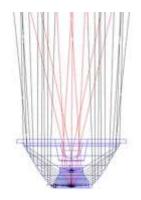


## For Immediate Release

## Fraen expands Multi-TIR Nested Lens Technology for Domeless LEDs

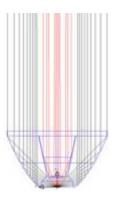
READING, Mass. (February 1, 2016) —

Fraen Corporation has recently expanded its patent pending Multi-TIR Nested Lens Technology to include their new 19.8mm Diameter Super Narrow Multi-TIR Nested Lens Technology for Domeless High-Powered LEDs. The patent pending technology enables higher candela-per-lumen than standard TIR collimators or reflectors of equivalent diameter.



Standard TIR

Central (red) rays are controlled by the central lens geometry, resulting in some collimation, contributing to both the center beam and spilled light.



Fraen Nested Lens

Central (red) rays are wellcollimated by the inner TIR component, <u>maximizing the</u> <u>center beam intensity</u>.

## **Target Applications**

- Architectural Lighting
- Museum Lighting
- Retail Applications
- Any high-candela/lumen application
- Entertainment Lighting
- Portable Spotlights
- Wall-wash Lighting

Samples of this new technology will be available February 1, 2016. Please email <a href="mailto:optics@fraen.com">optics@fraen.com</a> for information about pricing and sample availability.

## **About Fraen Corporation**

Fraen Corporation specializes in the design, development and manufacture of optics for high-powered LEDs. Fraen offers a wide range of standard products for all major LED makers as well as specializing in designing and manufacturing custom optics. Fraen's other businesses include its Custom Manufacturing Division, which specializes in lighted plastic automotive interior components and complex metal fabrication; and Fraen Machining Corporation, which manufactures precision-turned metal components.