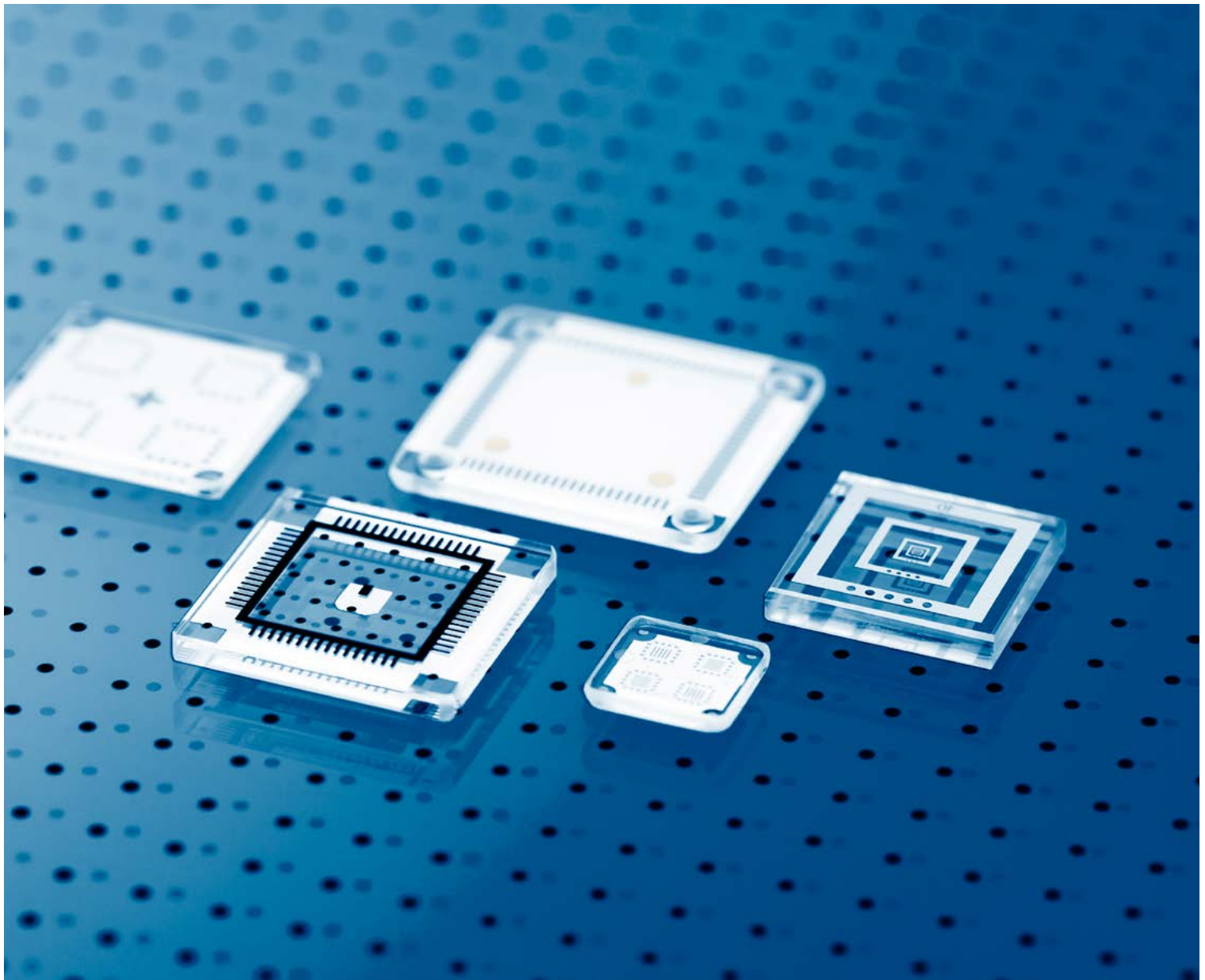


Calibration solutions for Pick & Place equipment

Calibration plates and dummy chips for on-line
calibration of Pick & Place and Flip-Chip equipment





Low-reflection dark pattern on high-reflection mirroring surface for high contrast



Low-reflection dark pattern/structure on no-reflection white diffusive surface (IMT DS) for specular-free reflection for machine vision applications



Low-reflection dark pattern on glass with other side frosted



High-reflection pattern on glass with other side black



Combined high-/low-reflection pattern in the same focal plane in combination with a transparent anti-reflex optical coating for optimum transmission



Low-reflection dark pattern. Other side white diffusive surface for homogeneous illumination



Combined low-reflection dark pattern/low-reflection white pattern in the same focal plane in combination with a transparent anti-reflex optical coating for optimum transmission



Frosted low-reflection surface with dark and high-reflection patterns

Applications

- › Calibration plates
- › Dummy Chips, custom made glass components
- › In-house measurement certificates

Benefits

- › A wide range of optical properties of the surface possible

Technical Data

Substrate materials

- › Sodalime (Floatglass)
- › Borosilicate (Borofloat)
- › Quartz glass (Fused silica)
- › ULE, Zerodur

Thin film layers

- › High and low-reflection (black) chrome
- › Aluminium, gold and other metallic layers
- › Antireflection coatings

Special features

- › Holes into the glass and bevels according specification
- › Shaped of finished substrate according to the requirements
- › Double sided and aligned structures
- › Shaped adhesive foil
- › Cementing into frames

Accuracy and orthogonality

- › Accuracy (2 Sigma) at 20.0 °C: $\pm (0,5 \mu\text{m} + 5.0 \times 10^{-6} \times L)$
- › Accuracy (2 Sigma) at 20.0 °C using the copying process: $\pm (0,5 \mu\text{m} + 25 \times 10^{-6} \times L)$
- › Orthogonality < 3 μrad

About IMT

- › Foundry for optical, electrical and micro-fluidic structures and components
- › Fast prototyping through in-house mask manufacture
- › Staff of 100 employees
- › 1300 m² clean room

 AR-Chrome	 Black Screen Print
 HR-Chrome	 Grit 400
 White Screen Print	 AR coating



IMT Masken und Teilungen AG
 CH-8606 Greifensee (Zürich)
 Switzerland
 Phone: +41 44 943 19 00
 Fax: +41 44 943 19 01
 info@imtag.ch
 www.imtag.ch