This example is taken from a paper, Mayerhofer, T. G. (2005). Symmetric Euler orientation representations for orientational averaging. *61*, 2611–2621.

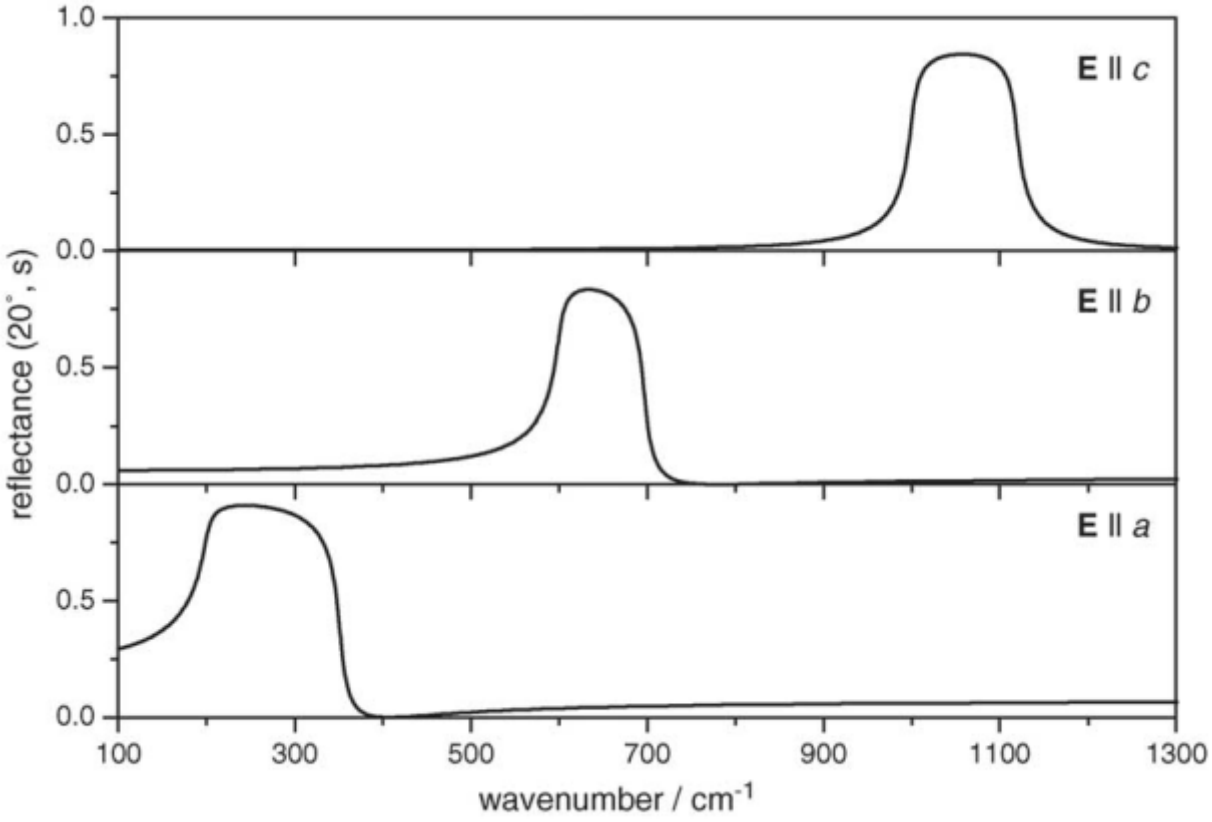
https://doi.org/10.1016/j.saa.2004.10.002

The dielectric function is defined using a Drude-Lorentz model and the data is given here;

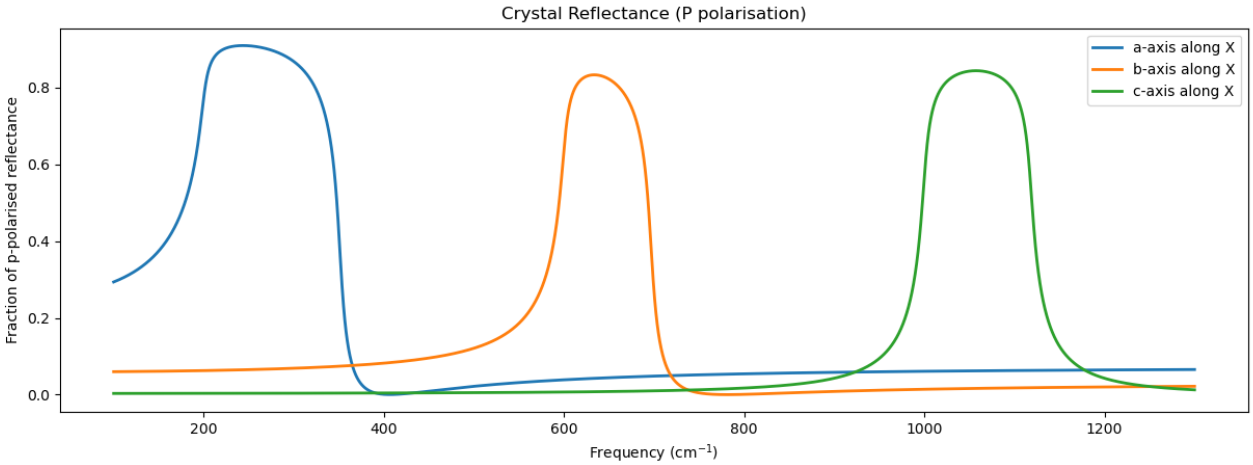
Table 2
Oscillator parameter of the hypothetic single crystal of orthorhombic symmetry ($\tilde{\nu}_T$, S, γ in cm^{-1})

Orientation of transition moment, M	Oscillator position, $\tilde{\nu}_T$	Oscillator strength, S	Damping constant, γ	Dielectric background, ε_∞
$M \parallel a$	200	500	10	3
$M \parallel b$	600	500	10	2
$M \parallel c$	1000	500	10	1

The published results have been taken from the paper.



For this example we need to look at the R_p polarisation, which lies in the XZ plane.
E parallel to c (010), 90 degrees azimuthal (c- lies along X)
E parallel to b (001), 90 degree azimuthal (b- lies along X)
E parallel to a (001), 0 degree azimuthal (a- lies along X)


Crystal Reflectance (P polarisation)
a-axis along X
b-axis along X
c-axis along X
Fraction of p-polarised reflectance
0.0
0.2
0.4
0.6
0.8
200
400
600
800
1000
1200
Frequency (cm^{-1})