

ABSTRACT

This project represents a case study in designing a new machine fixture for the electronic industry. The new machine fixture would act as a holder to hold the LED securely in the required position for the machine operation, and it would be able to perform the bending and cutting operations simultaneously. By using the machine fixture, the user would be able to bend and cut the LED pin connector to the required shape and length. This machine fixture would vastly reduce the cycle time for producing LED's in the current situation. In addition, the machine fixture would also helps to reduce the manufacturing cost for each LED, and it has a higher precision, which directly means better quality in the product produced. This project presents the design and development of Single LED Bending Machine Fixture, which is semi-automated, reduces a substantial sum in the labor cost, and replaces it to semi-skilled workers. As the result, this machine fixture would also yield a higher production rate compared to the previous method.

Main Mechanism and Prototype

