Test Evolution Ltd

Laser Module Final Test System

Product Information

Test Evolution Ltd's laser module final test system has been developed to provide a automated, highly versatile, cost effective and time efficient test station.

At the centre of this system is a multiple position test enclosure (typically 4 positions) with independent control of case and sub-mount temperature per position. Optical and electrical switching within the enclosure allows LIV characterisation or other measurements on any of the device positions. Optical measurements are made using an integrating sphere per position with an optical tap from each sphere switched through to a spectrum analyser. This allows a range of optical powers to be easily covered and avoids any uncertainty from the measurement process caused by optical connections.

The device fixtures are removable allowing the system to easily be adapted for different device or package styles.

A major proportion of a laser module test sequence is taken in ramping the case and sub mount temperature to temperature. Since this system heats or cools all devices simultaneously but uses the same equipment to carry out measurements the test time per device is reduced to almost a quarter of that taken by single position test stations. Also the cost of the system per position reduces to less than half compared to the cost of a single position system since expensive equipment is shared.

Test Evolution's existing test software provides an versatile platform for this system. The software is centred around a powerful test editor which allows the test engineer to quickly create device specific tests.

The tests conducted on a device and the analysis of the tests results have been broken down into individual test functions within the editor. The intention within each test function is to allow the engineer to set any of the variables relating to the test, I.e. nothing is hard coded within the software. The result of one test function can also be passed as an input to another test function. Within the test editor test functions are chained together to define a test sequence or test suite. Using this method complicated test suites can quickly be defined. Many test suites can be created and grouped under different device types. Once the test suites are defined the operator only has to select the particular test suite to run and then press 'go'. Test Evolution are happy to provide new test functions if required or modify existing ones to your requirements.

The results of each test are stored to file and a database. The test functions can also be configured to save results to an existing production database. The system allows the setting of security levels on a per user basis so that only authorised personnel can access certain functions. At the end of each test a results sheet can be printed for each device tested. The results printed are defined by the test engineer within the test editor. The format of this printout can be modified to your requirements if desired.