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interiors+sources

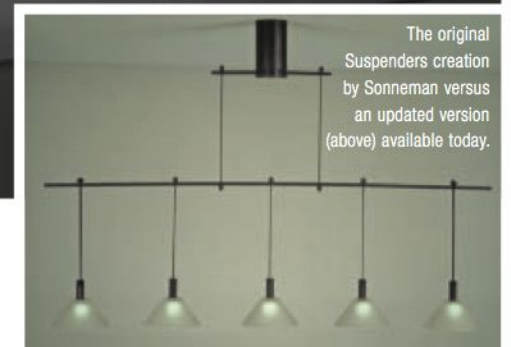
A modern interior scene featuring a blue wall, a spherical pendant light, and red and black seating. The scene is set in a room with light blue walls and a dark floor. A large, textured, spherical pendant light hangs from the ceiling. Below it, a white table with a curved top and a silver base stands between two red and black ottomans. The text "THE LOCAL ISSUE" is centered on the blue wall.

THE **LOCAL** ISSUE



THE EVOLUTION OF LIGHTING

Technology has developed to bring a new level of artful design to the world of light.



The original Suspenders creation by Sonneman versus an updated version (above) available today.

Perhaps the most important force behind cultural and socioeconomic development is the ability to generate light. As technology continues to develop beyond our imaginations, so too does the built environment. We have entered an era in which technology no longer evolves independently from art and design. Rather, the scientific and creative fields now work in tandem with one another to rapidly change the world around us. That phenomenon has come to characterize all aspects of the architectural landscape—including the lighting industry.

I have observed this evolution in design and technology firsthand. Since I started at George Kovac's acclaimed storefront on Manhattan's Upper East Side in the 1960s, I have been at the forefront of the architecture and design industry for the last five decades. As such, I have witnessed the congruence of design and technology through the introduction of LEDs. As what some have called "Lighting's Modern Master," I worked on pioneering contemporary lighting and making it an art form, combining the scientific with the creative to dramatically transform the possibilities of both form and function in electronic illumination.

In my latest sculpturally minimalist iterations, I have been exploring the development of architectural lighting systems where technology-enabled illumination is harmoniously integrated into the spatial planning and construction of the world's most innovative commercial projects.

But, as they say, Rome wasn't built in a day.

THE PAST

Historically, freedom in lighting design was restricted due to engineering limitations posed by halogen bulbs. Tungsten filaments are long-lasting and easily produce enough light to fill a room but generate a tremendous amount of heat and are bound by the range of lighting temperatures offered. These constraints, along with the heavy electrical system components of the past, made it difficult to balance art with scale and superior functionality in lighting design. As a result, functionality oftentimes became lost in excessive, decorative adornments and lighting was formerly reduced to "what's pretty."

Fortunately, inspiration from Bauhaus and my modernist peers such as Bill Blitzer and Bob Freemont, industrialist-inspired 20th-century innovations in incandescent, halogen, and fluorescent bulbs increased luminous outputs and creative possibility. However, lighting design was still plagued by the issues associated with managing extreme heat production. Moreover, the introduction of recessed downlights, coffers, coves, linear fluorescents, and tracks brought integration of lighting into architectural construction, offering alternatives to fixtures and lamps, but they were still limited in terms of functionality.

Many halogen designs during this period were also bound by heat-source limitations, which frustrated and creatively stifled lighting design pioneers, in turn reducing the potential for cutting-edge ideas. When LED technology was finally

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introduced on a commercial scale, the opportunity for a new approach to lighting design presented itself and I personally went through a creative rebirth.

THE PRESENT

Over the course of the last decade, the once ubiquitous halogen and incandescent bulbs have given way to more efficient, functional sources of electronically generated illumination. Though the first iteration of LEDs were invented half a century ago, the technology has come a long way in the years since. These advancements in lighting science have afforded future-forward designers in this field—even the more decoratively inclined such as Ingo Maurer—the unique opportunity to completely reimagine the form, shape, materials, and utility of light.

LED technology has changed everything, propelling us into a world where electronic illumination and controls achieve the extraordinary. The once unimaginable is now within reach.

I was determined to discover ways to innovatively use the new technology to continue setting designs apart from the rest but even the brightest of the lighting industry have been challenged by LEDs. It took me years to understand and be comfortable with the science before I felt capable of adding functional value through its use.

Many lighting designers began by retrofitting their older designs with the new technology, slowly coming to understand its nuances. This process also led to the re-imagination of a number of my classic products—including the Floating Glass Pendant, now simply called “Float”—with LEDs. The light is now transmitted through the clear glass disk and emitted through the edges, creating a 360-degree ring of light that offers a more dramatic effect than its predecessor.

The goal is to do things better, that work well. Technology enables designers to achieve that objective. Yet, we are only at the beginning of the adventure that will take us into a new frontier of discovery and innovation.

THE FUTURE

Advancements in LED technology continue to charter forward, unleashing a world of luminescent possibilities with each new development.

As science continues to progress, modern lighting designers have worked diligently to push their own boundaries of innovation to achieve that perfect balance between art and technology. Even so, we are already onto the next big thing: integration.

Once it is commonly understood that electronically generated illumination is a wave in the spectrum of energy, we will be able to control, direct, and manage illumination as a component in a broad-based integrated system of energy that can be deployed across multiple applications of a building system. Our electronically managed information, communication, and entertainment will include the quality, color, intensity, and mood of illumination as a synchronous component of a smart-controlled environment.

The lighting of the future will be defined by integration—be it within the architecture, as a component of a broader environmental management system, or as an emotional component that can be adjusted to impact the



The Floating Glass Pendant (left) was re-imagined into Float (above) with the use of LEDs.

status of our well-being. This synthesis of LEDs with the built world around us will become essential to how we perceive and interact with a given space. We are moving our imagination of architecture, habitable spaces, and urban centers into the limitless possibilities of the digital age.

We are only at the beginning of electronic illumination becoming an infinitely diverse medium for innovation and change. Electronic illumination has the ability to manage circadian rhythms, color tuning can be adjusted to alter moods and perceptions of people and places, and the heat energy—uselessly discharged—has the potential to provide wireless connectivity for our hand-held devices. LEDs will even help grow our food and clean our air.

The future is bright, variable, and controllable with infinite variety and unimagined possibilities to see the world and manage our environments. **IS**



Robert Sonneman, “Lighting’s Modern Master,” pioneered contemporary lighting, making it an art form. His award-winning creations have been at the forefront of the design world for almost 50 years. Since their introduction in the 1960s and ‘70s, many of Sonneman’s lighting designs have become classics of the modern era. As the owner and creative force behind

SONNEMAN—A Way of Light, he continues to push the boundaries of innovation to achieve the perfect balance between art and technology.