Agilent 3G Microarray Format

Technical Drawings with Tolerances

Agilent 3G arrays contain features arranged onto a hexagonal grid. The arrays approximate a rectilinear grid, with the even rows offset to the right by one-half of the column spacing.

Figure 1 shows the feature spacing for all formats:

- The nominal feature diameter is 0.030 mm.
- The nominal row spacing is 0.018330871 mm.
- The nominal column spacing is 0.06349 mm.
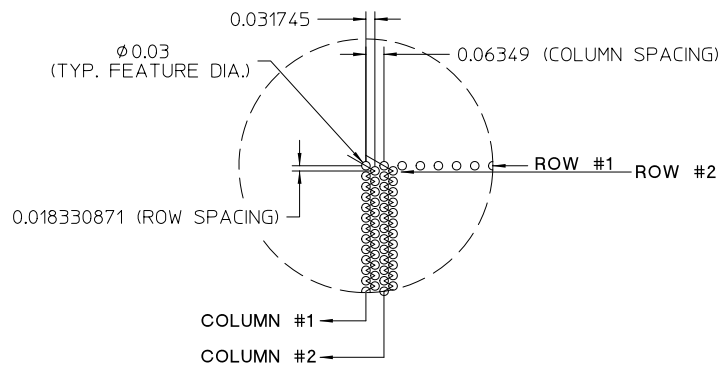- The nominal offset of the even rows is 0.031745 mm.

Figure 1   Feature spacing for all formats

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1M Format (1 array per slide)

This format contains a single array of 974,016 features arranged in 1,068 rows and 912 columns. Figure 2 shows the location (with tolerances) of the array on the slide.
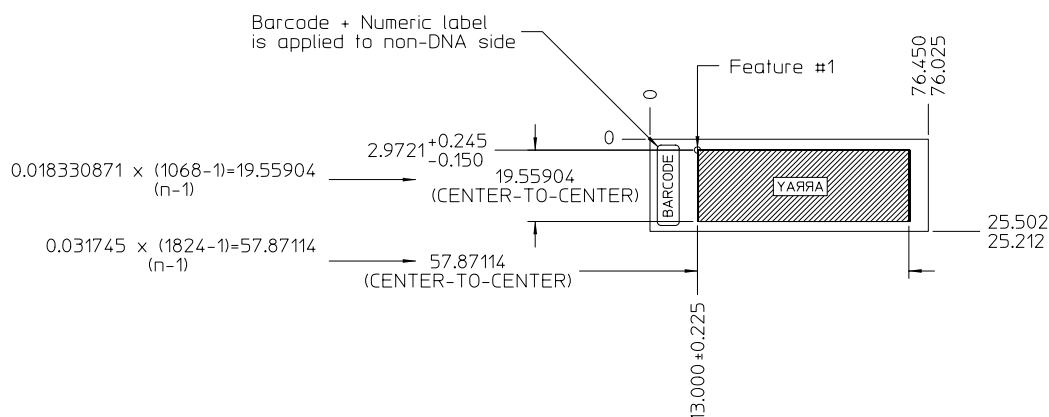
Barcode + Numeric label
is applied to non-DNA side

Feature #1

76.450
76.025

0

0

$2.9721^{+0.245}_{-0.150}$

$0.018330871 \times \underset{(n-1)}{(1068-1)}=19.55904$

19.55904
(CENTER-TO-CENTER)

BARCODE

ARRAY

25.502
25.212

$0.031745 \times \underset{(n-1)}{(1824-1)}=57.87114$

57.87114
(CENTER-TO-CENTER)

13.000 ±0.225

Figure 2   1M Format

2x400K Format (2 arrays per slide)

This format contains two arrays of 420,288 features, arranged in 1,056 rows and 398 columns. Figure 3 shows the location (with tolerances) of the arrays on the slide.
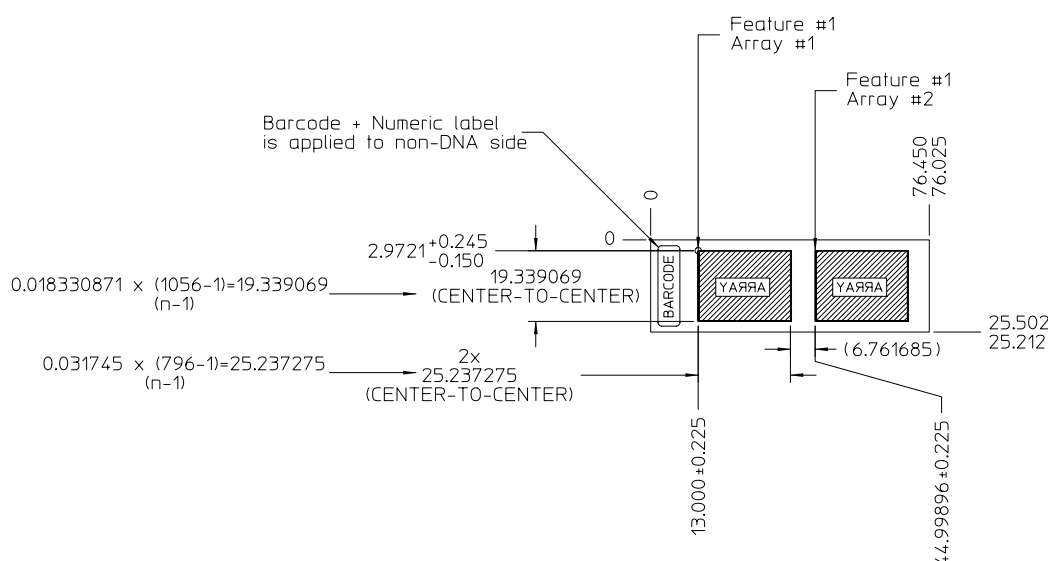
Feature #1
Array #1

Feature #1
Array #2

76.450
76.025

Barcode + Numeric label
is applied to non-DNA side

0

0

$2.9721^{+0.245}_{-0.150}$

$0.018330871 \times \underset{(n-1)}{(1056-1)}=19.339069$

19.339069
(CENTER-TO-CENTER)

BARCODE

ARRAY

ARRAY

25.502
25.212

$0.031745 \times \underset{(n-1)}{(796-1)}=25.237275$

2x
25.237275
(CENTER-TO-CENTER)

(6.761685)

13.000 ±0.225

44.99896 ±0.225

Figure 3   2x400K Format

4x180K Format (4 arrays per slide)

This format contains four arrays of 180,880 features, arranged in 1,064 rows and 170 columns. Figure 4 shows the location (with tolerances) of the arrays on the slide.
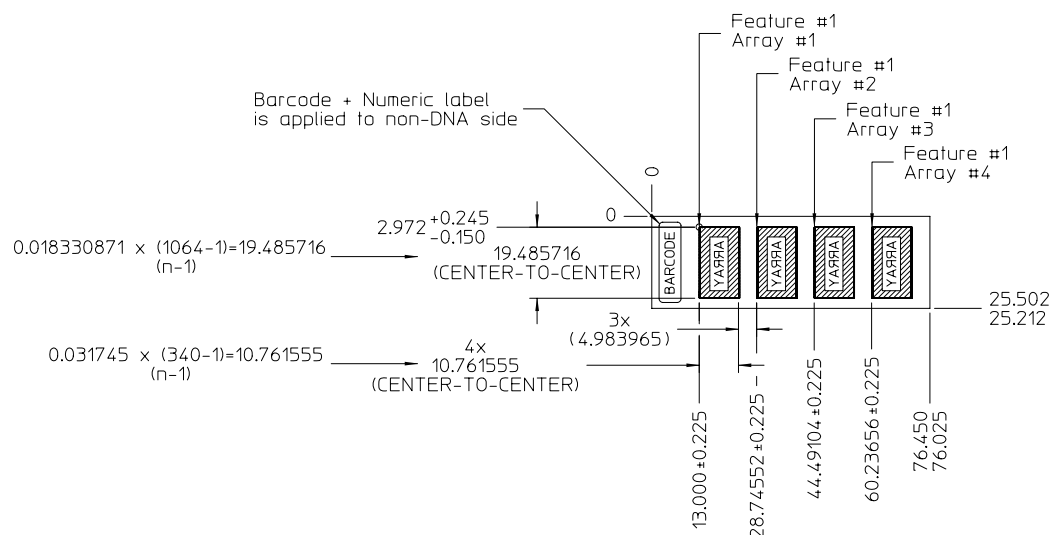

Figure 4   4x180K Format

8x60K Format (4 arrays per slide)

This format contains eight arrays in a 4 x 2 grid, each array containing 62,976 features arranged in 1,064 rows and 170 columns. Figure 5 shows the location (with tolerances) of the arrays on the slide.
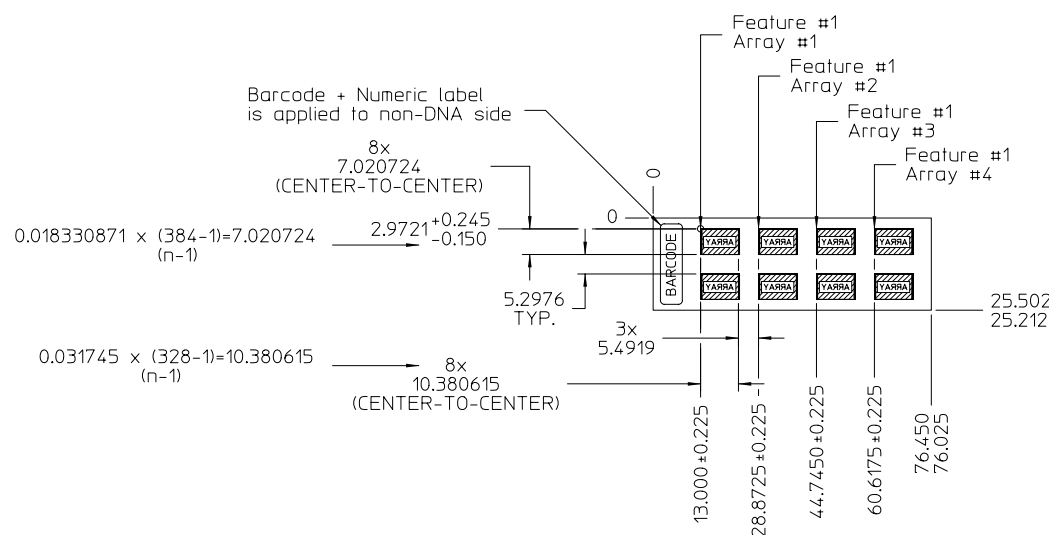

Figure 5   8x60K Format

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