

# Detector geometry format for LCLS2

- text format
- dictionary type k,v pairs

```
units_angle  degree
units_size   micrometer

size_s 109.92
size_w 274.80
size_d 400

segment seg1
  name <name>
  surface <python code for lambda function of z(x,y)>
  shape <nslow> <nfast>
  unitv_f <x> <y> <z> # components in local frame relative to pixel(0,0)
  unitv_s <x> <y> <z> # components in local frame relative to pixel(0,0)
  pixels <f_min> <f_max> <s_min> <s_max> <f_pixsize> <s_pixsize> <d_pixsize>

# EXAMPLE for surface:

planez0 lambda x,y: 0
  surface planez0
  surface lambda x,y: 0.1*x - 0.2*x*x + 0.5*y*y - 0.003*x*y # python code for lambda function of z(x,y)

# EXAMPLE for segment:
#2x1 has 185 rows and 388 columns,
segment CSPAD2X1
  name 2x1
  surface planez0
  shape 185 388
  unitv_f 0 1 0
  unitv_s 1 0 0
  pixels 0 192 0 184 size_s size_s size_d
  pixels 193 194 0 184 size_w size_s size_d
  pixels 195 387 0 184 size_s size_s size_d
```