

# **Advanced Optical Systems for Daylighting – The Tubular Daylighting Device (TDD)**

By

Dr. Neall Digert, Director of Commercial Market Development  
Solatube International, Inc.

**Program Description:** Learn about the latest advanced optical daylighting technology and a new product category – the Tubular Daylighting Device (TDD). After a brief overview of typical daylighting strategies and key energy- and human performance-based reasons for daylighting today's buildings, the audience is introduced to the four major components that are common to every TDD. Commercially-available component-technologies are compared and contrasted, allowing the designer to make informed decisions when choosing the appropriate TDD technology for their application.

**Presentation Duration:** 1 Hour (45 Minutes for the Presentation, 15 Minutes for Questions and Answers)

## **Learning Objectives:**

At this presentation, the following five key points and issues will be presented:

1. An overview of traditional daylighting technologies and their advantages and disadvantages.
2. A brief review of the key energy- and human performance-based reasons for using daylight in today's commercial and institutional environments.
3. The design advantages afforded by the new optical daylighting technology of Tubular Daylighting Devices (TDDs).
4. The unique concept and benefits of the TDD and the four key components that make up every commercially-available TDD product.
5. The key performance & technology issues to consider when choosing the right TDD for your daylighting application.

## **Speaker Bio:**

Neall Digert, Ph.D., MIES, Director of Commercial Market Development for Solatube International, Inc., has been involved in the building energy engineering and energy research field for over twenty years. He possesses a unique technical background in optical daylighting systems, architectural daylighting solutions, and advanced energy and lighting strategies.

Before joining Solatube International, he was a senior engineer and manager of the Design Assistance Profit Center for Architectural Energy Corporation, a Boulder, Colorado company specializing in providing state-of-the-art architectural and energy-integrated design solutions including daylighting, electric lighting, and energy consulting services to architects, engineers, and building owners. Dr. Digert has specialized in the design of state-of-the-art energy-efficient, daylight commercial, institutional, and residential buildings, and has been used as an educator for daylighting seminars for architects, engineers, and building owners throughout North America.

Dr. Digert's technical background encompasses illuminating engineering, building energy engineering, and the psychology of perception relative to luminous environments. Dr. Digert holds a Bachelor of Science degree in architectural engineering, a Master of Science degree in building energy/civil engineering, and a Doctorate in building energy/civil engineering, all earned at the University of Colorado.