

Investigation of Scribing Quality Defect of Thin Film Solar Cell Using Machine Vision

Abstract

Laser micromachining provide significant effect in thin film solar industrial field especially in determining cell efficiency of each panels. However, there is an issue in determining scribing failure or defect on solar module. This research aims to investigate the defects of laser micromachining process in thin film solar module in manufacturing fields. Machine vision inspection system is used as inspection tools and to investigate the defect of laser micromachining in thin film solar cells. As a result, two major defects is define which is scribe line quality and scribe line position defects in every scribe line. By identifying the defect cause by laser micromachining through machine vision, quality control plan can be taken together to prevent reoccurrence.