```
In [141]: import numpy as np
          import matplotlib as mpl
          import matplotlib.pyplot as plt
          import math
          %matplotlib inline
```

```
In [142]: #all measurements are in meters
          b = 100e-6
          l = 25e-2
          lamb = 625e-9
          h = 20e-3
          step = 1e-6
```

```
In [170]: y = np.arange(start=-h/2,stop=h/2,step=step,dtype=None)
```

```
In [178]: d1 = np.zeros(len(y))
          d2 = np.zeros(len(y))
          A = np.zeros(len(d1))
          I = np.zeros(len(A))
```

```
In [180]: i = 0
          while i < len(y):
              d1[i] = math.sqrt((y[i]-b/2)**2+l**2)
              d2[i] = math.sqrt((y[i]+b/2)**2+l**2)
              i += 1
```

```
In [184]: i = 0
          while i < len(y):
              A[i] = 2*math.cos(math.pi*(d1[i]-d2[i])/lamb)*math.cos(math.pi*(d1[i]+d2[i])/lamb)
              i += 1
```

```
In [185]: i = 0
          while i < len(y):
              I[i] = A[i]**2
              i += 1
```

```
In [186]: plt.plot(y,I)
```

Out[186]: [<matplotlib.lines.Line2D at 0x20f6dbd1a58>]