

IMT



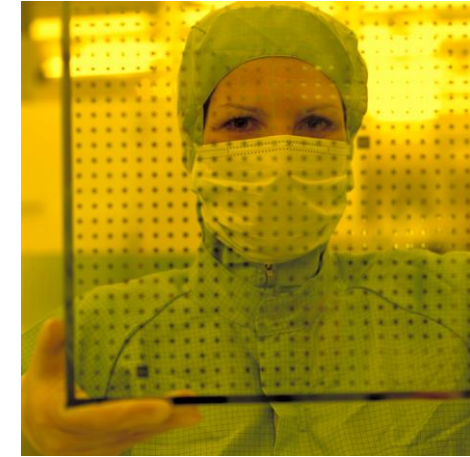
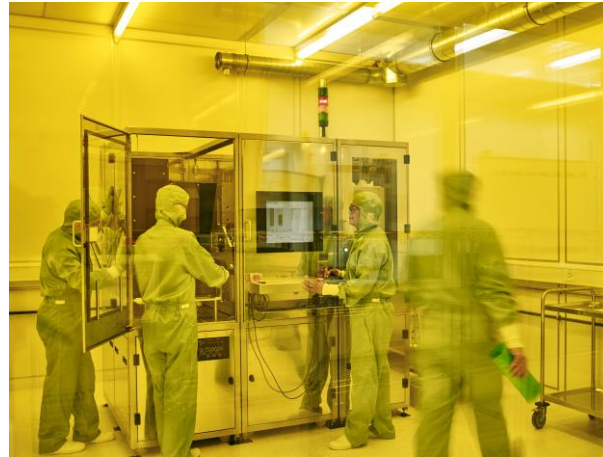
IMT

PRECISION ON GLASS

From Machine Vision over Diagnostics to Microscopy:
Where Microstructures on and in Glass are the real game
changers for better performance.

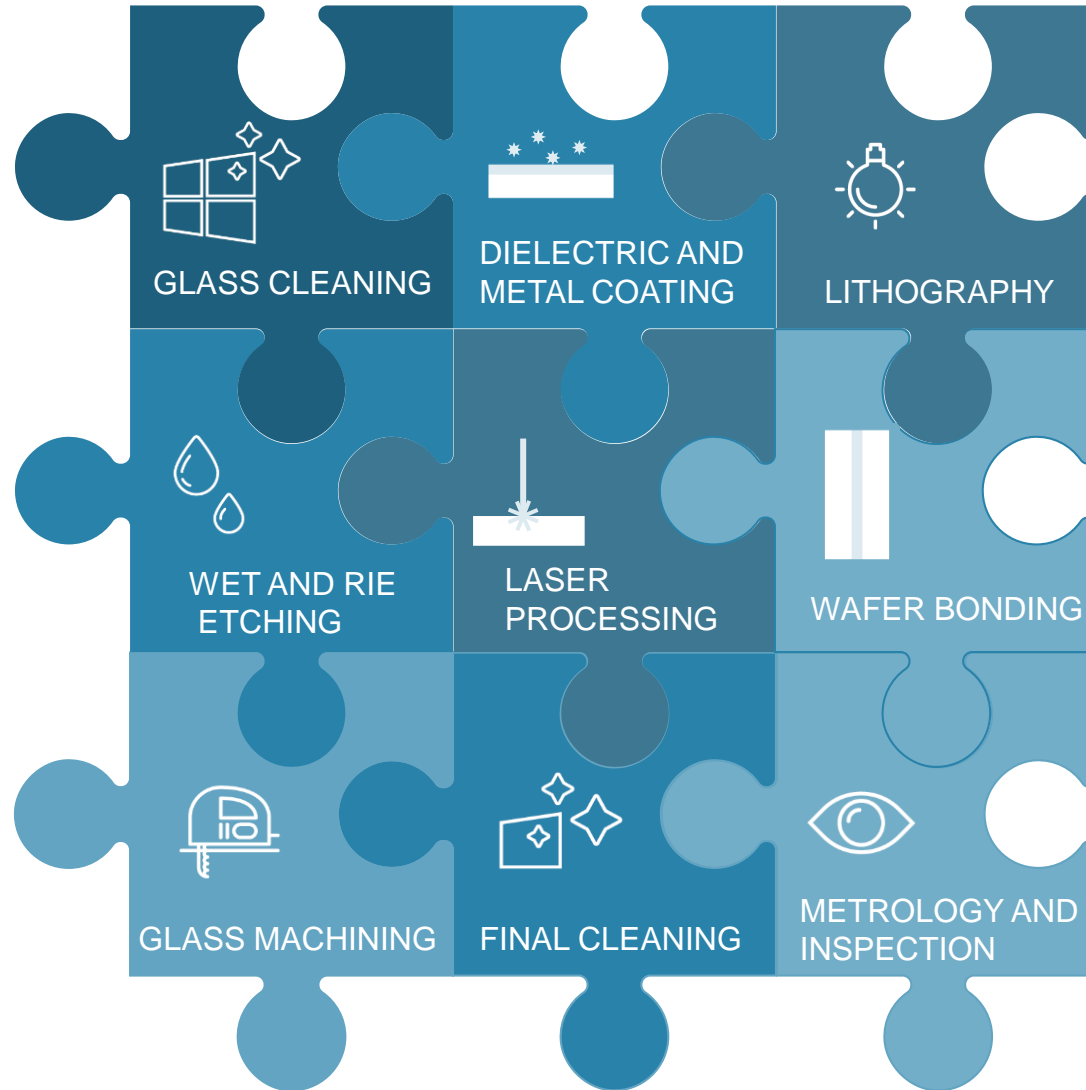
■ ABOUT IMT

- Foundry
- Microstructures ON and IN glass
- Customized Micro- and Submicrometer structures
- ~1600m² clean room facility
- Semi-automated Ø200mm wafer line for glass processing
- 100% subsidiary of Heidenhain
- 110 people, ~25M€ turn over
- Based in Greifensee, Switzerland



ABOUT IMT

SKILL SET

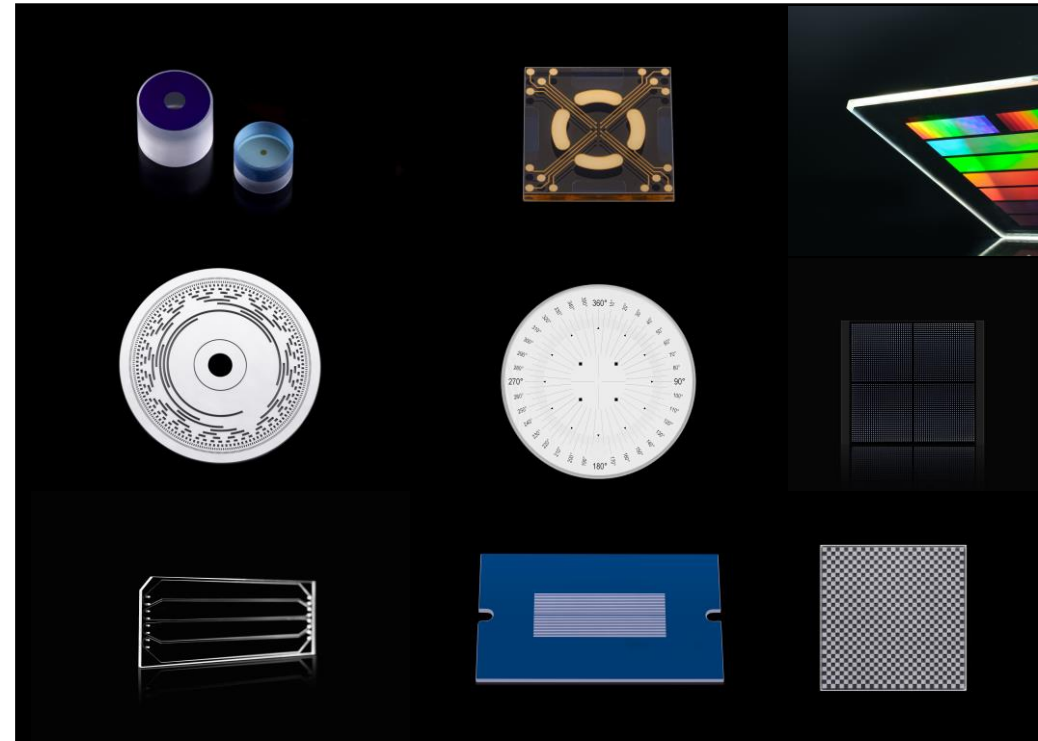


■ SERVICE

Customized micro- and submicrometer pattern on and in glass

E.g.:

- Calibration plates and standards
- Reticles
- Graticules
- Diffractive elements
- Microfluidic structures
- Conductive structures
- Projection masks
- Pinhole arrays
- ... **(your idea here)**



EXAMPLE 1

■ RETICLES FOR RIFLE SCOPES IMT POWER LIGHT™

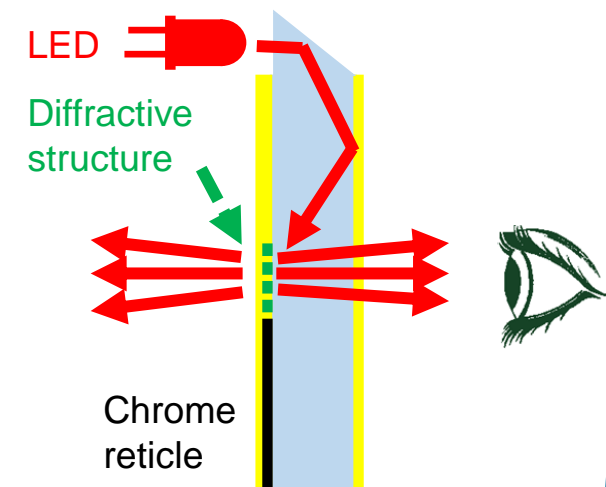
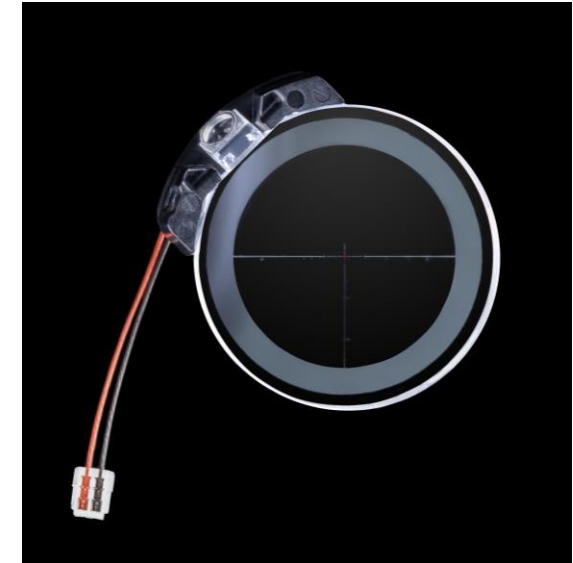
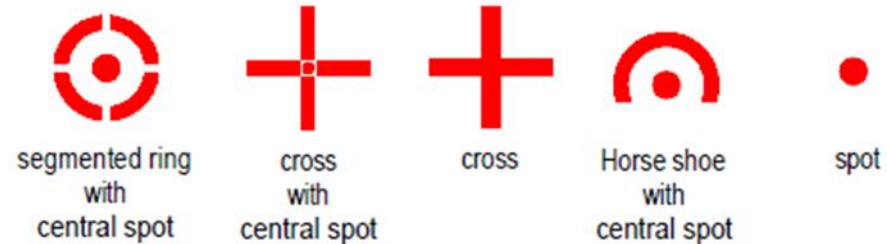
- Diffractive grating for the illumination of central area.

Advantages:

- Daylight bright.
- Reticle pattern can be customized.

Applications:

- Rifle scopes
- Ophtalmology



EXAMPLE 2

■ IMT-DS DIFFUSIVE SURFACE FOR CALIBRATION PLATES

IMT-DS (diffusive surface)

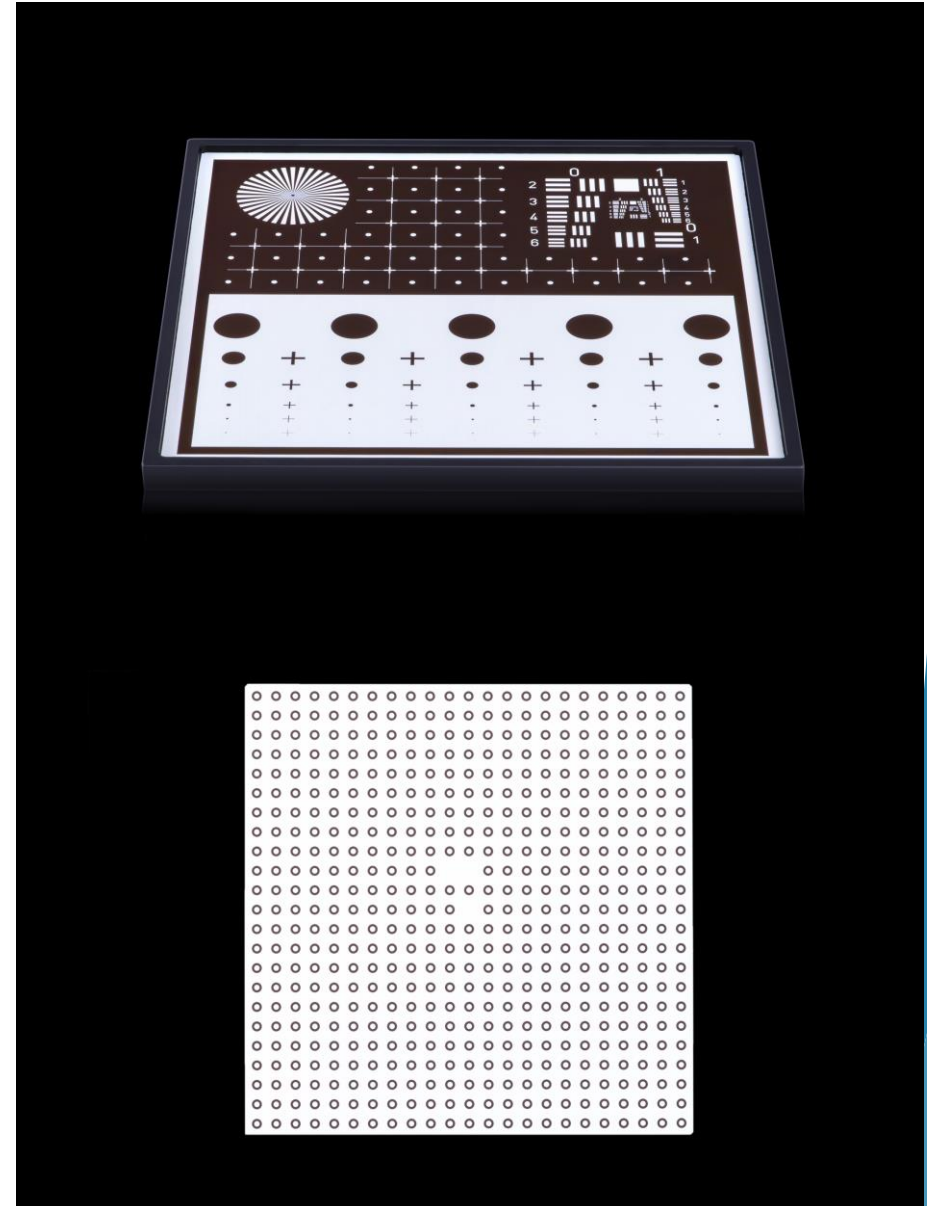
Specular free and close to lambert cosine law

Advantages:

- Illumination independent
- High contrast

Applications:

- Field of View calibration
- x-y-Positioning and -Measurement



EXAMPLE 3

■ DIFFRACTIVE COUPLING GRATING

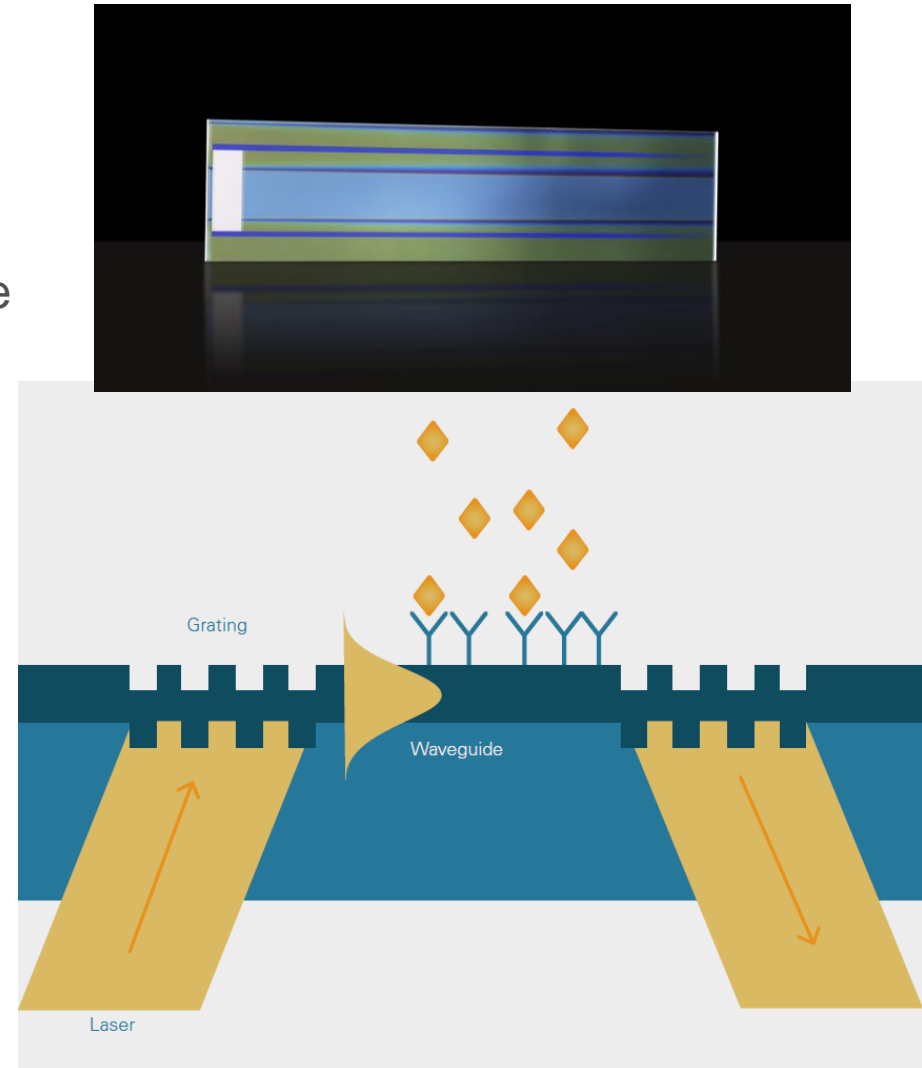
Biochip with waveguide and coupling gratings

Advantages:

- Gratings to couple light into a horizontal waveguide
- Evanescent field of guided wave can detect molecules

Application:

- High sensitivity sensing applications



EXAMPLE 4

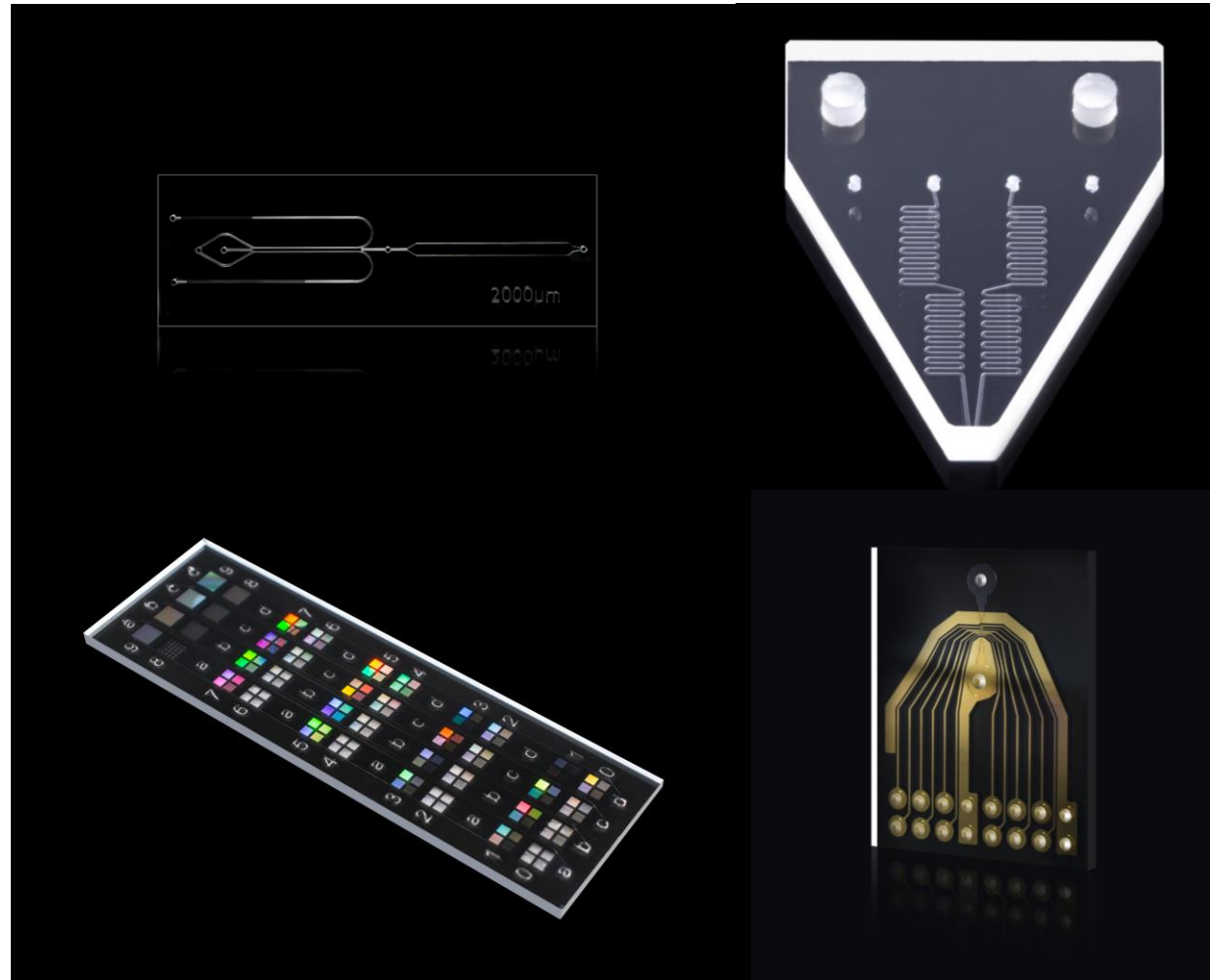
■ MICROFLUIDIC FLOW CELL WITH FUNCTIONALIZATION

Adding to flow cells:

- Electrodes
- Diffractive structures
- Functional surfaces
- Coatings, optical functions
- Channel access
- Combinations of these

Applications:

- Droplet generation
- Flow chemistry
- Diagnostics
- Fluid analysis
- Drug delivery



EXAMPLE 5

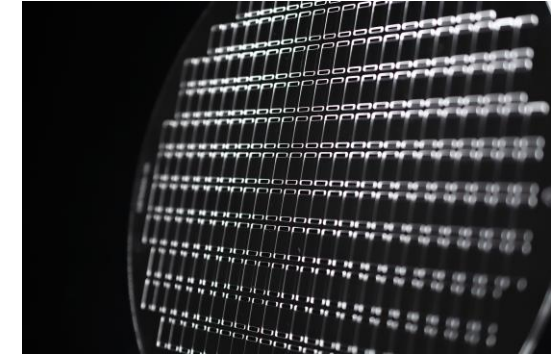
CAPS AND INTERPOSER FOR SENSORS AND ELECTRONICS PACKAGING

Advantages:

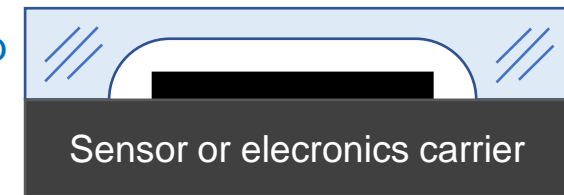
- Free-form cavities or through-glass etched structures
- Optical grade surface
- Wafer level ($\text{\O}200\text{mm}$) or singulated
- Functional coatings (e.g. AR- or Filter coatings) optional
- Metallization and via holes

Applications:

- Packaging of optical sensors
- Harsh environment electronics



Glass cap



Interposer





Thank you for your attention.

Find out what **IMT** can do for you,
visit us at **Booth A6a.**

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