



**PRODUCT RANGE**

## **WAFER UNIVERSE**

In order to service the high demand of wafers with fixed specifications more quickly, Wafer Universe has been founded to provide off the shelf products in sizes from 100 up to 300mm diameter. Therefore every customer can be served with stock products in respond to it's needs - simple and fast.

Stock wafers by Wafer Universe are mainly used as substrate wafers for a variety of applications. Furthermore these wafers are often used in production processes as carriers for Thin-Wafer-Handling or for Wafer-Level-

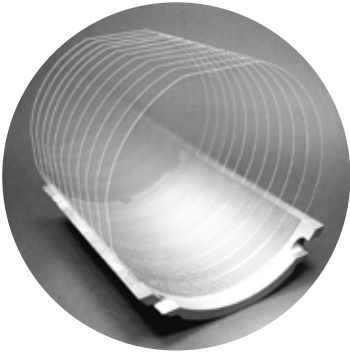
Packaging (WLP) of MEMS.

In addition to glass wafers Wafer Universe also offers wafers from quartz and fused silica, that can be used in high temperature processes or applications that demand high optical transmission.

Also wafers made of alkaline free glass are available from stock. These wafers are often used in sensor technology and as display cover glass as well as in thin glass applications

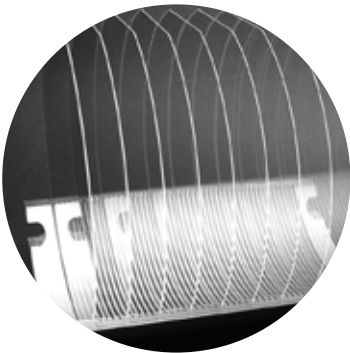
**[www.waferuniverse.com](http://www.waferuniverse.com)**

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## SILICON WAFERS

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# BOROSILICATE WAFERS REGULAR POLISHING GRADE

## 100 mm wafers

- **material:** BOROFLOAT33®
- **diameter:** 100.0 ± 0.3 mm
- **cte:** 3.25 ppm/K (adapted to Si)
- **thickness tolerance:** ± 10 µm
- **bow:** < 30 µm
- **edge exclusion:** 6 mm
- **polishing:** double side polished
- **flat:** SEMI 32.5 mm
- **surface roughness (Ra):** < 1 nm
- **ttv:** < 10 µm
- **scratch-dig:** 60-40
- **packaging:** cleanroom packed
- **packing units:** 10 pcs, 25 pcs

thickness (µm)	article number
200	DSP-100x0200-B33-00
300	DSP-100x0300-B33-00
400	DSP-100x0400-B33-00
500	DSP-100x0500-B33-00
600	DSP-100x0600-B33-00
700	DSP-100x0700-B33-00
1000	DSP-100x1000-B33-00

## 150 mm wafers

- **material:** BOROFLOAT33®
- **diameter:** 150.0 ± 0.3 mm
- **cte:** 3.25 ppm/K (adapted to Si)
- **thickness tolerance:** ± 10 µm
- **bow:** < 60 µm
- **edge exclusion:** 6 mm
- **polishing:** double side polished
- **flat:** SEMI 57.5 mm
- **surface roughness (Ra):** < 1 nm
- **ttv:** < 10 µm
- **scratch-dig:** 60-40
- **packaging:** cleanroom packed
- **packing units:** 10 pcs, 25 pcs

thickness (µm)	article number
200	DSP-150x0200-B33-00
300	DSP-150x0300-B33-00
400	DSP-150x0400-B33-00
500	DSP-150x0500-B33-00
600	DSP-150x0600-B33-00
700	DSP-150x0700-B33-00
1000	DSP-150x1000-B33-00

## 200 mm wafers

- **material:** BOROFLOAT33®
- **diameter:** 200.0 ± 0.3
- **cte:** 3.25 ppm/K (adapted to Si)
- **thickness tolerance:** ± 10 µm
- **bow:** < 80 µm
- **edge exclusion:** 6 mm
- **polishing:** double side polished
- **notch:** SEMI
- **surface roughness (Ra):** < 1 nm
- **ttv:** < 10 µm
- **scratch-dig:** 60-40
- **packaging:** cleanroom packed
- **packing units:** 10 pcs, 25 pcs

thickness (µm)	article number
200	DSP-200x0200-B33-00
300	DSP-200x0300-B33-00
400	DSP-200x0400-B33-00
500	DSP-200x0500-B33-00
600	DSP-200x0600-B33-00
700	DSP-200x0700-B33-00
1000	DSP-200x1000-B33-00

## 300 mm wafers

- **material:** BOROFLOAT33®
- **diameter:** 300.0 ± 0.3
- **cte:** 3.25 ppm/K (adapted to Si)
- **thickness tolerance:** ± 10 µm
- **bow:** < 100 µm
- **edge exclusion:** 6 mm
- **polishing:** double side polished
- **notch:** SEMI
- **surface roughness (Ra):** < 1 nm
- **ttv:** < 10 µm
- **scratch-dig:** 60-40
- **packaging:** cleanroom packed
- **packing units:** 10 pcs, 25 pcs

thickness (µm)	article number
400	DSP-300x0400-B33-00
500	DSP-300x0500-B33-00
700	DSP-300x0700-B33-00
1000	DSP-300x1000-B33-00

# BOROSILICATE WAFERS MDF POLISHING GRADE

## 100 mm wafers

- **material:** BOROFLOAT33®
- **diameter:** 100.0 ± 0.3 mm
- **cte:** 3.25 ppm/K (adapted to Si)
- **thickness tolerance:** ± 10 µm
- **edge exclusion:** 6 mm
- **polishing:** double side MDF polished
- **flat:** SEMI 32.5 mm
- **surface roughness:** < 0.5 nm (Ra)
- **ttv:** < 10 µm
- **bow:** < 30 µm
- **sub-surface damaging reduction:** >99%
- **packaging:** cleanroom packed
- **packing units:** 10 pcs, 25 pcs

thickness (µm)	article number
500	MDF-100x0500-B33-01

## 150 mm wafers

- **material:** BOROFLOAT33®
- **diameter:** 150.0 ± 0.3 mm
- **cte:** 3.25 ppm/K (adapted to Si)
- **thickness tolerance:** ± 10 µm
- **edge exclusion:** 6 mm
- **polishing:** double side MDF polished
- **flat:** SEMI 57.5 mm
- **surface roughness:** < 0.5 nm (Ra)
- **ttv:** < 10 µm
- **bow:** < 60 µm
- **sub-surface damaging reduction:** >99%
- **packaging:** cleanroom packed
- **packing units:** 10 pcs, 25 pcs

thickness (µm)	article number
500	MDF-150x0500-B33-01

## 200 mm wafers

- **material:** BOROFLOAT33®
- **diameter:** 200.0 ± 0.3 mm
- **cte:** 3.25 ppm/K (adapted to Si)
- **thickness tolerance:** ± 10 µm
- **edge exclusion:** 6 mm
- **polishing:** double side MDF polished
- **notch:** SEMI
- **surface roughness:** < 0.5 nm (Ra)
- **ttv:** < 10 µm
- **bow:** < 80 µm
- **sub-surface damaging reduction:** >99%
- **packaging:** cleanroom packed
- **packing units:** 10 pcs, 25 pcs

thickness (µm)	article number
500	MDF-200x0500-B33-01

# ALKALINE FREE GLASS WAFERS

## 150 mm wafers

- **material:** SCG32
- **diameter:** 150.0 ± 0.3 mm
- **cte:** 3.17 ppm/K (adapted to Si)
- **thickness tolerance:** ± 10 µm
- **bow:** < 60 µm
- **edge exclusion:** 6 mm
- **polishing:** double side polished
- **flat:** SEMI 57.5 mm
- **surface roughness (Ra):** 1 nm
- **ttv:** < 10 µm
- **cte:** 3.17 ppm/K (adapted to Si)
- **packaging:** cleanroom packed
- **packing units:** 10 pcs, 25 pcs

thickness (µm)	article number
500	DSP-150x0500-AFG-00

## 200 mm wafers

- **material:** SCG32
- **diameter:** 200.0 ± 0.3 mm
- **cte:** 3.17 ppm/K (adapted to Si)
- **thickness tolerance:** ± 10 µm
- **bow:** < 80 µm
- **edge exclusion:** 6 mm
- **polishing:** double side polished
- **flat:** SEMI
- **surface roughness (Ra):** 1 nm
- **ttv:** < 10 µm
- **cte:** 3.17 ppm/K (adapted to Si)
- **packaging:** cleanroom packed
- **packing units:** 10 pcs, 25 pcs

thickness (µm)	article number
500	DSP-200x0500-AFG-00
725	DSP-200x0725-AFG-00

# QUARTZ WAFERS SEMICONDUCTOR GRADE

## 100 mm wafers

- **material:** semiconductor grade quartz
- **diameter:** 100.0± 0.3 mm
- **cte:** 0.59 ppm/K
- **thickness tolerance:** ± 10 µm
- **bow:** < 30 µm
- **edge exclusion:** 6 mm
- **polishing:** double side polished
- **flat:** SEMI 32.5 mm
- **surface roughness:** < 0.5 nm (Ra)
- **ttv:** < 10 µm
- **scratch-dig:** 20-10
- **packaging:** cleanroom packed
- **packing units:** 10 pcs, 25 pcs

thickness (µm)	article number
200	DSP-100x0200-SGQ-00
300	DSP-100x0300-SGQ-00
525	DSP-100x0525-SGQ-00
675	DSP-100x0675-SGQ-00
1000	DSP-100x1000-SGQ-00

## 150 mm wafers

- **material:** semiconductor grade quartz
- **diameter:** 150.0± 0.3 mm
- **cte:** 0.59 ppm/K
- **thickness tolerance:** ± 10 µm
- **bow:** < 60 µm
- **edge exclusion:** 6 mm
- **polishing:** double side polished
- **flat:** SEMI 57.5 mm
- **surface roughness:** < 0.5 nm (Ra)
- **ttv:** < 10 µm
- **scratch-dig:** 20-10
- **packaging:** cleanroom packed
- **packing units:** 10 pcs, 25 pcs

thickness (µm)	article number
200	DSP-150x0200-SGQ-00
300	DSP-150x0300-SGQ-00
525	DSP-150x0525-SGQ-00
675	DSP-150x0675-SGQ-00
1000	DSP-150x1000-SGQ-00

## 200 mm wafers

- **material:** semiconductor grade quartz
- **diameter:** 200.0± 0.3 mm
- **cte:** 0.59 ppm/K
- **thickness tolerance:** ± 10 µm
- **bow:** < 80 µm
- **edge exclusion:** 6 mm
- **polishing:** double side polished
- **notch:** SEMI
- **surface roughness:** < 0.5 nm (Ra)
- **ttv:** < 10 µm
- **scratch-dig:** 20-10
- **packaging:** cleanroom packed
- **packing units:** 10 pcs, 25 pcs

thickness (µm)	article number
300	DSP-200x0300-SGQ-00
525	DSP-200x0525-SGQ-00
675	DSP-200x0675-SGQ-00
1000	DSP-200x1000-SGQ-00

# QUARTZ WAFERS HP FUSED SILICA WAFER

## 100 mm wafers

- **material:** high purity fused silica
- **diameter:** 100.0± 0.3 mm
- **cte:** 0.57 ppm/K
- **thickness tolerance:** ± 10 µm
- **bow:** < 30 µm
- **edge exclusion:** 6 mm
- **polishing:** double side polished
- **flat:** SEMI 32.5 mm
- **surface roughness (Ra):** < 0.5 nm
- **ttv:** < 10 µm
- **scratch-dig:** 20-10
- **packaging:** cleanroom packed
- **packing units:** 10 pcs, 25 pcs

thickness (µm)	article number
525	DSP-100x0525-FSQ-00

## 150 mm wafers

- **material:** high purity fused silica
- **diameter:** 150.0± 0.3 mm
- **cte:** 0.57 ppm/K
- **thickness tolerance:** ± 10 µm
- **bow:** < 60 µm
- **edge exclusion:** 6 mm
- **polishing:** double side polished
- **flat:** SEMI 57.5 mm
- **surface roughness (Ra):** < 0.5 nm
- **ttv:** < 10 µm
- **scratch-dig:** 20-10
- **packaging:** cleanroom packed
- **packing units:** 10 pcs, 25 pcs

thickness (µm)	article number
675	DSP-150×0675-FSQ-00

## 200 mm wafers

- **material:** high purity fused silica
- **diameter:** 200.0± 0.3 mm
- **cte:** 0.57 ppm/K
- **thickness tolerance:** ± 10 µm
- **bow:** < 80 µm
- **edge exclusion:** 6 mm
- **polishing:** double side polished
- **notch:** SEMI
- **surface roughness (Ra):** < 0.5 nm
- **ttv:** < 10 µm
- **scratch-dig:** 20-10
- **packaging:** cleanroom packed
- **packing units:** 10 pcs, 25 pcs

thickness (µm)	article number
725	DSP-200×0725-FSQ-00

# CARRIER WAFERS FOR LASER AND MECHANICAL RELEASE

## 151mm CARRIER FOR SI-WAFER

- **material:** BOROFLOAT33®
- **diameter:** 151.0 ± 0.1 mm
- **cte:** 3.25 ppm/K (adapted to Si)
- **bow:** < 60 µm
- **polishing:** double side polished
- **edge exclusion:** 5 mm
- **flat:** SEMI 57.5 mm
- **thickness:** 705 ± (see product spec)
- **packaging:** cleanroom packed
- **packing units:** 10 pcs

thickness tolerance (µm)	ttv (µm)	article number
± 3	< 1	CLM-151x0705-B33-01
± 5	< 3	CLM-151x0705-B33-02
± 10	< 5	CLM-151x0705-B33-03

## 201 mm CARRIER FOR SI-WAFER

- **material:** BOROFLOAT33®
- **diameter:** 201.0 ± 0.1 mm
- **cte:** 3.25 ppm/K (adapted to Si)
- **bow:** < 80 µm
- **polishing:** double side polished
- **edge exclusion:** 5 mm
- **notch:** no notch
- **thickness:** 705 ± (see product spec)
- **packaging:** cleanroom packed
- **packing units:** 10 pcs

thickness tolerance (µm)	ttv (µm)	article number
± 3	< 1	CLM-201x0705-B33-01
± 5	< 3	CLM-201x0705-B33-02
± 10	< 5	CLM-201x0705-B33-03

## 301 mm CARRIER FOR SI-WAFER

- **material:** BOROFLOAT33®
- **diameter:** 301.0 ± 0.1 mm
- **cte:** 3.25 ppm/K (adapted to Si)
- **bow:** < 200 µm
- **polishing:** double side polished
- **edge exclusion:** 5 mm
- **notch:** no notch
- **thickness:** 705 ± (see product spec)
- **packaging:** cleanroom packed
- **packing units:** 10 pcs

thickness tolerance (µm)	ttv (µm)	article number
± 5	< 3	CLM-301x0705-B33-02
± 10	< 5	CLM-301x0705-B33-03

# CARRIER WAFERS FOR GaAs WAFER

## 152 mm CARRIER FOR GaAs-WAFER

- **material:** SCG72
- **diameter:** 152.0 ± 0.2 mm
- **cte:** 7,2 ppm/K (adapted to GaAs)
- **polishing:** single side polished
- **edge exclusion:** 5 mm
- **flat:** no flat
- **thickness:** 650 ± (see product spec)
- **packaging:** cleanroom packed
- **packing units:** 10 pcs

thickness tolerance (µm)	ttv (µm)	article number
± 3	< 2	CGA-152x0650-S72-00

# BLACK QUARTZ CARRIER

## 150 mm CARRIER

- **material:** Black Quartz
- **diameter:** 150.0 ± 0.2 mm
- **cte:** 0.57 ppm/K
- **polishing:** double side polished
- **ttv:** < 5 µm
- **flat:** SEMI 57.5 mm
- **edge exclusion:** 5 mm
- **thickness:** 675 ± 10
- **packaging:** cleanroom packed

article number	CBQ-150×0675-BGQ-01
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## 200 mm CARRIER

- **material:** Black Quartz
- **diameter:** 200.0 ± 0.2 mm
- **cte:** 0.57 ppm/K
- **polishing:** double side polished
- **ttv:** < 5 µm
- **notch:** SEMI
- **edge exclusion:** 5 mm
- **thickness:** 675 ± 10
- **packaging:** cleanroom packed

article number	CBQ-200×0675-BQG-01
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# SI-ADAPTER CARRIER

## 150 mm wafers

- **material:** Si
  - **diameter:** 150 mm
  - **thickness:** 625 ± 25 µm
  - **front side:** polished
  - **back side:** etched
  - **flat:** SEMI 57.5 mm
  - **packing unit:** 3 pcs
- with centered pockets:
- **pocket bottom:** frosted
  - **pocket depth:** 300 ± 50 µm
  - **pocket walls:** rounded (~ 300 µm radius)
  - **pocket diameter at carrier surface:** 102.0 ± 50 mm
  - **SEMI flat:** no flat in pocket

device wafer diameter*	article number
100 mm	CAD-150×0625-SIL-40

\*at carrier surface



## 200 mm wafers

- **diameter:** 200 mm
- **material:** Si
- **thickness:** 725 ± 25 µm
- **front side:** polished
- **back side:** etched
- **flat:** SEMI 57.5 mm
- **packing unit:** 3 pcs

with centered pockets:

- **pocket bottom:** frosted
- **pocket depth:** 350 ± 50 µm
- **pocket walls:** rounded (~ 350 µm radius)
- **pocket diameter at carrier surface:**  
CAD-200×0725-SIL-40: 152.5 ± 0.5 mm  
CAD-200×0725-SIL-60: 202.0 ± 0.5 mm
- **SEMI flat:** no flat in pocket

device wafer diameter*	article number
100 mm	CAD-200×0725-SIL-40
150 mm	CAD-200×0725-SIL-60

## 300 mm wafers

- **diameter:** 300 mm
- **material:** Si
- **thickness:** 775 ± 25 µm
- **front side:** polished
- **back side:** etched
- **notch:** SEMI
- **packing unit:** 3 pcs

with centered pockets:

- **pocket bottom:** frosted
- **pocket depth:** 350 ± 50 µm
- **pocket walls:** rounded (~ 350 µm radius)
- **pocket diameter at carrier surface:**  
CAD-300×0775-SIL-60: 152.5 ± 0.5 mm  
CAD-300×0775-SIL-80: 202.0 ± 0.5 mm
- **SEMI flat:** no flat in pocket

device wafer diameter*	article number
150 mm	CAD-300×0775-SIL-60
200 mm	CAD-300×0775-SIL-80

# GLASS-ADAPTER CARRIER

## 150 mm WAFERS

- **material:** Alkaline free Glass
- **diameter:** 150.0 ± 0.3 mm
- **thickness:** 900 ± 10 µm
- **polishing:** double side frosted
- **flat:** SEMI (57.5 mm)

with centered pockets:

- **pocket depth:** 500 ± 50 µm
- **pocket walls:** rounded (~ 500 µm radius)
- **pocket bottom:** frosted
- **flat:** no flat in pocket
- **packing units:** 3 pcs

device wafer diameter*	article number
102.0 ± 0.5 mm	CAD-150×0900-AFG-40

## 200 mm WAFERS

- **material:** Alkaline free Glass
- **diameter:** 200.00 ± 0.3 mm
- **thickness:** 900 ± 10 µm
- **polishing:** double side frosted
- **notch:** SEMI

with centered pockets:

- **pocket depth:** 500 ± 50 µm
- **pocket walls:** rounded (~ 500 µm radius)
- **pocket bottom:** frosted
- **flat:** no flat in pocket
- **packing units:** 3 pcs

device wafer diameter*	article number
102.0 ± 0.5 mm	CAD-200×0900-AFG-40
152.0 ± 0.5 mm	CAD-200×0900-AFG-60

\*at carrier surface

## 300 mm WAFERS

- **material:** Alkaline free Glass
- **diameter:** 300.00 ± 0.3 mm
- **thickness:** 900 ± 10 µm
- **polishing:** double side frosted
- **notch:** SEMI

with centered pockets:

- **pocket depth:** 500 ± 50 µm
- **pocket walls:** rounded (~ 500 µm radius)
- **pocket bottom:** frosted
- **flat:** no flat in pocket
- **packing units:** 3 pcs

device wafer diameter*	article number
152.0 ± 0.5 mm	CAD-300×0900-AFG-60
202.0 ± 0.5 mm	CAD-300×0900-AFG-80

# SILICON WAFERS

## 100 mm WAFERS

- **material:** Si
- **diameter:** 100.0 ± 0.2 mm
- **growth:** CZ
- **grade:** prime
- **type / dopant:** P/Boron
- **orientation:** (100)±1°
- **resistivity:** 1-100 Ohm-cm

- **ttv:** < 10 µm
- **bow:** < 40 µm
- **warp:** < 40 µm
- **flat:** SEMI 32.5 mm
- **front side:** polished
- **back side:** etched
- **packing units:** 10 pcs, 25 pcs

thickness	article number
525 ± 25 µm	SSP-100×0525-SIL-00

## 150 mm WAFERS

- **material:** Si
- **diameter:** 150.0 ± 0.2 mm
- **growth:** CZ
- **grade:** prime
- **type / dopant:** P/Boron
- **orientation:** (100)±0.5°
- **resistivity:** 1-100 Ohm-cm

- **ttv:** < 10 µm
- **bow:** < 40 µm
- **warp:** < 40 µm
- **flat:** SEMI 57.5 mm
- **front side:** polished
- **back side:** etched
- **packing units:** 10 pcs, 25 pcs

thickness	article number
675 ± 25 µm	SSP-150×0675-SIL-00

## 200 mm WAFERS

- **material:** Si
- **diameter:** 200.0 ± 0.3 mm
- **growth:** CZ
- **grade:** prime
- **type / dopant:** P/Boron
- **orientation:** (100)
- **resistivity:** 1-100 Ohm-cm

- **ttv:** < 10 µm
- **tir:** < 5 µm
- **bow:** < 30 µm
- **warp:** < 30 µm
- **front side:** polished
- **back side:** etched
- **packing units:** 10 pcs, 25 pcs

thickness	article number
725 ± 25 µm	SSP-200×0725-SIL-00

\*at carrier surface





**WAFER UNIVERSE**

a brand of  
Plan Optik AG  
Über der Bitz 3  
56479 Elsoff / Germany

**Phone** +49 2664 239 929 0  
**Mail** [sales@waferuniverse.com](mailto:sales@waferuniverse.com)  
**Web** [www.waferuniverse.com](http://www.waferuniverse.com)