KEY FEATURES

- Applicable for burn-in, reliability and life testing
- ACC and APC control modes
- Individual channel driving and measurement
- Driving current 500 mA per channel and up
- Precise temperature control up to 125 ˚C
- Individual module operation

Burn-in, Reliability & Life Test

The Chroma 58604 is a high density, multifunction, and temperature controlled module for laser diode burn-in and lifetime tests. Each module has up to 256 SMU channels which can source current and measure voltage in various control modes as described below.

Auto Current Control Mode (ACC)

In auto current control (ACC) mode, the control circuit will provide the preset current to each laser diode with high stability. No matter how the device resistance and temperature change, the current will be kept constant over the test period. The device voltage will be recorded as a quality reference parameter.

Auto Power Control Mode (APC)

With feedback signal from the optional external Photo Diode PCB, the control circuit can adjust the laser diode current automatically to keep constant feedback signal strength, which means the optical output of the laser diode is maintained constant over the test period. The device voltage and current are recorded as quality parameters for reference.

Temperature Control

A proprietary designed heat plat will control the laser diode case temperature with high accuracy, excellent stability, and good uniformity. Compared with oven or chamber types of laser diode burn-in systems, our solution is much more compact, easier to operate, better performance, and energy saving. Customers gain benefit for small footprint, versatile usage, and easy maintenance.

Individual Module Operation

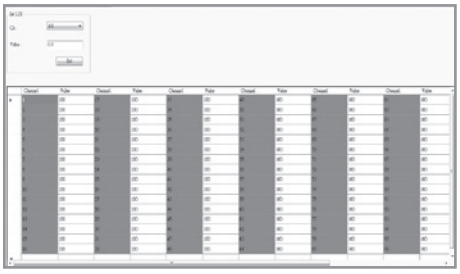
Customers can set different modules in different temperatures, operated in different control modes, and with different start and stop times. This provides great flexibility in operation.

Protection and Individual Channel Shotdown

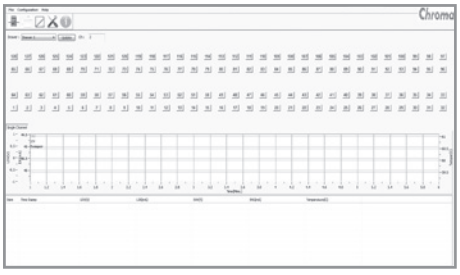
The control circuit is specially designed for protecting laser diodes. No rush current or voltage will occur to hurt the devices. High/Low limits of current and voltage can be set to perform shutdown protection. When abnormality happens, only the particular channel will be shutdown while others are running normally. Besides the protection functions implemented in the control circuit, isolation and ESD protection are also taken care in system design.

Auto Data Recovery afterCommunication Interruption

The burn-in data are stored in system PC and optional remote servers. If the communication between the module and PC is broken temporarily, the data will be buffered in the module up to 6 hours or even longer. After the communication is restored, the buffered data will be dumped to the PC/server without loss.

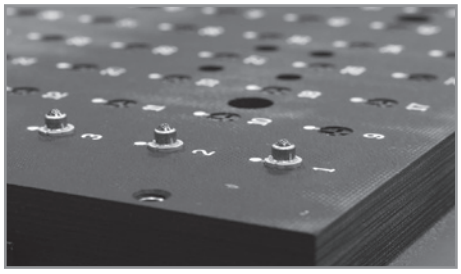


Flexible to choose condition

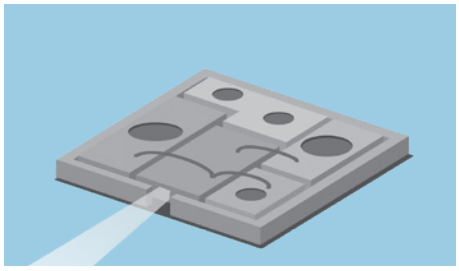


Comprehensive test data

GUI calibration interface



TO-CAN carrier



CoC carrier

Test Fixture

All specifications are subject to change without notice.

SPECIFICATIONS	
Model	**58604**
SMU Module	
Channel Number	up to 256
Laser Diode Type	TO-46, TO-56, CoC
Test Function	ACC (standard) APC, LIV (optional)
Burn-in Record Time	1 min to 5000 hours
Auto Current Control Mode	
Current Range	±500 mA
Current Accuracy	0.2% F.S.
Compliant Voltage	±7 V
Voltage Measurement Range	±7 V
Voltage Measurement Accuracy	0.2% F.S.
Auto Power Control Mode (Optional)	
External PD type	Si or InGaAs *1
Wavelength Range	400 ~ 1600 nm *1
LD Current Range	±500 mA
LD Current Measurement Accuracy	0.2% F.S.
LD Compliant Voltage	±7V
LD Voltage Measurement Accuracy	0.2% F.S.
Temperature Control	
Temperature Measuring Range	Ambient ~ 125 ˚C
Temperature Setting Range	45~125 ˚C
Temperature Setting/Reading Resolution	0.1 ˚C
Temperature Stability *3	1 ˚C
Temperature Uniformity	±(1 ˚C + 1.2% ΔT) *2
System	
CommunicationPort	Ethernet to server
Dimensions (D x W x H)	1,300 mm x 900 mm x 1,900 mm
Weights	500±50 kg
Power Requirements	187 ~ 250 Vac (3 Phase 4 Wire, Δ Connection) or 323 ~ 437 Vac (3 Phase 5 Wire, Y Connection) / 45 ~ 65 Hz
Environment Temperature	20~30˚C
Humidity	<80% RH, non-condensing
Compressed Air	5 kgf/cm^3, 30 L/min. ; 0.5 Mpa

Note *1 : Wavelength dependent, customized PD types upon request
Note *2 : Thermal platform temperature without DUT loading, ΔT = | ambient temperature - setting temperature |
Note *3 : 1 ˚C = (Max T - Min T) within 48 hrs burn-in time

ORDERING INFORMATION

58604 : Laser Diode Burn-in & Reliability Test System

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