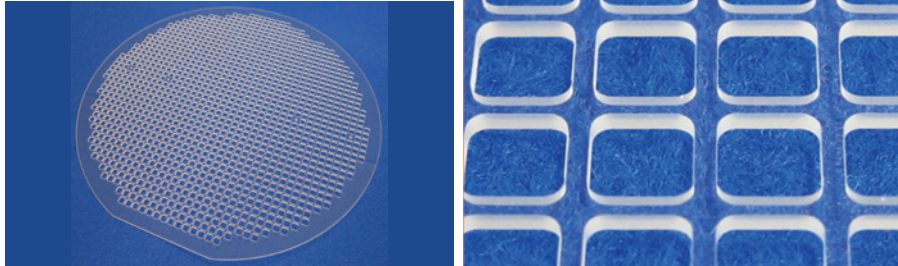


Spacer Glass

Structured glass wafers

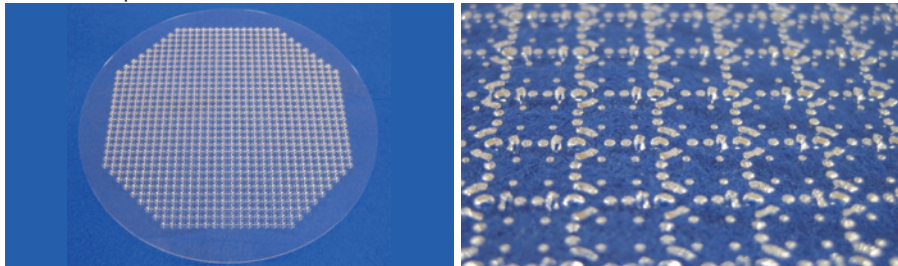
Spacer Glass

Milling process



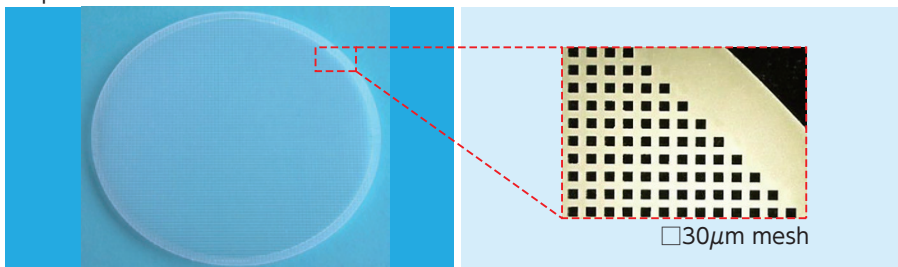
Standard specifications	
Glass material	Various types
Hole shape	Straight
Wafer size	Up to $\phi 200\text{mm}$
Wafer thickness	Up to 10mm
Hole size	Min. $\phi 0.3\text{mm}$
Size tolerance	$\pm 0.01\sim 0.05\text{mm}$

Sand Blast process



Standard specifications	
Glass material	Various types
Hole shape	$60\sim 70^\circ$ taper
Wafer size	Up to $\phi 200\text{mm}$
Wafer thickness	Up to 1.0mm
Hole size	Min. $\phi 0.05\text{mm}$
Size tolerance	$\pm 0.01\sim 0.05\text{mm}$

HY process



Standard specifications	
Glass material	Various types
Wafer size	Up to $\phi 150\text{mm}$
Wafer thickness	Min. 0.1mm
Hole shape	Rectangular
Hole size	Min. $\square 0.03\text{mm}$
Size tolerance	$\pm 0.01\text{mm}\sim$

Application (examples)

- Sensors (Pressure, Acceleration, Gyro)
- Optical device (CMOS, CCD, LD, LED)
- Glass filter, etc.

Option

- Less micro cracks/chipping process
- Metallization patterning
 - Top/Bottom surface
 - Hole inner wall surface
- Control sagging around holes
- Laser marking
- Excellent TTV

Features

- Flexible designing upon customer requests
- Suitable for Wafer Level Package

	Hole periphery comparison	Chipping comparison
Advanced		
	Sagging area Width $<10\mu\text{m}$ Depth $<0.1\mu\text{m}$	
Standard		
	Sagging area Width $<400\mu\text{m}$ Depth $<0.7\mu\text{m}$	

* The specs sited on this catalog are as of Feb. 2020