DSI • DEPOSITION SCIENCES, INC.

A LOCKHEED MARTIN COMPANY

ISOSPHERE® AR COATED BALL LENSES

Technical Data Sheet

PROCESS/PRODUCT DESCRIPTION

The IsoSphere® AR coated ball lens represents a breakthrough in technology. While other coating methods yield soft, non-uniform, single-layer AR coatings on ball lenses, DSI's exclusive IsoDyn™ low pressure chemical vapor deposition (LPCVD) process provides a uniform, highly durable, high performance AR coating over the entire surface of the lens. Ball lenses are a mechanically simple and economically attractive optical solution to a number of fiber optic coupling and collimating challenges.

APPLICATION

Fiber to fiber coupling, diode to fiber coupling, fiber to detector coupling, diode laser collimation, and fiber collimation

BENEFITS

- Orientation when placing the ball lens in your device is not required (uniform coating over entire lens surface), reducing device assembly costs
- A wide choice of lens materials with indices from 1.44 to 2.38 at 1550 nm allows maximum freedom of optical design and minimizes cost
- A wide choice of lens sizes (0.20 mm to 20 cm) allows freedom of optical design; small lens sizes minimize the cost per lens
- Multi-layer coating capability provides dual and broad band AR coatings (1310/1550 dual band, e.g.); dual band coatings allow one lens to be used for either wavelength, reducing lens inventories

FEATURES

- Hard, scratch-resistant coatings (passes 20 eraser rub)
- Bondable by a wide variety of methods
- Compatible with numerous visible, near-infrared and short-wave IR materials

STANDARD SPECIFICATIONS

- Single wavelength coating insertion loss, < 0.022dB (T > 99.5%) at wavelengths of interest
- Dual wavelength coating insertion loss, < 0.044dB (T > 99%) at wavelengths of interest

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