$$\hat{L}(\omega_x, \omega_y) = \frac{\sum_{dx,dy} i^{dx+dy} w(dx,dy) \omega_x^{dx} \omega_y^{dy} \bar{\hat{f}} \hat{I} + i\gamma(\omega_x \Psi_x + \omega_y \Psi_y)}{\sum_{dx,dy} i^{dx+dy} w(dx,dy) \omega_x^{dx} \omega_y^{dy} \bar{\hat{f}} \hat{f} - \gamma(\omega_x^2 + \omega_y^2)}$$