MODEL 58605

KEY FEATURES

- Burn-in, reliability and life test
- ACC and APC control modes
- Independent channel for source and measurement
- Spike-Free sourcing
- Up to 6000 mA per channel and pulsing
- Precise temperature control by TEC
- Modular design for flexibility and maintainability
- Software auto reconnection
- ESD protection (device interface)

HIGH POWER LASER DIODE BURN-IN AND RELIABILITY TEST SYSTEM MODEL 58605

Burn-in, Reliability & Life Test

Chroma 58605 is a high density, multifunction, and temperature-controlled module-based system for laser diode burn-in and lifetime tests. Each module has up to 128 SMU channels which can source current and measure voltage in various control modes as described below. The system can accommodate 6 modules for a total of 768 SMU channels.

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. Even with fluctuations in device resistance and temperature, the current will be kept constant during the burn-in process. 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 or the onboard Monitor Photo Diode (MPD), the control circuit can adjust the laser diode current automatically to keep a constant optical power output over the test period. The device voltage and current are recorded as quality parameters for reference.

Temperature Control

A proprietary designed heat plate will control the laser diode case temperature with high accuracy, excellent stability, and good uniformity. This thermal condition approach is much more compact, easier to operate, offers better performance, and energy saving over chamber-based systems. Customers gain the benefit of a small footprint, versatile usage, and easy maintenance.

Independent Module Operation

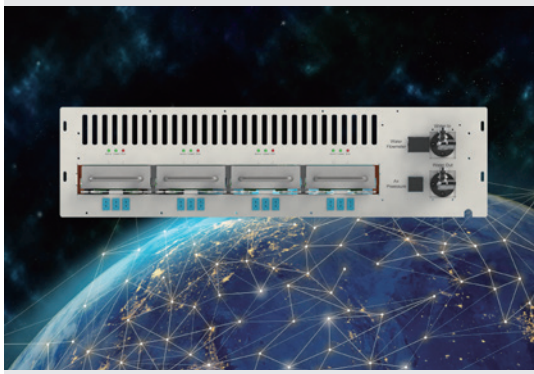
Customers can set each module to a set test program varying from all other modules in the system. Variation includes all parameters including temperatures, Control Modes (APC/ACC), start times and test durations. These modules can test a variation of CoS, CoC, and TO-Can packages allowing for multiple device types in one system. This provides the highest flexibility in operation.

Protection and Individual Channel Shutdown

The control circuit is specially designed for protecting each laser diode. No in-rush current or voltage will occur to damage the devices. High/Low limits of current and voltage can be set to perform shutdown protection. If a device abnormality occurs, only the affected channel will be shut down while others continue running normally. To ensure device safety, ESD protection is also sustained in the system design.

Auto Data Recovery after Communication Interruption

The measurement data is stored in the system IPC and optionally in remote servers. If the communication between the module and IPC is temporarily interrupted, the data will be buffered in the module 6 hours or more. After the communication is restored, the buffered data will be uploaded to the IPC/server without loss.



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SPECIFICATIONS

Model		58605
System Max. Capacity		6 burn-in drawers, 768 channels of SMU at maximum
Burn-in Drawer		128 channels for 4 subdrawers
Test Function		Auto current control
Burn-in Record Time		1 min. to 5000 hrs
Auto Current Control Mode (ACC)		
Current Range		0 to 4A CW or +6A pulsing
Current Accuracy		0.5% F.S.
Voltage Measurement Range		0 to +7V max.
Voltage Measurement Accuracy		0.5% F.S.
Max. Output		12W
Pulse Mode		High speed mode / Low speed mode
Min. Pulse Width		100uS *1
Temperature Control for each Fixture		
Temperature Setting Range		20 to 85°C
Temperature Setting/Reading Resolution		0.1°C
Temperature Stability		<1°C *2
Temperature Uniformity		± (1°C + 2%ΔT) *3
System		
Communication Port		Ethernet to server
Dimensions (D x W x H)		1342mm x 1229mm x 2298mm
Weights		1,200Kg (full rack)
Power Requirements		200 to 240 Vac (3 phase 4 Wire, Δ or Y connection), 29KW, 50/60Hz
Cooling		Water cooling
Inlet Water Temperature		18 to 25°C
Environment Temperature		20 to 30°C
Humidity		<80% RH, non-condensing
Air	Compressed	0.5kg/cm, 30L/min.
	Nitrogen	0.5kg/cm, 30L/min.
Nitrogen (reserved for purge)		0.5kg/cm, 30L/min.
Water *4		0.69m/s, 12L/min.

Note *1: Duty cycle detail, refer to the user manual.
Note *2: 1°C = (Max. T to Min. T) within 48 hrs burn-in time
Note *3: Use water that meets the Japan Refrigeration and Air Conditioning Industry Association Water Quality Standards (JRA GL-02-1994: Cooling Water / Circulation Type / Supply Water).
* All specifications are subject to change without notice.

ORDERING INFORMATION

58605: High Power Laser Diode Burn-in and Reliability Test System

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