# FLEXINITY® level

## Blind holes and stepped bridges

**FLEXINITY® level represents closed cavities and stepped bridges. FLEXINITY® level complements the unlimited through hole designs offered as FLEXINITY®.**

The FLEXINITY® level offers unparalleled precision and versatility, meeting the demands of various applications, including optical sensor housings and MEMS.

Regardless of whether the requirement is for non-through "blind" structural elements only or combined with FLEXINITY® through-holes, the FLEXINITY® level provides the highest accuracy and versatility, aligning seamlessly with its family members.

The levelled bridges separating neighbouring through holes offer the benefit of tight tolerances, exceptional edge quality, and straight contours, thereby enhancing the design possibilities of the user.

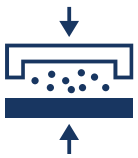
**Key Features:**

- Ideal for optical sensor housings and MEMS applications
- Offers 3D or 2.5D depth profiles
- Base of blind holes or steps can be optimized for semi-transparency upon request

**Advantages:**

- Supplementary features to FLEXINITY® and/or FLEXINITY® mini
- Unlimited geometric variations with high precision
- Lateral dimensional and free-form tolerance of ± 10 µm, even for dimensions down to a few millimeters
- High homogeneity in edge quality with minimal chipping
- Straight walls for both blind holes and stepped bridges
- Enhances design freedom for sensors, MEMS, and other miniaturized packaging modules

**Wafer level alignment & integration**



**Small cavities to create reference conditions**

**3D and 2D steps for advanced packaging**

**Combining through- and blind holes**

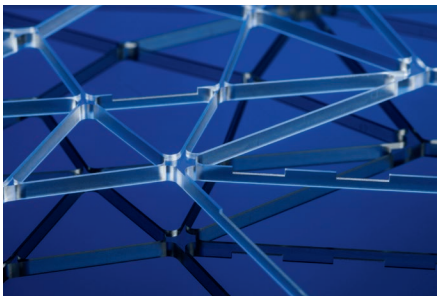

**Tight tolerances**

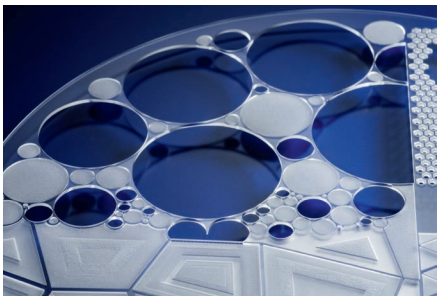
SCHOTT
glass made of ideas

# FLEXINITY® level

## Technical specifications

| Standard structuring capabilities* | |
|---|---|
| Glass types | D 263® T eco, BOROFLOAT® 33 |
| Thickness range (depending on glass type) | 0.6 – 3.3 mm |
| Format | Max. 600 mm in diameter (round, square) |
| Layout | Non-through structures according to customer specifications; can be combined with through structures* |
| Structuring radius | Down to 25 µm |
| Minimum dimension of structure element (lateral) | 100 µm |
| Feature size tolerance | < 20 µm (equiv. ± 10 µm) |
| Wall taper angle | 90° ± 0.5° |
| Edge exclusion zone | ≥ 3 mm |
| Position tolerance of features | < 20 µm (equiv. ± 10 µm) |
| Bridge width between structure elements | Down to 100 µm |

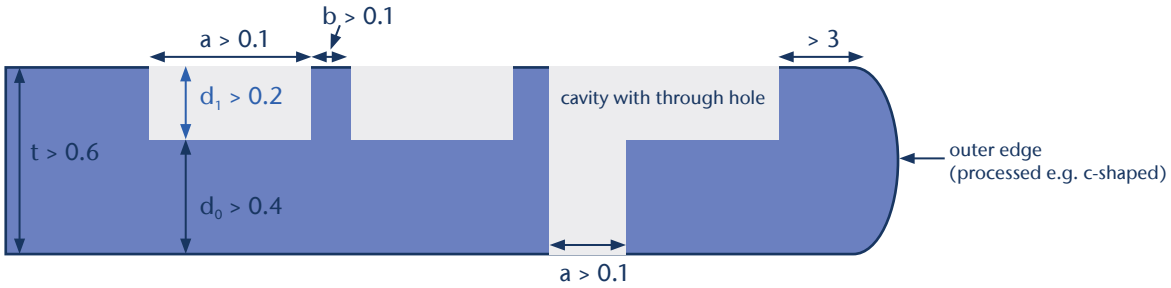




| Specifications FLEXINITY® level | |
|---|---|
| Level depth range, $d_1$ | Min. 0.2 mm* |
| Remaining base thickness, $d_0$ | Min. 0.4 mm* |
| Layout cavity | Round, rectangular, free shape |
| Feature size tolerance (lateral) | < 20 µm (equiv. ± 10 µm) |
| Position tolerance of features (lateral) | < 20 µm (equiv. ± 10 µm) |
| Level depth tolerance | < 100 µm (equiv. ± 50 µm) |
| Level depth surface texture | Matte |

* limitations in feature design and demands deviating from these capabilities will be evaluated upon request

### Side view of glass

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