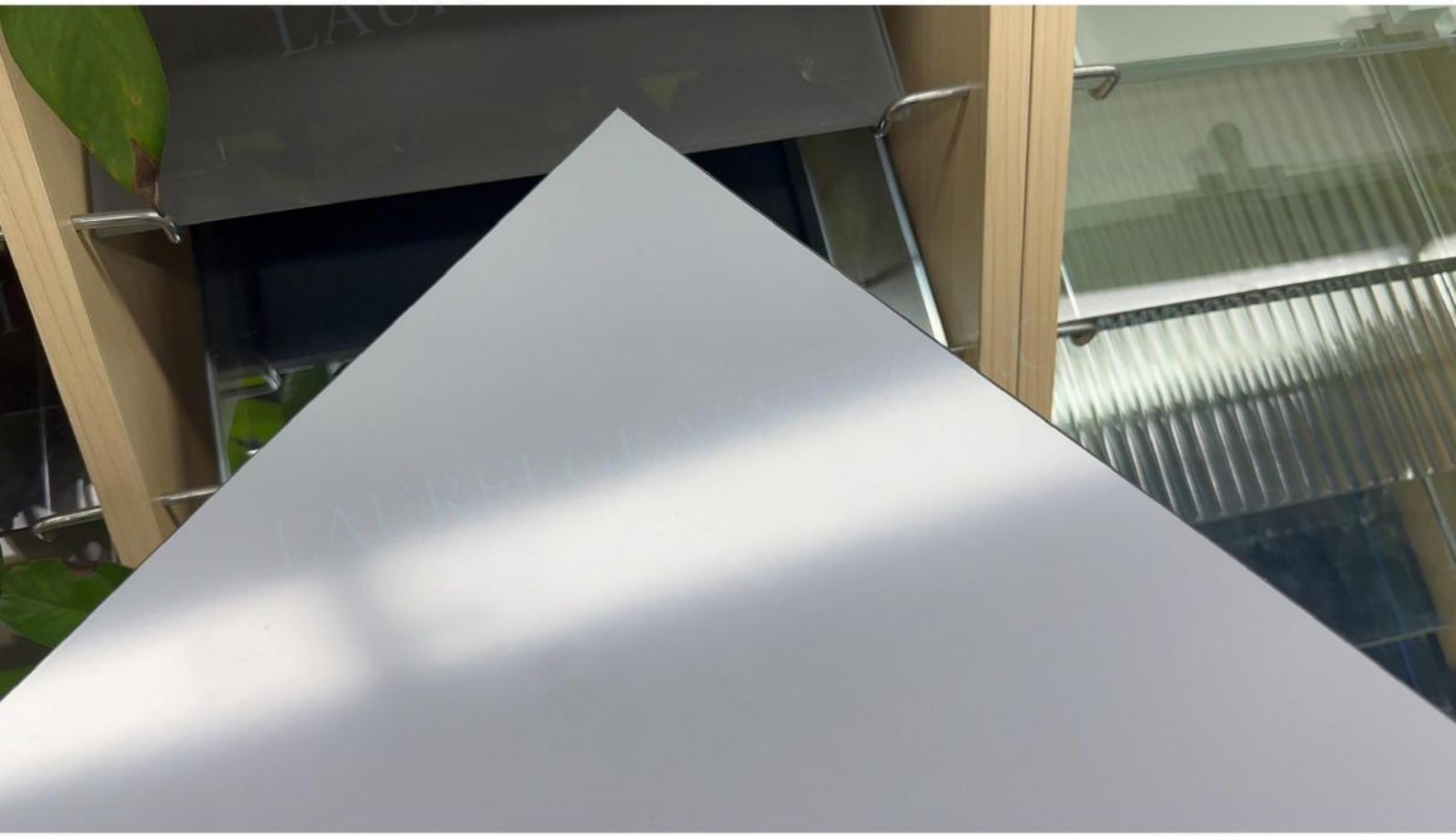


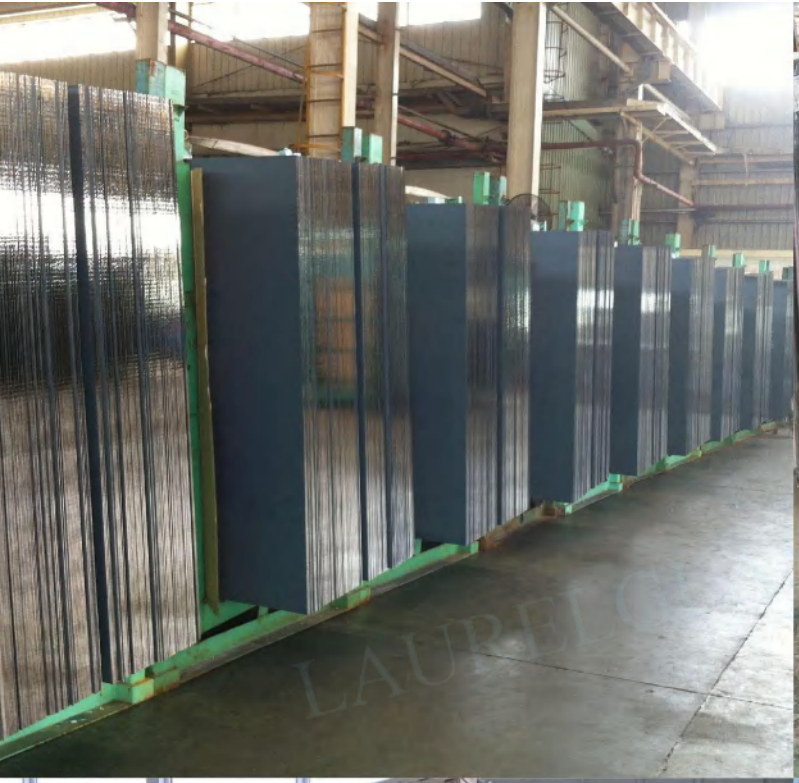
Thickness (mm): 3/4/5/6

Sizes (mm): 1830*1220; 1830*2440;
3300*2140; 3660*2140; 3300*2250

FLAT POLISHED EDGES











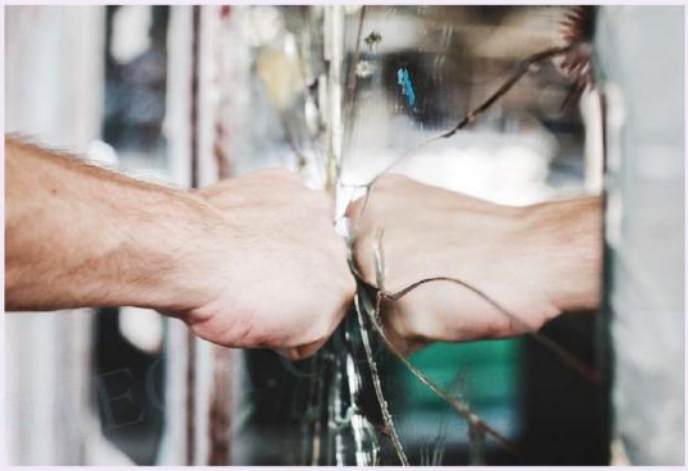

MADE IN CHINA
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Mirror Safety Film

A **safety-backed mirror** with CAT I or CAT II film is commonly referred to as a vinyl-backed safety mirror. This type of mirror is widely used and features a protective layer applied to the back of the mirror panel, enhancing its safety and durability without being visible.







When the mirror breaks, the safety film holds the broken pieces together, significantly reducing the risk of injury from sharp edges and flying debris. These mirrors are especially suitable for high-traffic areas or environments where they may be subjected to heavier impacts, such as gyms, dance studios, hotels, public restrooms, and commercial spaces.





CAT I: Smooth surface film

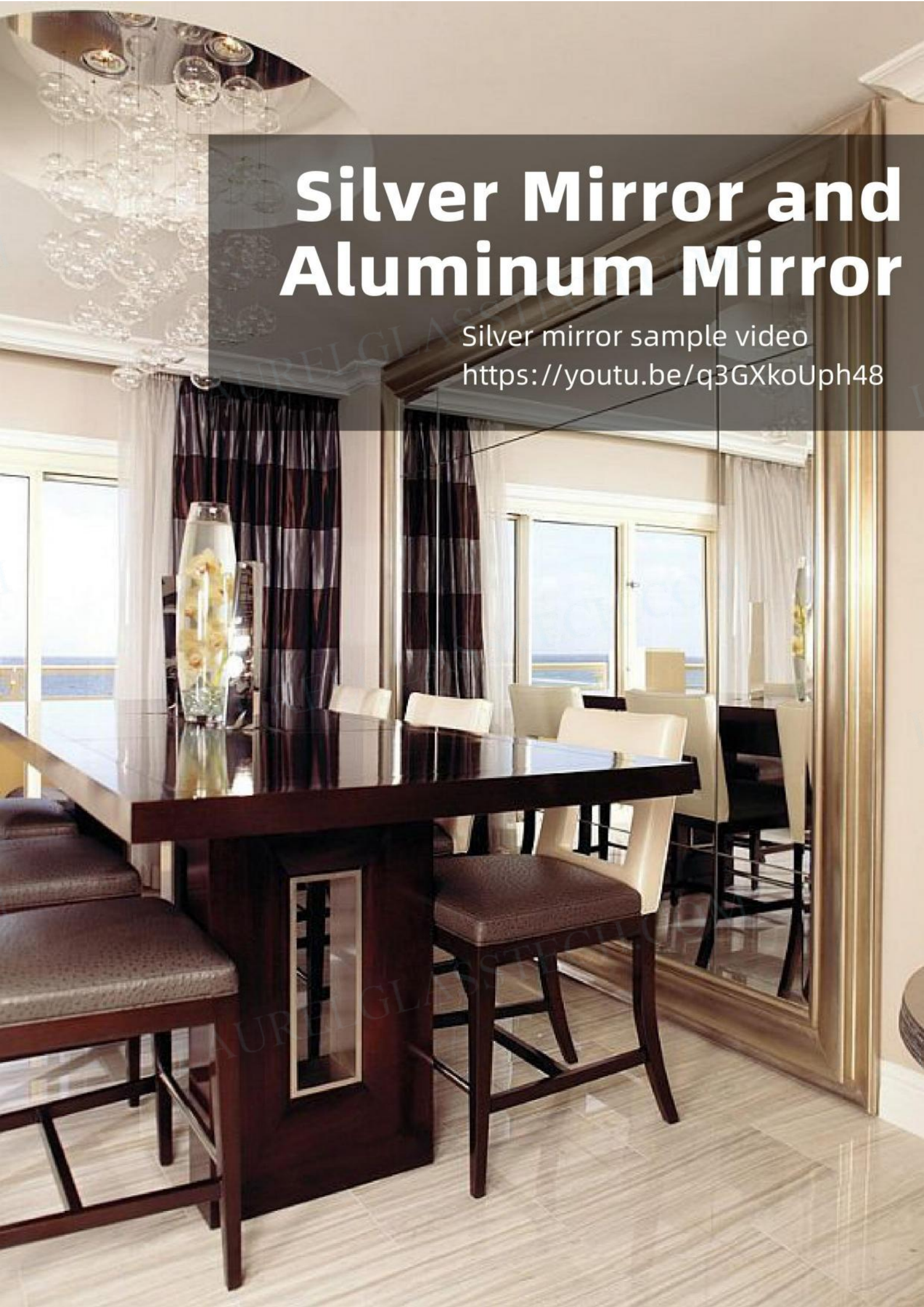
CAT II: Mesh surface film











Silver Mirror and Aluminum Mirror

Silver mirror sample video
https://youtu.be/q3GXkoUph48

Siver Mirror & Aluminum Mirror







Mirrors are objects that reflect images. People have been making mirrors out of stone, metal and glass for thousands of years. In general, a mirror consists of transparent glass and a thin coating on the back. The coating on the back is both protective and functional. On the one hand, it can protect the mirror from tarnishing and abrasion. On the other hand, metals such as silver or aluminium are used as coatings to increase the reflectivity of the mirror.

Silver Mirrors

When an aldehyde is combined with an ammonia complex of silver in a basic aqueous solution, the aldehyde slowly reduces the complex to silver metal. When the surface of the glass is clean and wet, the silver metal adheres to the glass, forming a highly reflective surface.

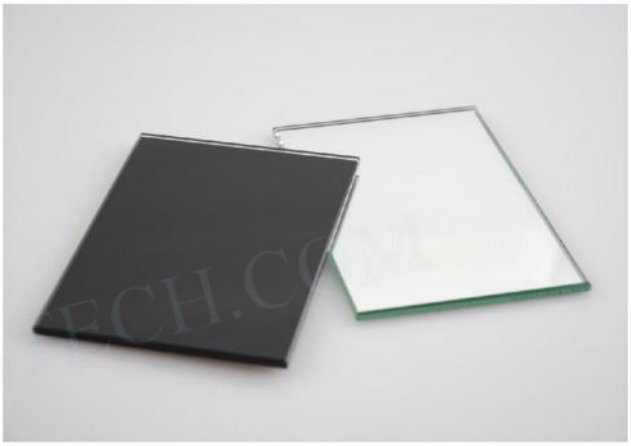
After the silver reflective layer is applied, a copper layer is then plated on top of it to provide added protection. Silver is a highly reactive element and is prone to oxidation when exposed to air, which causes it to tarnish and turn gray over time, much like silver jewelry that darkens with age. The copper layer acts as a protective barrier, preventing the silver from direct exposure to the air and significantly reducing the risk of oxidation. Finally, two coats of protective lacquer are applied to safeguard the mirror's surface, further enhancing its durability and protecting it from potential damage.

Aluminum mirrors

The most commonly used metal coating for mirrors today is aluminium coating, which can be produced by sputtering or evaporation. These two coating methods use aluminium targets and aluminium evaporation materials respectively as raw materials. The coating process is as follows.

First, the mirror is placed in a high vacuum chamber as a substrate. The aluminium source materials are then physically converted into aluminium atoms which are then deposited onto the glass. This produces a very thin reflective aluminium layer on the mirror. To enhance durability, one or two coats of protective lacquer are applied to the mirror's surface, providing additional protection and ensuring the longevity of the coating.





Differences Between Silver and Aluminum Mirrors		
Feature	**Silver Mirror**	**Aluminum Mirror**
Reflectivity	**Higher reflectivity** and brighter, sharper reflections	**Slightly lower reflectivity**, still good but not as bright
Durability	**Sensitive to moisture**, may tarnish or discolor without protective coating	**Highly durable**, resistant to corrosion and oxidation
Corrosion Resistance	Susceptible to **moisture** and chemicals, needs a protective coating	**Resistant to corrosion** and ideal for **humid environments**
Cost	Generally **higher cost**, premium product	More **affordable**, cost-effective solution
Aesthetic	Provides a **luxurious, premium appearance**	Offers a more **practical, functional look**
Applications	Ideal for **high-end**, **luxury** projects	Suitable for **commercial**, **industrial**, and **moisture-prone areas**

Make Your Decision

Choose a Silver Mirror if you are looking for a premium-quality, highly reflective mirror for luxury projects or spaces where the visual clarity and bright reflection are a priority, such as in high-end bathrooms, hotels, or retail displays.
Choose an Aluminum Mirror if you need a cost-effective solution that is durable, moisture-resistant, and ideal for high-humidity environments like bathrooms, kitchens, or outdoor applications. Aluminum mirrors are also a great choice for commercial projects where budget and performance are key.



Both silver mirrors and aluminum mirrors offer their own unique benefits, and the choice between them ultimately depends on your project's needs, budget, and desired aesthetic. Let us know if you'd like to explore specific options or customizations!

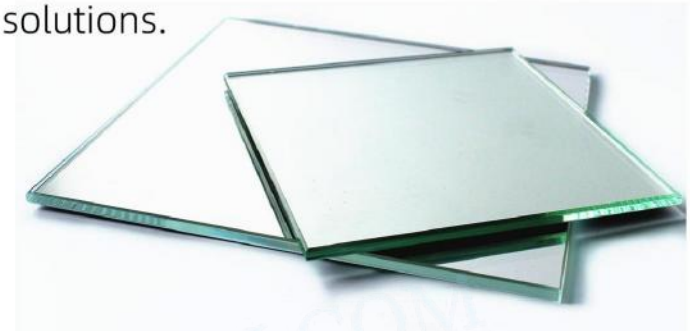


Copper-free Silver Mirror

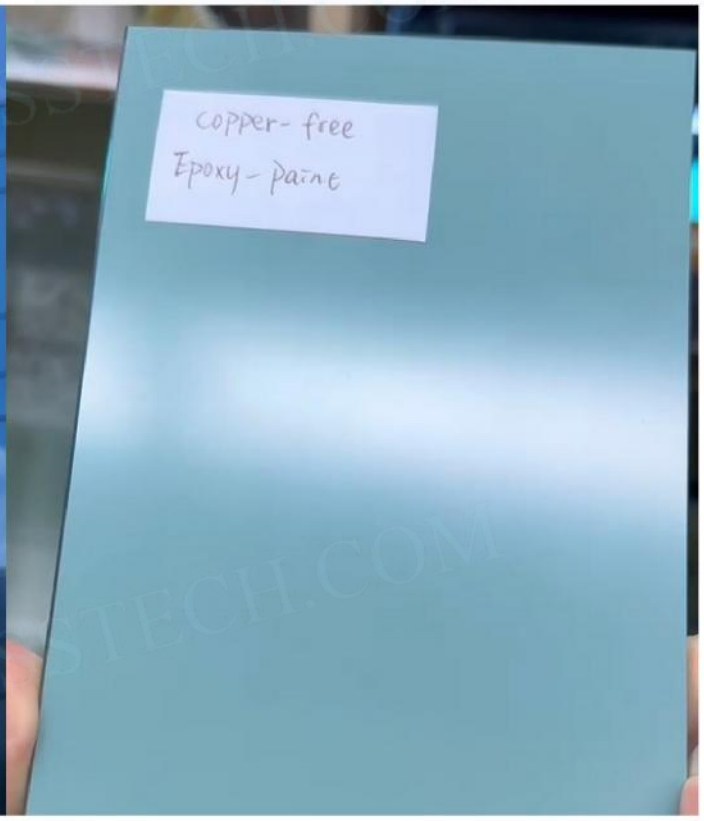
Copper Free Silver Mirror-Clear / Grey / Bronze Epoxy Back Paint Video
https://youtu.be/XFf6V4QCMiw

Copper-free epoxy mirror is an advanced and eco-friendly alternative to traditional mirrors, where the reflective coating is applied using a copper-free process, typically using silver or aluminum and a protective epoxy resin layer. This method eliminates the use of copper, which is often used in traditional mirrors, easy to oxidize, and can be harmful to the environment.
The epoxy layer offers superior protection against corrosion, making these mirrors highly resistant to moisture, humidity, and chemical exposure, offering exceptional clarity and durability. Ideal for both residential and commercial use, copper-free epoxy mirrors are perfect for spaces that demand high-quality, environmentally conscious solutions.

Applications: Bathroom, Living Room, Hotels, Gyms, Office, Retail Stores, Spas, Lobbies, Entrances...



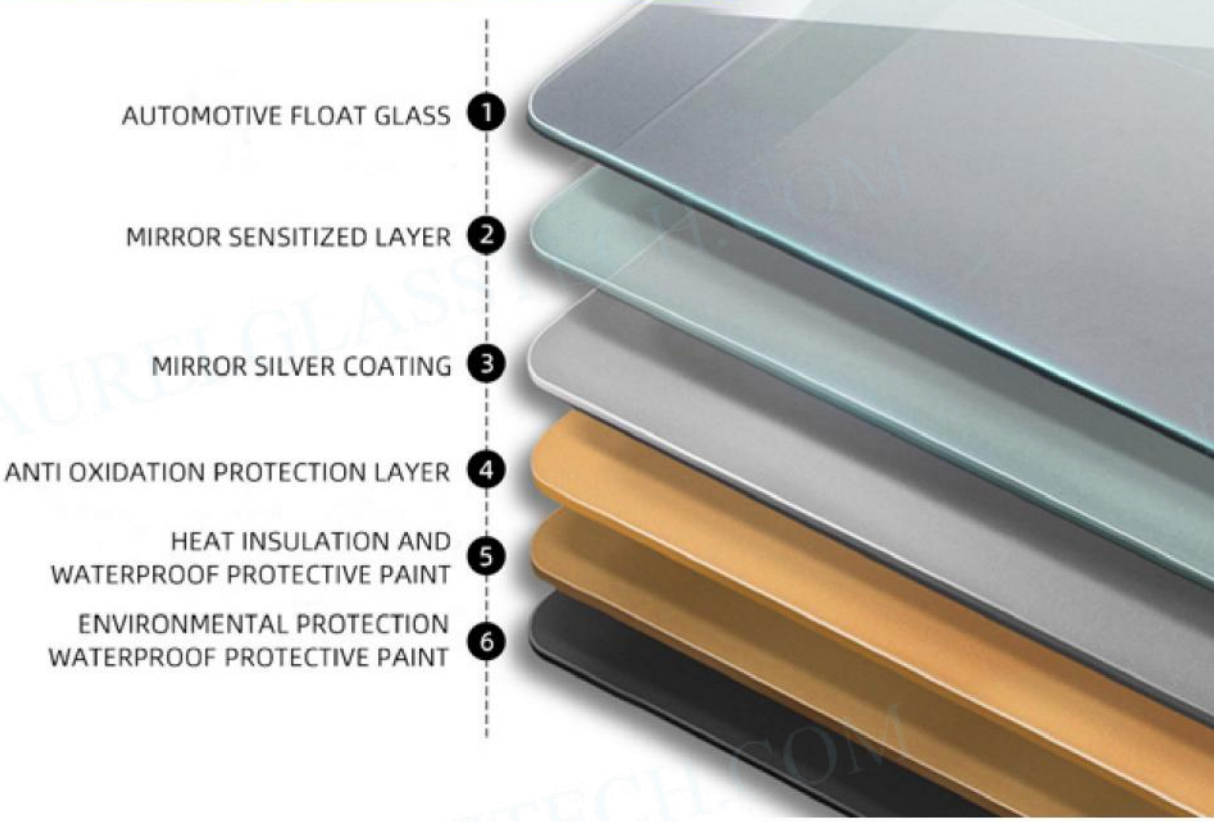




Our copper-free mirror with a standard paint coating on the back is a cost-effective alternative to epoxy backed mirrors. By applying a standard protective paint layer instead of epoxy, these mirrors offer a budget-friendly solution for those who seek an eco-conscious, long-lasting copper-free mirror that is resistant to corrosion and oxidation.

copper free silver mirror

High-definition and multi-layer protection for durable lifetime









Whether you need clear copper-free mirrors for a bright, clean look or tinted copper-free mirrors for a more sophisticated effect, we can produce the perfect mirror for your needs using premium clear or tinted float glass. Tinted copper-free mirrors are perfect for adding a touch of luxury and elegance to any room.

***Epoxy back paint and standard back paint available**





Copper free silver mirror

LAUREL GLASS
Leading solutions for Glass!



Silver mirror

WWW.GLASSTECH.COM

Tinted and Colored Mirror





Our **colored mirrors** are crafted using clear float glass combined with magnetron sputtering technology to apply a reflective coating made from various metals. Unlike traditional mirrors made with silver or aluminum reflective layers, this process creates vibrant, high-quality reflective colors while maintaining the clarity of the base glass.

The mirror's back is coated with one or two layers of high-performance lacquer, which enhances the mirror's durability and scratch resistance and protects the reflective layer.

Applications: Curtain Wall, Mirror Tiles, Art Installations...



Laurel **tinted mirrors** offer a unique combination of aesthetic appeal and functionality, produced silver and aluminum mirror from high-quality tinted float glass. These mirrors usually come in two elegant shades — Euro Grey and Euro Bronze — that add a sophisticated, contemporary look to any space, making them perfect for a range of residential and commercial applications.



The tinted glass is coated with a reflective layer to create a mirror, giving you the reflective surface you need while adding a distinct color tone that enhances the ambience of the room. Whether you need a cool, subtle tone (Euro Grey) or a warm, rich hue (Euro Bronze), these tinted mirrors provide both style and functionality.



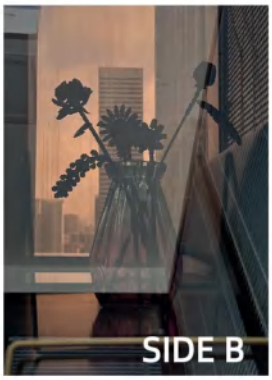




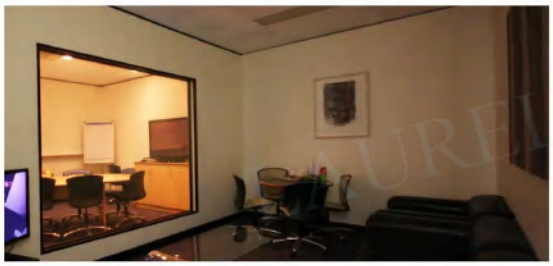

Coated Mirror

Coated Mirror











Optical Parameters	Y	L	a	b
Coating Surface	74.36	88.40	-4.00	-1.30
Transmittance	10.50	39.20	4.50	-1.20

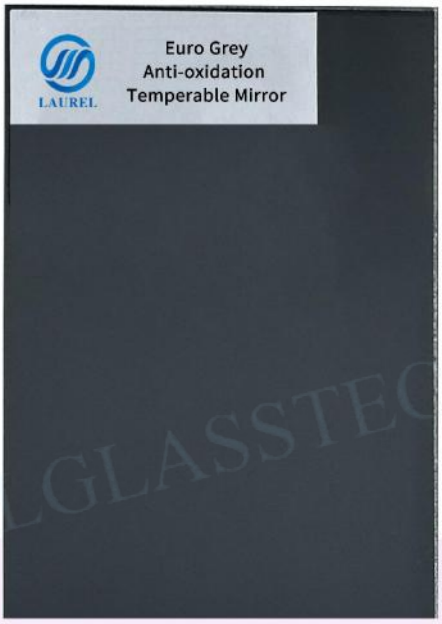
A **one-way mirror** or **two-way mirror**, consists of a reflective coating that is applied to a glass panel. The effect is achieved when there is a significant difference in lighting between the two sides:
On the reflective side (bright side), the mirror acts as a standard mirror, reflecting light and creating a mirrored surface.
On the transparent side (darker side), the mirror acts as a window, allowing people to see through.
One-way mirror can be further processed, such as edge grinding, drilling, hot bending, tempering, laminating, and insulating (double-glazing).

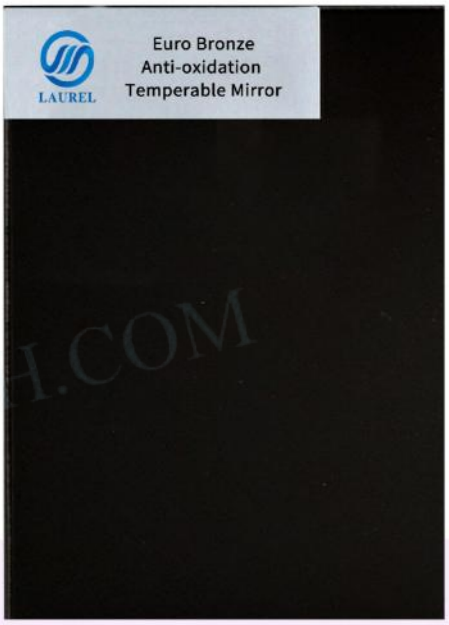
Thickness (mm): 2-12
Maximum Size (mm): 3660*2440
Applications: Interrogation Rooms, Observation Rooms, Conference Rooms, Curtain Wall...

An **infinity mirror** is a type of optical illusion mirror that creates the appearance of a never-ending reflection. It is achieved by placing a reflective mirror behind a one-way mirror. When light is reflected between these two surfaces, it creates a visual effect of an infinite series of reflections that appear to recede into the distance. Infinity mirrors are often used for decorative purposes, art installations, or lighting designs, adding a captivating and modern touch to any space.









Temperable Mirror

Different from the standard mirror with safety film, the **temperable mirror** is a kind of safety mirror with good reflectivity, the best oxidation resistance, and high-temperature resistance performance among the mirror series. Temperable mirror uses nanocomposite dielectric material though our advanced environmentally friendly magnetron sputtering coating technology. The solid coating will not oxidize with black edges, doesn't need be to protected by back lacquer, made it can be tempered after cutting.





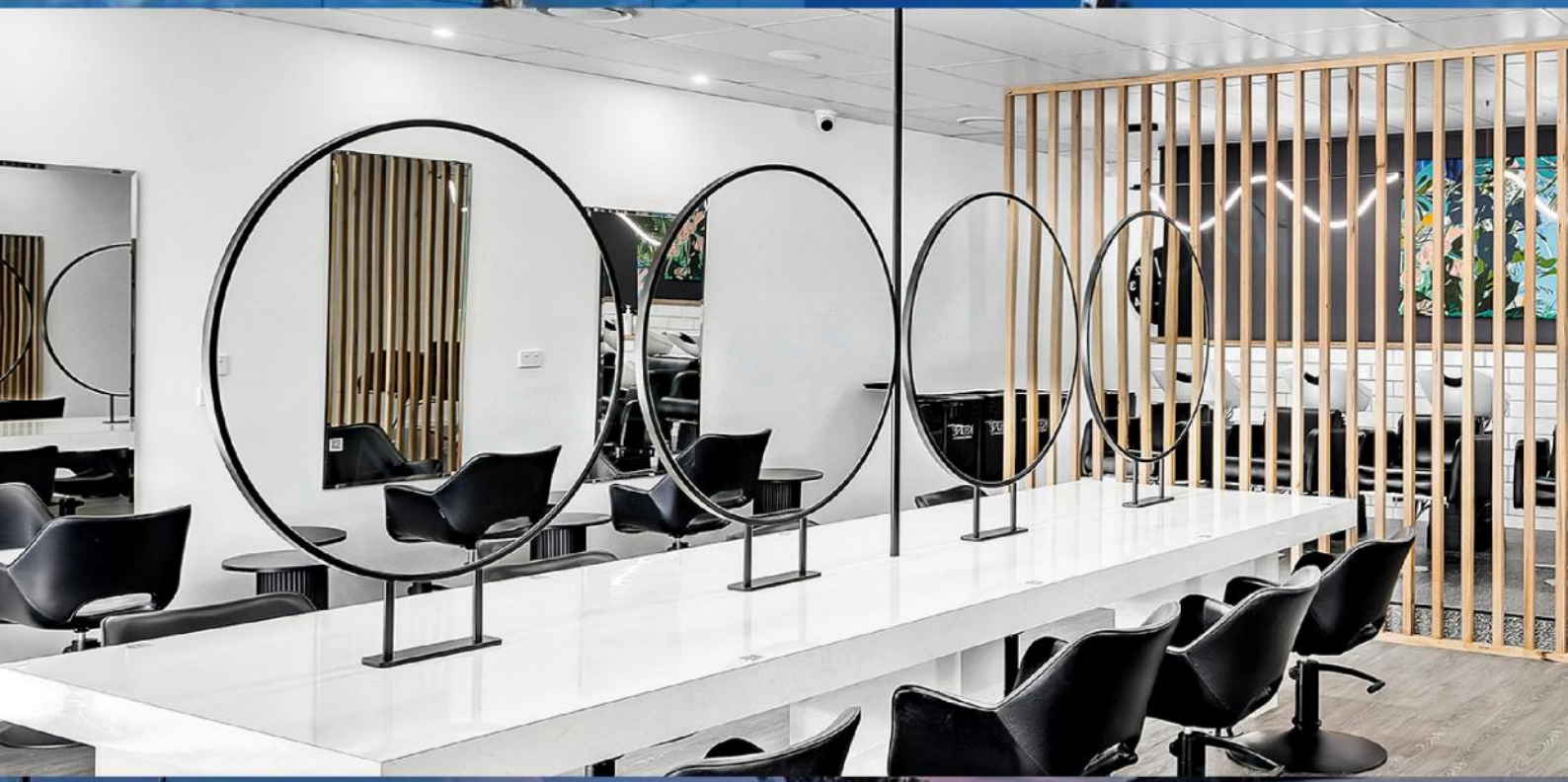
Temperable mirror can be further processed, such as edge grinding, drilling, hot bending, tempering, laminating, and insulating (double-glazing).





Types: Single-sided; Double-sided
Reflectance: 72.5%
Thickness (mm): 2-12
Maximum Size (mm): 3660*2440
Color: Ultra Clear, Euro Bronze,


Temperable Mirror

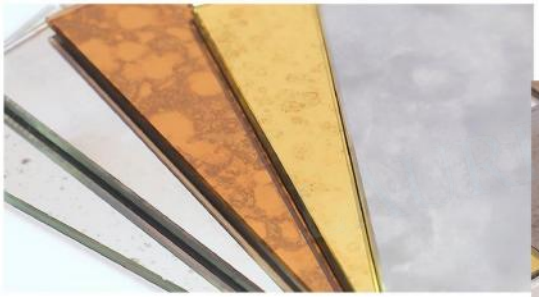




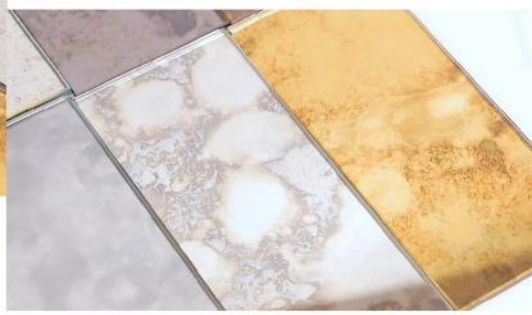


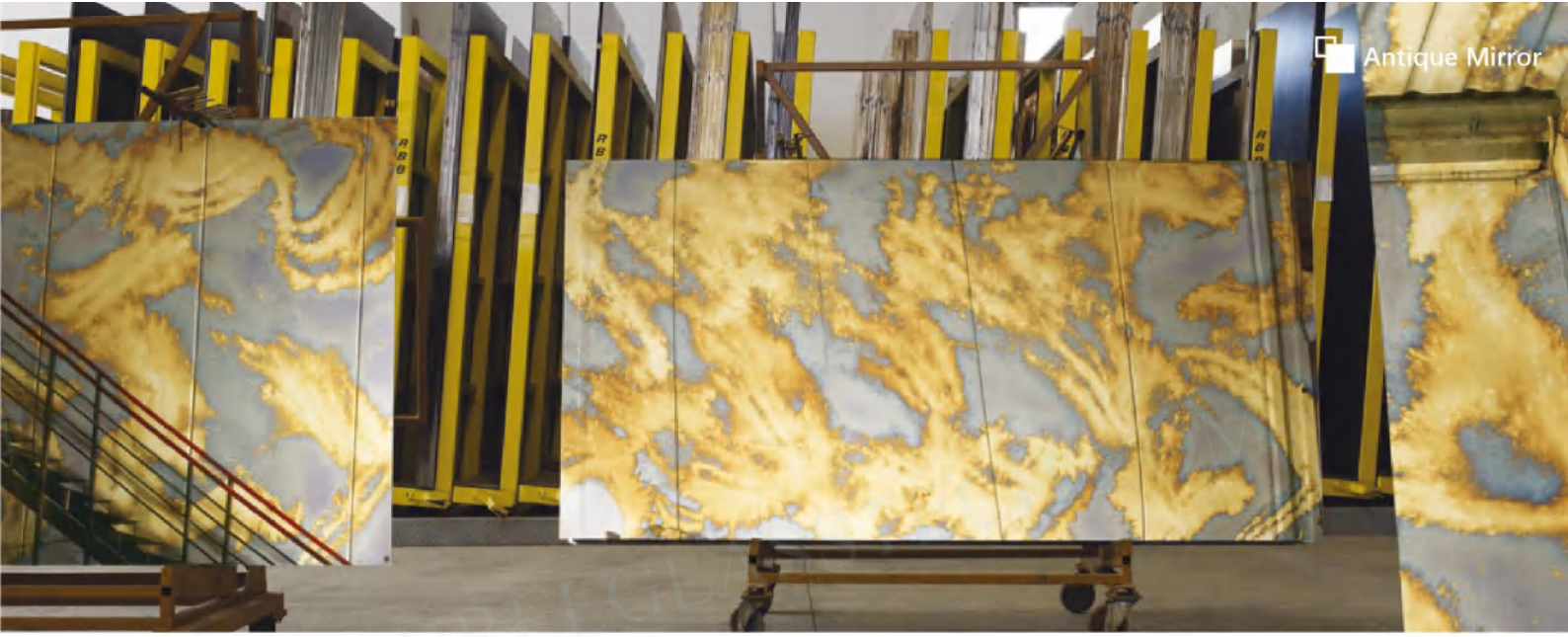
Antique Mirror

Oxidized Antique Mirror & Temperable Mirror Video
https://youtu.be/3rxmzbIKIO0









The **oxidized antique mirror**, also known as the distressed or aged mirror, is a type of decorative mirror designed to resemble the appearance of an aged or weathered mirror. This mirror often features patterns and a deliberately tarnished surface by using chemicals, giving them a vintage, timeworn look.

With their aged, vintage appeal, oxidized antique mirrors never go out of style, making them perfect for both traditional and contemporary interiors. This mirror can add character, charm, and visual interest to various interior design styles and spaces, offering a unique solution for diverse design needs.





Size (mm):
1830 x 2440; 1650 x 2140
3300 x 2140; 3660 x 2140
3300 x 2250; 3660 x 2250
3660 x 2440;
Customized sizes

Applications: Decorative Wall Mirrors; Furniture Accents; Backsplashes & Wall Panels; Interior Design; Architectural Elements...

Thickness (mm): 3-8









Decorative Mirror

Wall-mounted Decorative Mirror with Mosaic Frame and Bevel Edge Work Video
https://youtu.be/yKDPPfxXOXc

Wall-mounted Decorative Mirror with Beaded Frame and Bevel Edge Work Video
https://youtu.be/AXK6vWT-KrQ

Wall-mounted 36" Round Mirror with Aluminum Alloy Frame Video
https://youtu.be/NEt6qOG3nR0

Wall-mounted Mirror

A wall-mounted rectangular mirror is a mirror that is affixed to the wall, offering a full reflection within a sleek, rectangular frame. The rectangular shape is timeless and contemporary, making it suitable for any interior space. Unlike freestanding mirrors, these mirrors are space-saving, and the mounting design ensures they are secure, stable, and out of the way, perfect for areas with limited floor space.





MDF backing board is a medium-density fiberboard that is hard, smooth, and eco-friendly. With our flat seam hand-made workmanship, aluminum alloy mounting hardware, and shatter-proof film on the back of the mirror to guarantee the quality, this mirror is safe for children and pets and performs well in humid environments like bathrooms.

Both swanky and eclectic, the shiny silver color PS frame modeled raised mosaic that recalls a Hollywood style. It will sparkle with the classic beveled edge on the mirror under the light that creates a cheerful vibe to your space to show your good taste and distinct attitude towards life.







Hung vertically will visually add height to the walls and easily reflect a chandelier or the wonderful scene outside your window. It can help relieve the cramped feeling in a narrow bathroom. Contrarily, a spacious bedroom or living room might benefit from a horizontal-hung mirror. There will increase the light and create an eye-catching focal point if the mirror is hung horizontally.







The mirror of rectangular shape with beveled edges and a beaded frame is our original design. It will fit any kind of bathroom no matter it is modern or rustic. Putting a mirror in your bathroom will offer a place to pause and reflect.

Polystyrene (PS) is a type of synthetic polymer commonly used for making lightweight and affordable mirror frames. It can be easily molded into various shapes and designs, making it a versatile option. PS frames are resistant to moisture and insects, and they can be finished with paint or foil to mimic the appearance of wood or metal.

A **wall-mounted round mirror** is a circular mirror designed to be mounted directly on the wall. Unlike traditional rectangular or square mirrors, the rounded shape creates a harmonious, fluid appearance that enhances the balance and flow of the room. Whether it's a simple frameless design or an ornate, framed piece, the round mirror can be a statement piece or an understated addition to any interior.

Whether you are looking to brighten a hallway, create a statement in your living room, or add a soothing design element to your bathroom or office, a wall-mounted round mirror is the perfect choice. Its blend of elegance, functionality, and versatility makes it a timeless addition to any home or commercial space.





Aluminum Alloy Frame

Aluminum alloy frames are lightweight, strong, waterproof, and resistant to corrosion. They are a popular choice for modern and minimalist mirror designs, as they can be finished in various colors and textures, such as matte, glossy, or brushed metal. Aluminum alloy frames are low-maintenance and suitable for both indoor and outdoor use. It will not be out of shape at all. Whether for a bathroom, living room, entrance, or office, the aluminum alloy frame not only enhances the mirror's design but also ensures its durability and long-lasting appeal.










The **irregular-shaped or custom-shaped mirror**, is designed and fabricated in non-standard or unique shapes. This mirror breaks away from traditional rectangular or circular forms, offering a dynamic way to reflect light and space in rooms. The mirrors can be framed or frameless, and they are often used as decorative features in a room. An irregular mirror is perfect for anyone looking to make a bold, creative statement in their space. Whether for the living room, bedroom, bathroom, or commercial spaces, it adds a touch of personality and character while still providing all the practical benefits of a traditional mirror. Its unique design makes it the ideal choice for those who appreciate artistic expression and want their décor to reflect a sense of individuality and style.





A **full-length mirror** is an essential and stylish addition to any space, available in various shapes and sizes, including rectangular, oval, and round designs. They can be framed or frameless to match your style and providing a full-body view, making it perfect for checking your outfit, posture, or appearance from head to toe. Although large, full-length mirrors can visually expand the space by reflecting light and creating the illusion of a larger room. Perfect for a range of interior designs, from bedrooms and bath rooms to lobbies, studios, and retail spaces, full-length mirrors are both functional and decorative, enhanc-ing the look and feel of any room.





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An **LED mirror** integrates energy-efficient LED lights into the mirror's frame or back, creating a glowing effect that illuminates your reflection without the need for additional light fixtures. The LEDs can be embedded around the mirror's edges or hidden behind it to create a seamless, floating effect. The lighting intensity can range from soft ambient light to brighter, more focused lighting, depending on the design and intended use of the mirror. Whether you're updating your bathroom, enhancing your living room, or adding a modern touch to a commercial space, an LED mirror provides the perfect combination of form and function.





Applications: Bathrooms, Vanities, Hotels, Spas, Salons, Lobbies, Hallways, Offices, Commercial Spaces...














MANUFACTURED BY LAUREL
Unlock the Beauty, Clarity, and Functionality of Mirrors
You Tube
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E-mail: info@laurelglasstech.com