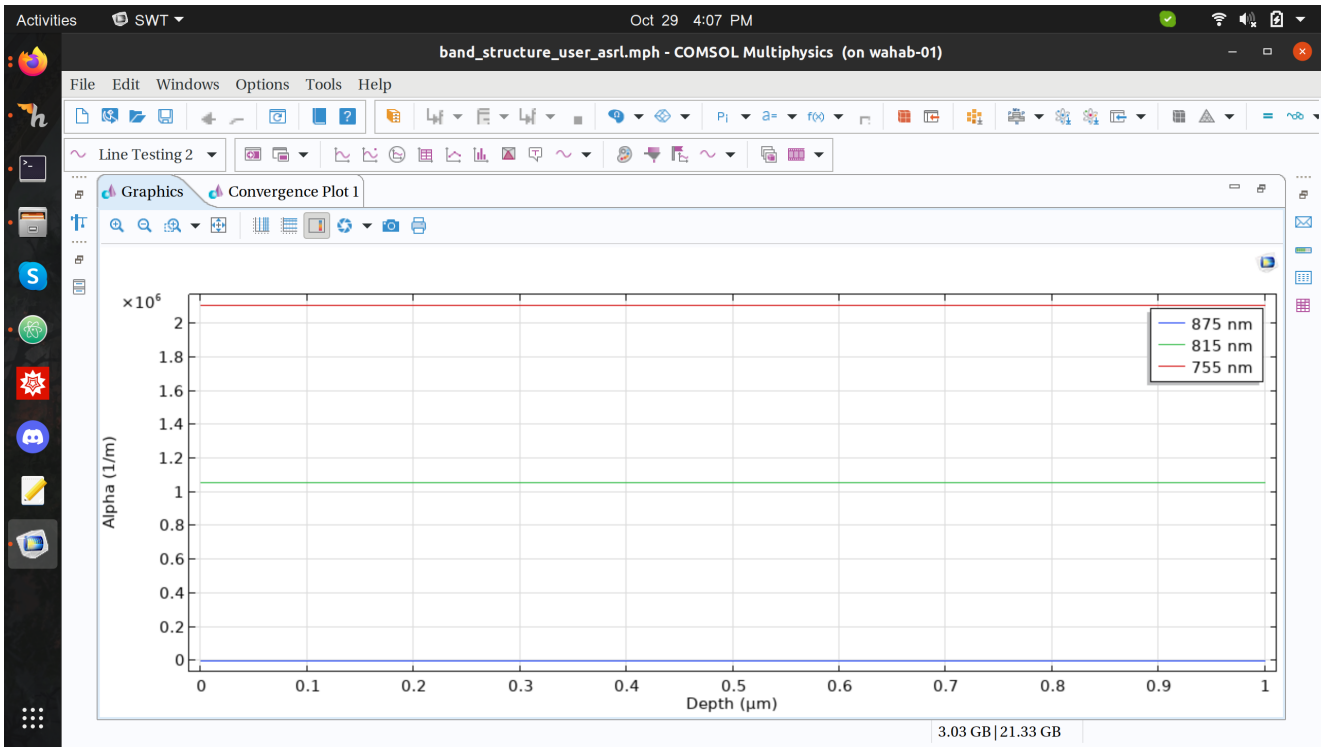
Absorption coefficient in my model

The absorption coefficient in my model is calculated independently



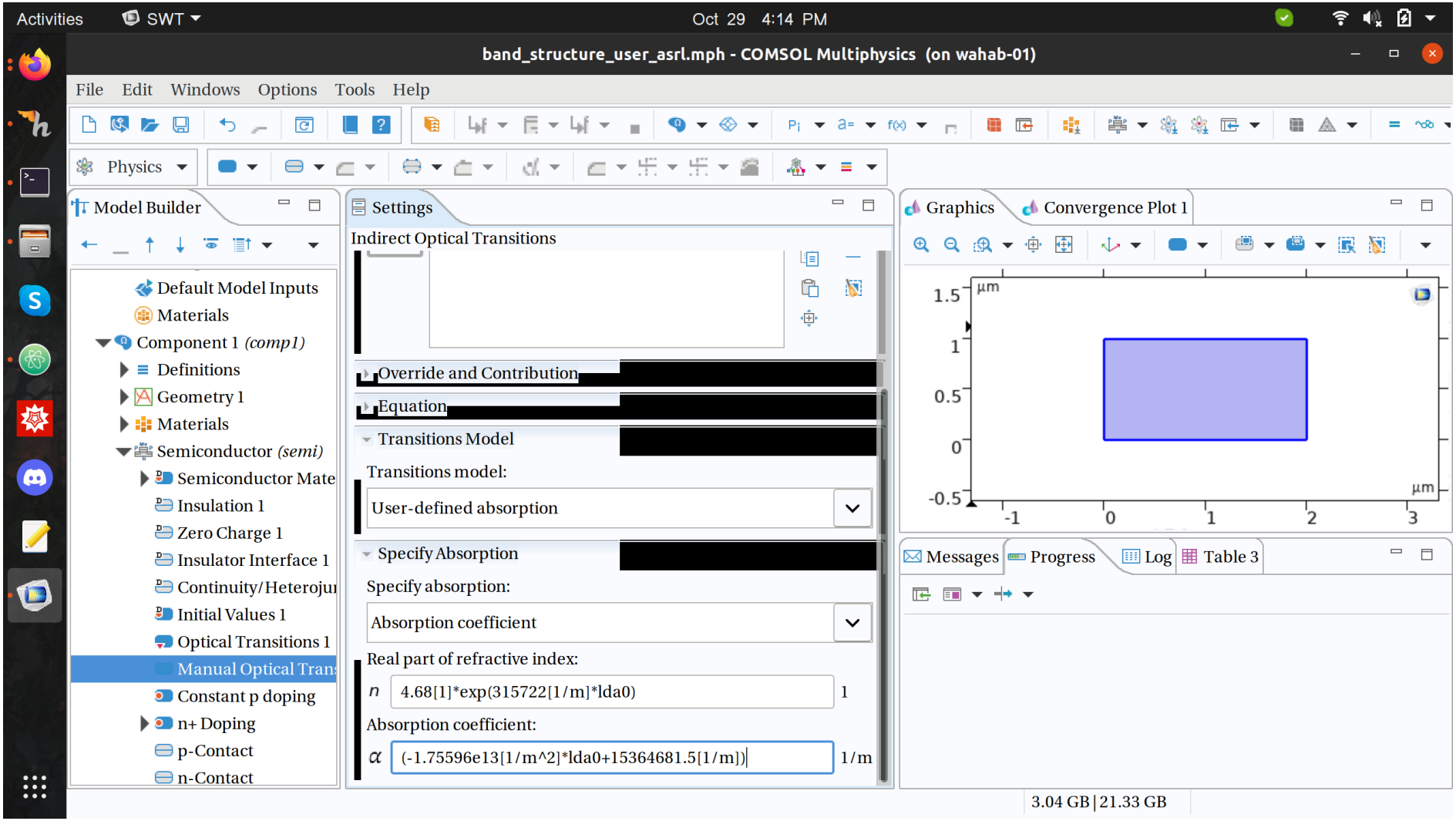
By definition

$$\alpha = \frac{4\pi k}{\lambda}$$

α is given to the code based on the known k

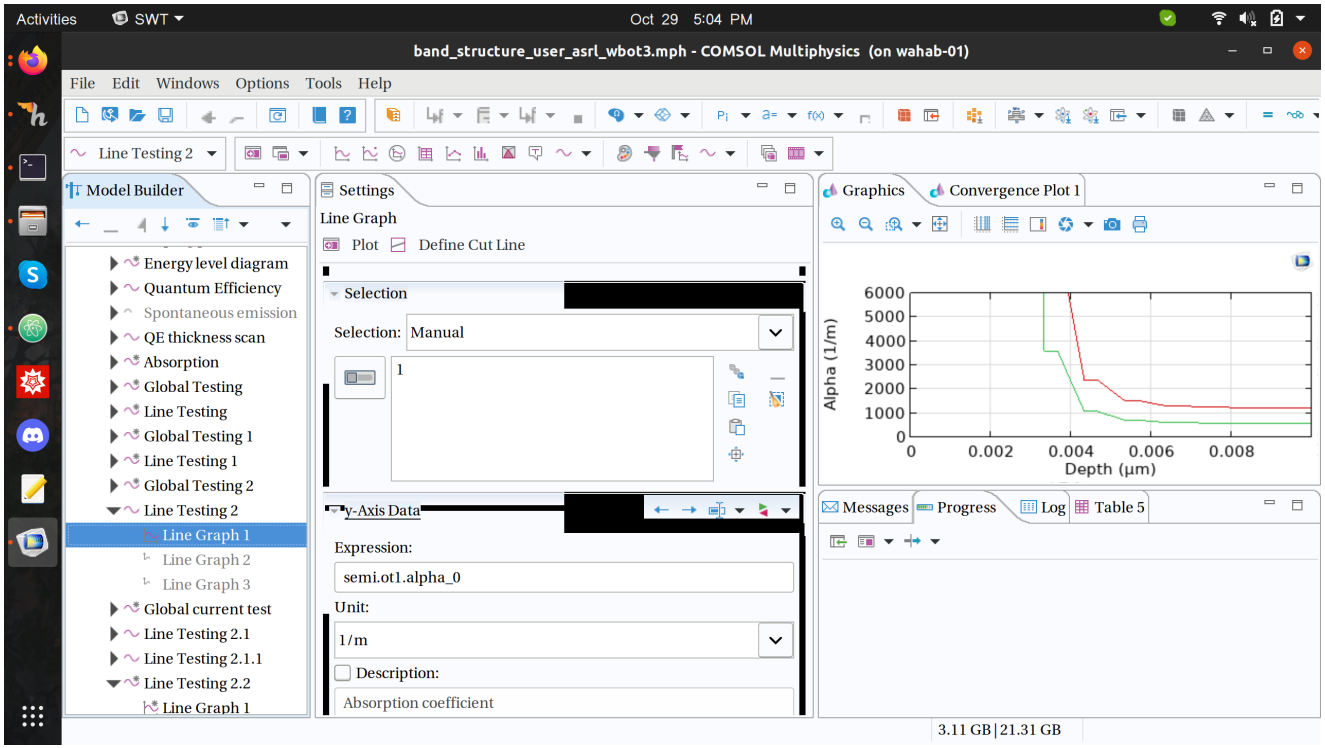
How is this given to the code?

I define a functional form for α and k



Absorption coefficient in COMSOL's model

COMSOL attempts to account for doping - KK integral



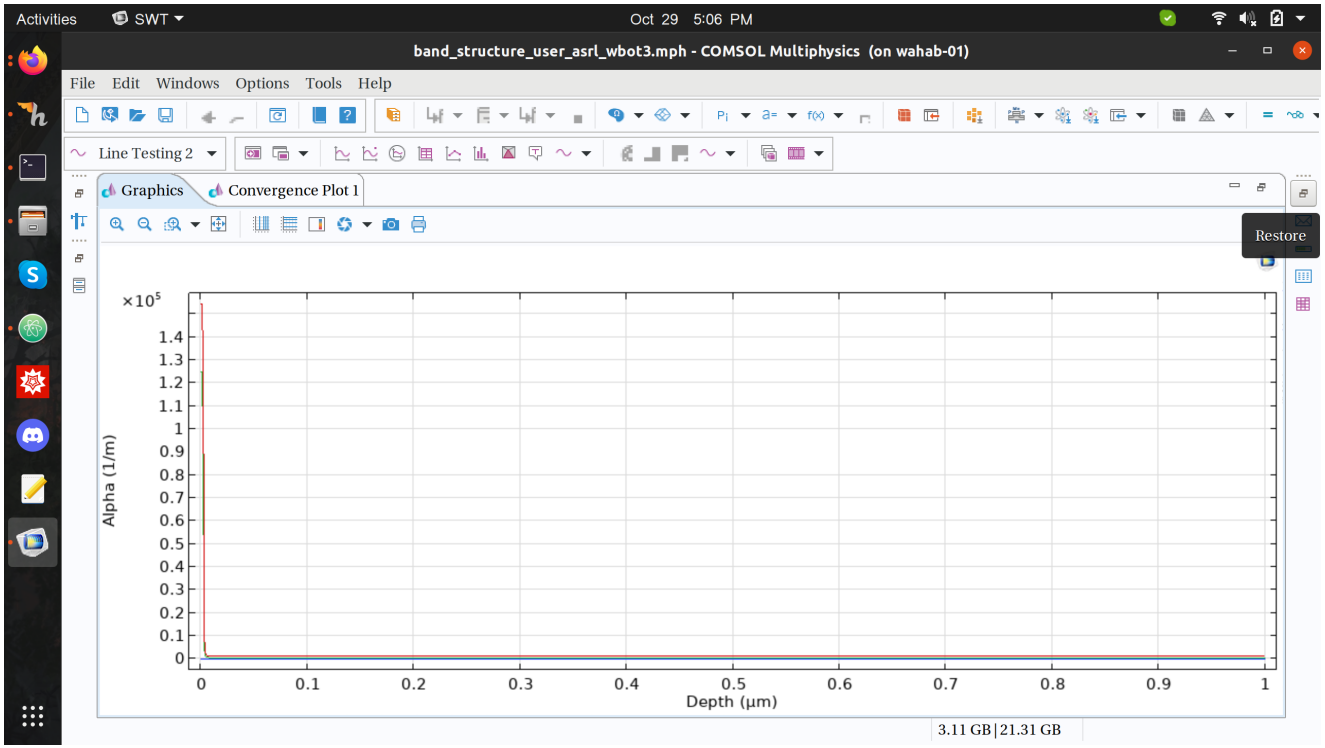
By definition

$$\alpha = \frac{4\pi\Delta k}{\lambda}$$

Does COMSOL care about refractive index? Relative permittivity? What is Δk?

Absorption coefficient in COMSOL's model 2.0

The model has an option to turn off changes to n and k... trying today



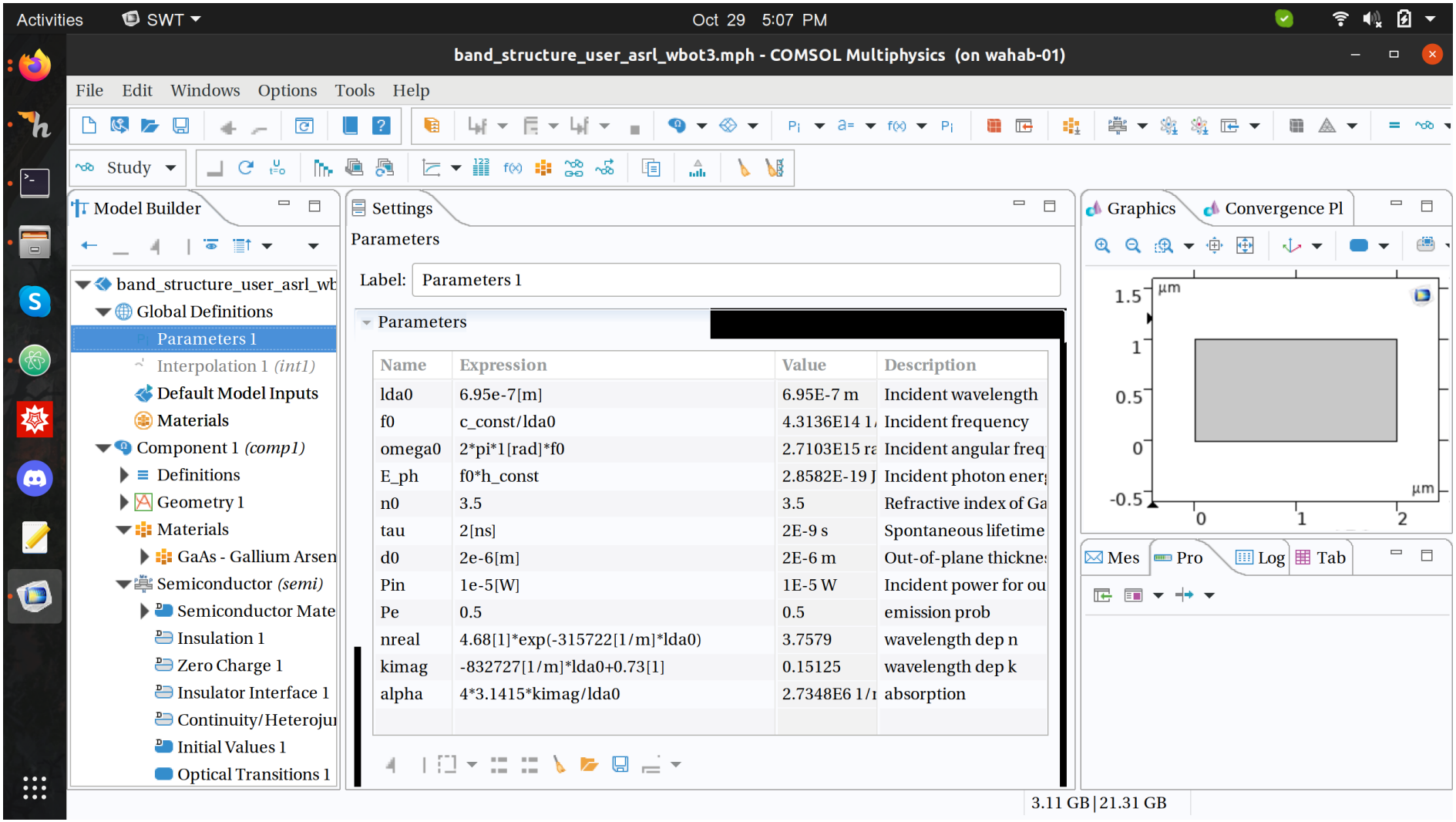
By definition

$$\alpha = \frac{4\pi\Delta k}{\lambda}$$

Does COMSOL care about refractive index? Relative permittivity? What is Δk?

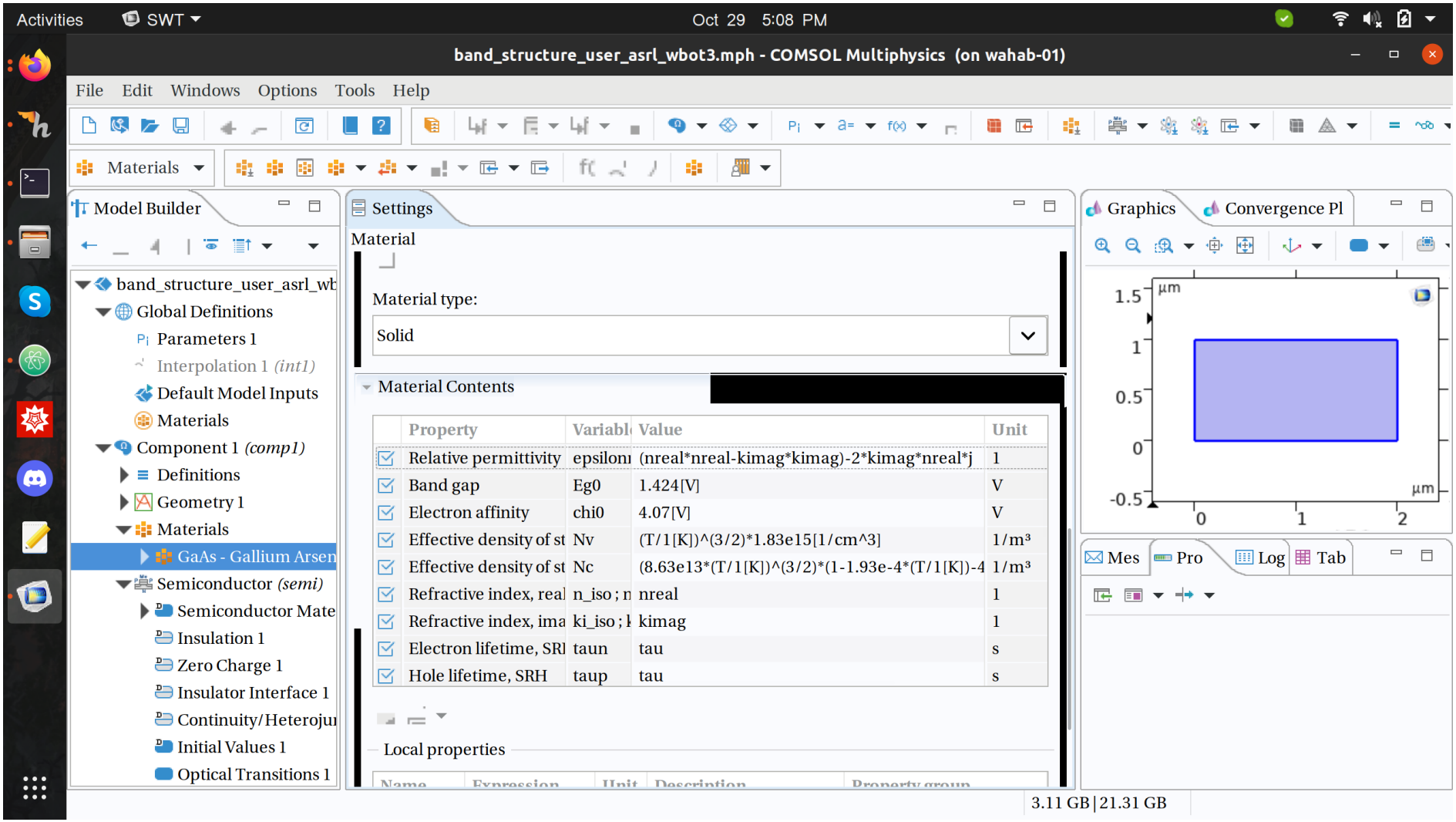
Maybe how does COMSOL get the info?

I define the same functions as I do in my model in parameters



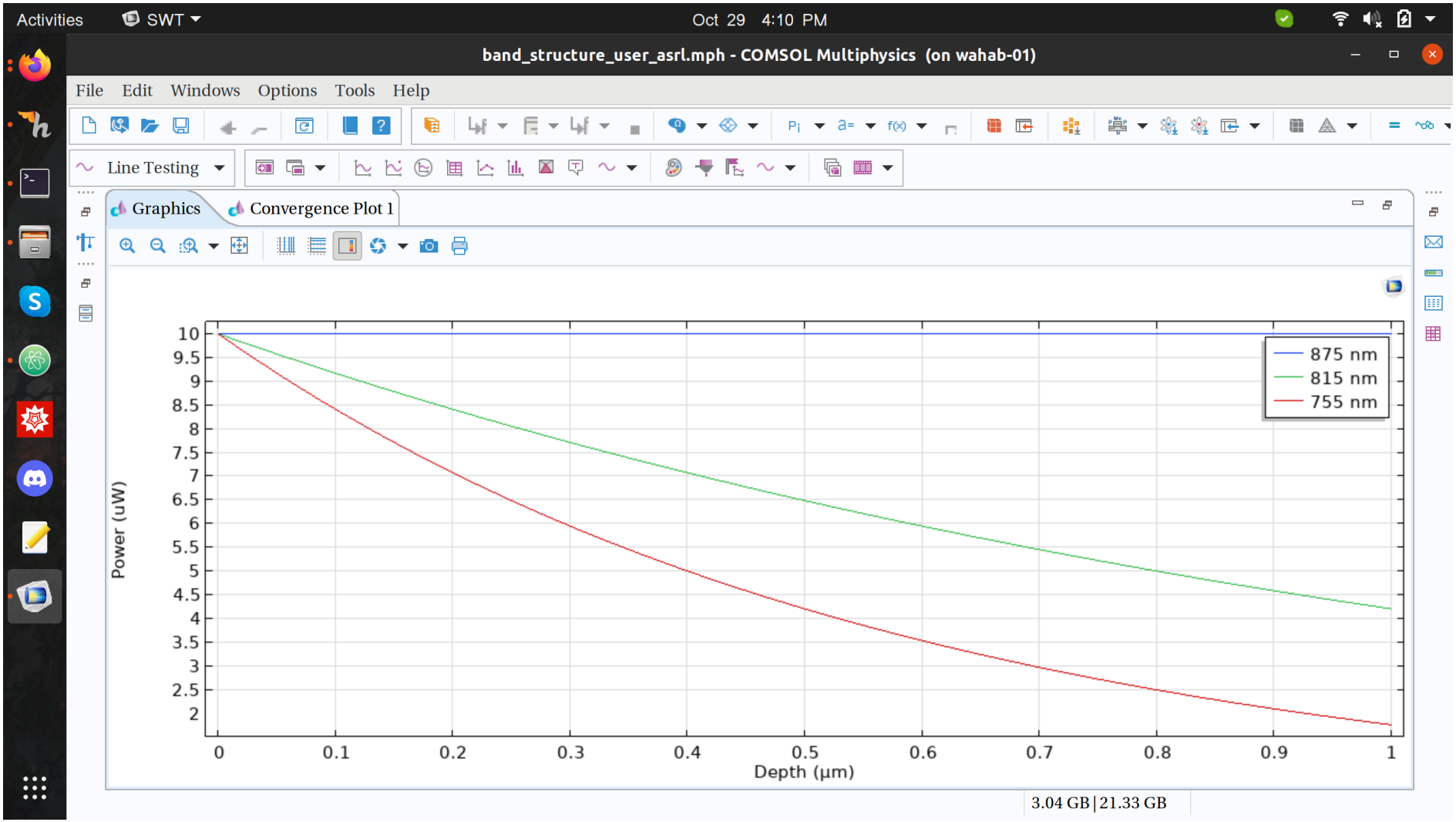
Maybe how does COMSOL get the info? 2.0

COMSOL gets assigned the same function in materials



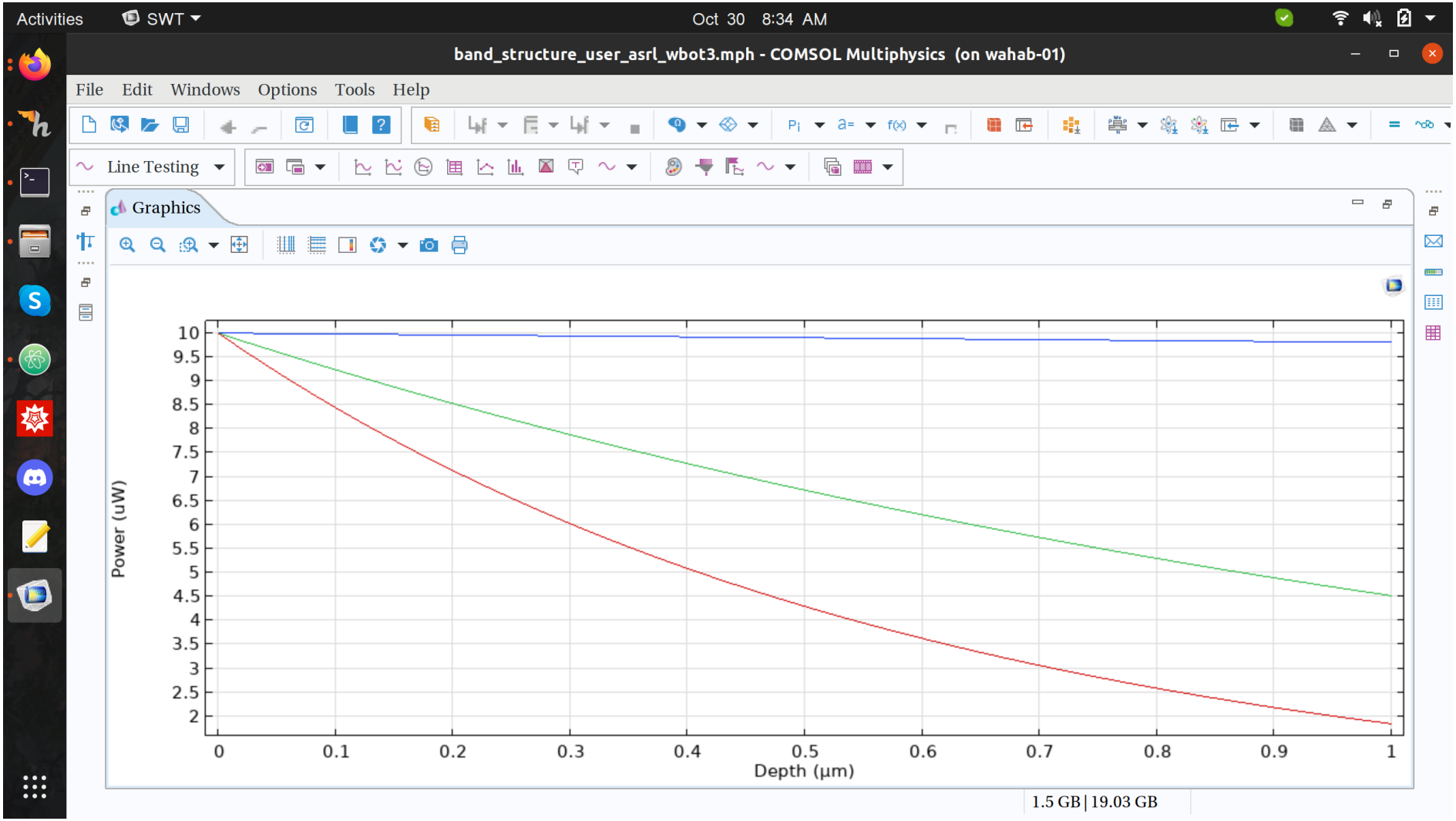
The absorption curve (Beer-Lambert)

Curve looks like what is expected - same "function" given to COMSOL



The absorption curve (Beer-Lambert) COMSOL?

Results from EM module seem to work... but not semiconductor!



My QE results

IQE now below 100 % and emission prob between 10-50 % (here 50 %)