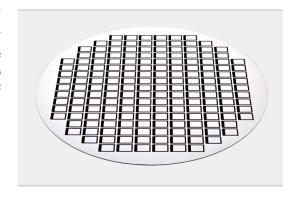


# **// BALZERS OPTICS**

# Wafer Level Packaging

#### **Coated Glass Wafer for Advanced Optical Packaging**

Wafer Level Packaging is the cutting edge technology for high volume optical packaging. The glass wafer is merged with the silicon wafer before dicing. Some of the applications require a spacer between the two wafers. Materion Balzers Optics provides glass wafers with low defect optical coatings – if required with Chrome apertures for light beam shaping.

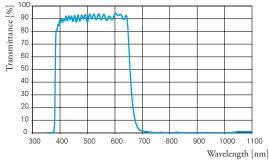


#### **Benefits**

- High cleanliness at assembly step
- High yields due to clean work pieces
- Reduced handling efforts
- Lowers cost due to parallel assembly step on devices
- Enables further miniaturization

# **Applications/Technical Data**

#### IR Cut Filters on WLP



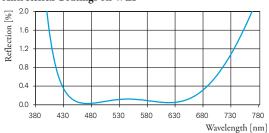
Application CMOS Packaging

Size of wafer 200 mm round, 0.3/0.4 mm thick

Typical glass type SCHOTT D263° T eco

Defect Level No defects > 50 μm

# Anti Reflex Coatings on WLP



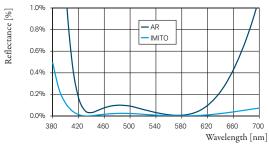
**Applications** MEMS/CMOS Packaging

Size of wafer 200 mm round, 1.1 mm thick

Typical glass type BOROFLOAT®

Defect Level No defects >  $20 \mu m$ 

### Index Matched ITO on WLP

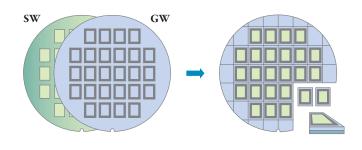


**Applications** LCOS Microdisplays Packaging

Size of wafer 200 mm round, 0.7/1.1 mm thick

Typical glass type Corning 1737, Eagle XG

**Defect Level** No defects > 10 μm on ITO side



Schematic Wafer Level Packaging: Entire semiconductor wafer (SW) with array of sensors is covered by a cover glass wafer (GW) – see left side. Combined wafers are cut into pieces (right side).

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