Module 1 Unit 2

POLARIZATION – FORMULA SHEET

Parameter	Formula
1. Brewster's angle	$\tan i_p = \frac{\mu_2}{\mu_1}; i_p + r_p = 90°$
2. Malus law	$I = I_0 \cos^2 \theta$
3. Resultant of two mutually perpendicular plane polarized waves	$\frac{E_x^2}{a^2} + \frac{E_y^2}{b^2} - \frac{2E_xE_y}{ab}\cos\delta = \sin^2\delta$
a) Linearly polarized	$\delta = 0$
b) Circularly polarized	$a = b$ and $\delta = (2n + 1)\,\pi/2$; $n = 0, 1, 2, 3, \ldots$
c) Elliptically polarized	$a \neq b$ and $\delta = (2n + 1)\,\pi/2$; $n = 0, 1, 2, 3, \ldots$
