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The anomalous polarization property in laser diode TZU FANG HSU, YEN CHUN LIN, YUNG HSUN CHEN — We have experimentally found some anomalous polarization property in laser diode (LD). As laser beam was merely passing through a polarizer, the polarization curve acted as normal cosine function which obeyed the behavior of linear polarization, fitting the property of LD. However, the polarization curve that linear polarized beam reflected by a glass plate became the shape, W, which is much more different to the curve of linear polarized light. By experimentally demonstrated, it is found that this anomalous curve was revealed as the linear polarized laser beam experienced the condition of second reflection, so that the curve of reflecting by mirror was normal cosine function and by prism was also the W shape.

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