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Dow Corning News

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LED Lighting Designs from Pathway Lighting and SoundOff Signal Exemplify Proven Innovations Enabled by Dow Corning Silicones

San Diego – Dow Corning, a global leader in silicones, silicon-based technology and innovation, is showcasing more than its broad range of optical-grade silicone solutions here at LIGHTFAIR International 2016 (Booth #3657). It is also highlighting the proven innovation that its advanced technology is helping to enable in two real-world, commercial applications developed by Dow Corning customers, Pathway Lighting and SoundOff Signal.

"Three years ago, with the launch of *Dow Corning*® Moldable Silicones, our company not only expanded its portfolio of optical-grade solutions, it also multiplied the design flexibilities of LED lighting designers worldwide," said Hugo da Silva, global industry director for LED lighting at Dow Corning. "The industry was quick to explore the unique possibilities enabled by silicone technology's superior processability, reliability and thermal stability. Today, cutting-edge designs like those of Pathway Lighting and SoundOff Signal are emblematic of the tangible benefits that Dow Corning silicones can deliver for the next-generation of LED illumination."

Pathway Lighting Upgrades a Downlight

Pathway Lighting, a premiere designer and manufacturer of advanced lighting fixtures, is launching at LIGHTFAIR 2016 (Booth #4844) a tunable downlight developed with *Dow Corning*® MS-2002 Moldable White Reflector Silicone. Targeting reflectivity as high as 99 percent, this highly reflective white silicone from Dow Corning forms the parabolic mixing chamber of Pathway's downlight, helping to ensure the fixture maintains its consistent color temperature even when dimmed.

"While the spectrum of light often narrows as a light source is dimmed, MS-2002 White Reflector Silicone enabled our fixture to maintain lumen consistency across all offered color spectrums," said Russell Budzilek, director of engineering at Pathway Lighting. "We looked at three primary areas when deciding. First, the thermal properties of Dow Corning® MS-2002 Silicone were equal to or exceeded the temperature range of reflective films and coated metals. Second, the silicone's reflectance was the same or better than competitive reflective films and coated metals. But when it came to both flexibility of design and ease of installation, these were silicone's main benefits on our end."

Pathway Lighting designed its tunable downlight to replace a similar module that a supplier had ceased to offer. The uniform optical quality and output enabled by *Dow Corning*® MS-2002 White Reflector Silicone allowed Pathway Lighting's new module to deliver consistently high performance when integrated with any of its standard downlight offering.

SoundOff Signal's Compact ClearDuty™ Optic Improves Safety for Law Enforcement

SoundOff Signal, a global leader in lighting and electronic warning solutions for the law enforcement and amber markets, leveraged Dow Corning's collaborative expertise and optical-grade silicones to create its ClearDuty™ optical technology. The designer selected high-clarity *Dow Corning*® MS-1002 Moldable Silicone to fabricate a complex lens array, and then overmolded it with translucent, easily colorable *Dow Corning*® MS-0002 Moldable Silicone in a two-shot process.

As a result, ClearDuty™'s finished one-piece housing and optic architecture delivers a number of advantages over traditional polycarbonate lenses, including:

- A small footprint with optimized candela output
- Greater resistance to gravel pitting, scratching or cracking
- Improved sealing to minimize moisture ingress
- Higher ultra-violet (UV) and photothermal stability to prevent lens yellowing over time

SoundOff Signal's ClearDuty™ optic forms the foundation for the company's mPOWER™ Fascia Light. It is the first extremely compact, tri-color line of lighting for seamless integration in today's police vehicles.

"The uniquely expansive design latitudes afforded by Dow Corning's Moldable Silicone technology were a clear fit for SoundOff's 'Smart Design' approach, which progresses from understanding the initial challenge through discovery, experimentation, development and product launch," said Keith McRobert, director of marketing for SoundOff Signal. "Dow Corning's advanced materials helped us to develop a powerful, head-on and off-angle illumination for the fascia light. In addition, ClearDuty™ withstands punishing use to endure brutal weather conditions."

A market leader in materials, expertise and collaborative innovation for LED lighting concepts, Dow Corning offers solutions that span the entire LED value chain, providing materials for sealing, protecting, adhering, cooling and shaping light across all lighting applications.

LIGHTFAIR® International is the world's largest annual architectural and commercial lighting trade show and conference. Held at San Diego's Convention Center from April 26-28, this year's edition is expected to attract over 28,000 design, lighting, architectural, engineering, energy, facility and industry professionals from around the world to set future trends for lighting, design and technology innovation.

About Dow Corning

Dow Corning (dowcorning.com) provides performance-enhancing solutions to serve the diverse needs of more than 25,000 customers worldwide. A global leader in silicones, silicon-based technology and innovation, Dow Corning offers more than 7,000 products and services via the company's *Dow Corning*® and XIAMETER® brands. Dow Corning is equally owned by The Dow Chemical Company and Corning, Incorporated. More than half of Dow Corning's annual sales are outside the United States. Dow Corning's global operations adhere to the American Chemistry Council's Responsible Care® initiative, a stringent set of standards designed to advance the safe and secure management of chemical products and processes.

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Pathway Lighting developed a tunable downlight developed with Dow Corning® MS-2002 Moldable White Reflector Silicone. Targeting reflectivity as high as 99 percent, this highly reflective white silicone from Dow Corning forms the parabolic mixing chamber of Pathway's downlight, helping to ensure the fixture maintains its consistent color temperature even when dimmed. Image courtesy of Pathway Lighting.

The mPOWER™ Fascia Light from SoundOff Signal is the first extremely compact, tri-color line of lighting on the market for emergency vehicles. The clear lens is molded with *Dow Corning*® MS-1002 Moldable Silicone. Then the lens is over-molded with colored *Dow Corning*® MS-0002 Moldable Silicone to seamlessly form the housing onto the lens. Photo courtesy of SoundOff Signal.

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