

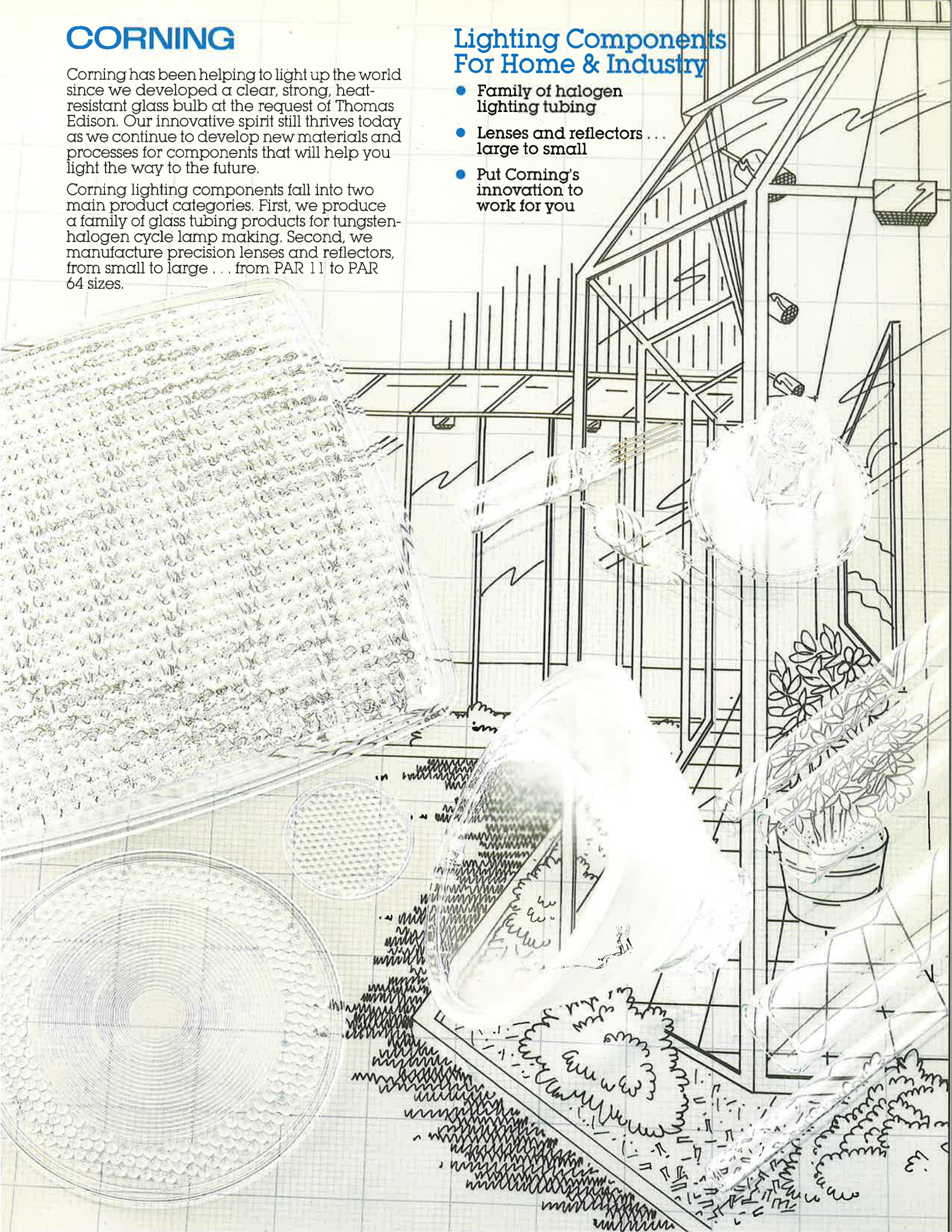
CORNING

Corning has been helping to light up the world since we developed a clear, strong, heat-resistant glass bulb at the request of Thomas Edison. Our innovative spirit still thrives today as we continue to develop new materials and processes for components that will help you light the way to the future.

Corning lighting components fall into two main product categories. First, we produce a family of glass tubing products for tungsten-halogen cycle lamp making. Second, we manufacture precision lenses and reflectors, from small to large . . . from PAR 11 to PAR 64 sizes.

Lighting Components For Home & Industry

- Family of halogen lighting tubing
- Lenses and reflectors . . . large to small
- Put Corning's innovation to work for you



Halogen Lighting Tubing

For over 25 years, Corning has manufactured high-temperature, high-precision, optical-quality glass tubing for halogen cycle lamp making. During this time, we have continually pursued development of new glass formulas to meet changing demands. What has evolved is an entire family of products.

Corning's family of halogen cycle glass tubing allows today's lamp maker to be selective. Now you can choose a specific glass to match a specific set of performance and production process requirements.

Contact a Corning representative with your specifications. Corning's engineers will then help you select the glass formulation best suited to your needs for your application, and custom design a tubing for you.

VYCOR® Tubing

Made of 96% silica glass, Corning's VYCOR brand glass tubing is ideally suited to high-wattage applications. VYCOR tubing possesses superior optical qualities. And it can be machine-formed at higher speeds because it is held to tighter tolerances and has a lower softening point than fused quartz. It is made to tight dimensional tolerances and has the thermal and chemical properties necessary for high-wattage lamps.

The favorable workability and ease of converting from fused quartz make VYCOR an exciting material for your halogen lamp manufacturing.

SPC (Statistical Process Control) is a technique used to control the VYCOR tubing manufacturing process. It stabilizes the process and ensures uniformity of the product.

The absence of striations in VYCOR tubing reduces leaks in the exhaust rubber-glass interface, reducing exhaust cycle shrinkages.

The lack of striations and air lines also results in better projection quality.

- Superior optical quality
- Tight dimensional control
- Thermal and chemical properties for high-wattage lamps
- Reduces exhaust cycle shrinkages
- Easy conversion from fused quartz to VYCOR tubing

Aluminosilicate Tubing

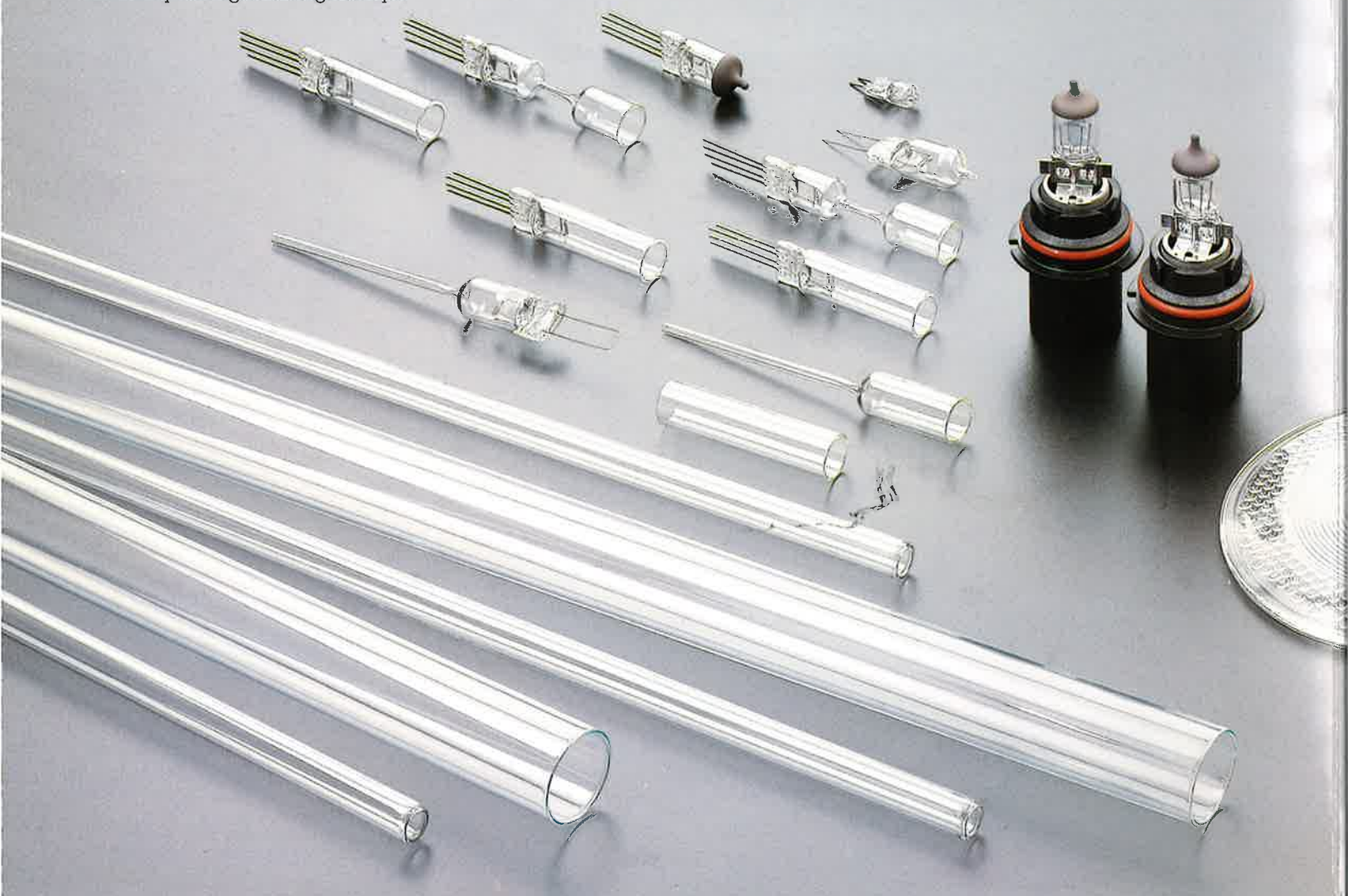
Corning's aluminosilicate glass tubing has expansion characteristics suitable for direct sealing with molybdenum lead wires used in regenerative cycle lamps. The direct sealing process means higher-speed, lower-cost production.

The very low alkali content of Corning's code 1724 tubing ensures optimum lamp life. Outstanding optical and dimensional qualities, coupled with the low-alkali content, make code 1724 the best material for today's high-speed manufacturing requirements.

Code 1725 is Corning's newest low-alkali glass, developed to meet the requirements of the future higher-wattage, compact halogen lamps.

SPC has been adapted to the manufacturing of 1724 and 1725 tubing. The tight tolerances under which codes 1724 and 1725 are manufactured leads to faster processing, lower lampmaking costs, less shrinkage, and eliminates the need for sorting by size. The more uniform inside diameter produces more uniform vacuums and fill pressures, resulting in more uniform lamp quality.

- Direct seal with molybdenum lead wires
- Low-alkali content ensures optimum lamp life
- No sorting by size necessary
- Uniform ID for uniform lamp quality
- Tight tolerances for faster processing, lower lamp-making costs



Lenses & Reflectors

Corning manufactures pressed glass reflectors and lenses in a myriad of shapes and sizes. These products are made on high-speed presses to tight tolerances which assure maximum product uniformity. The lenses and reflectors are used for both interior and exterior applications.

A Unique Process

The lamp lead wire hole in Corning's small reflectors are made by a unique "hot hole punch" process. The holes are made in-line with the reflector pressings, thus eliminating traditional grinding, washing, and rehandling. This offers several advantages:

- **Glazed Hole Surface** — Micro-checks caused by grinding are eliminated. These have the potential to be breaksources during the lamp heat-up cycle.
- **Uniform Stress** — No finishing is done after parts are annealed, which eliminates stress differences within the pieces.
- **Virgin Glass Surface** — Parts are packaged directly from the lehr. No water spots or residual grinding compound are on the glass, where they could interfere with the reflector coating process.

Small to Large

Corning has the capability to make unusually small or large components. Sizes from 1 $\frac{3}{8}$ " diameter (PAR 11) up to 8" diameter (PAR 64) are currently being produced. You may be looking for something that doesn't fit this wide range ... and we'll be happy to explore your specific needs.

Design Flexibility

Drawing from decades of experience in manufacturing pressed glass components as well as advanced glass-forming processes, Corning has the ability to produce lens and reflector shapes and sizes as yet unseen. Curvy shapes and high-aspect ratio lenses are now possible ... the use is up to you.

Imagine What We Can Do Together

If you have a new design or an improvement on an old one ... call your Corning representative. Our applications engineers can work with your engineers to make the shapes of the future a reality today.



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