

MODEL 58635 Series

KEY FEATURES

- References : ISO/IEC standards
- Up to 6" wafer
- Temperature:
 - Wide range
 - Precise temperature control
- Support both QCW and CW operation
- LIV- λ test : Model 58635-L
 - Near Field test : Model 58635-N
 - Far Field test : Model 58635-F
 - LIV- λ & NF two-in-one test : 58635-LN
- Support multisite testing
- High speed short pulse option

PHOTONICS DEVICE PROBING TEST SYSTEM MODEL 58635 SERIES

The advancement of the photonics device technology continues to enable broader and more demanding applications in the industry. For example, the use of laser diodes and VCSELs has expanded into a variety of consumer products beyond communication applications. To address the increasing test demand for many new device applications, Chroma has developed a series of laser diode wafer testers, the 58635 Series, designed specifically for consumer applications utilizing proprietary photoelectric measurement technologies accumulated over the years.

The 58635 Series can test up to 6" wafer and meet the stringent requirements of laser diode testing integrated with Chroma's precision equipment, such as the SMU (source and measurement unit) and temperature controller. Since the photoelectric characteristics and parameters for laser diode often vary with temperature, the precision temperature control of the 58635 Series is designed to ensure the most stable and accurate measurement for testing.

The 58635 Series comprise four types of models for different requirements including LIV / Wavelength, Near Field, Far Field, and LIV & NF two-in-one testing.

LIV- λ Measurement

The 58635-L model provides accurate optical power and wavelength measurement using

Chroma's accurate and stable current source as well as voltage measurement functions. The system is equipped with integrating sphere and high-resolution spectrometer. All LIV and wavelength related parameters can be measured through Chroma's proprietary software equipped with complete test functions.

Near Field Measurement

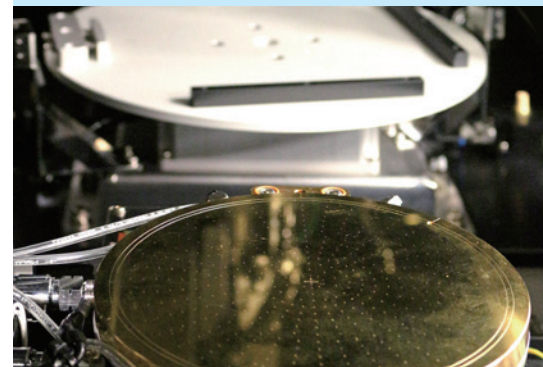
The 58635-N model provides fast and precise measurement for laser diode near-field beam quality as well as propagation ratio in compliance with ISO standards.

Far Field Measurement

The 58635-F model provides accurate laser diode far-field optical characterization such as laser emitting angle and beam profile analysis. This test system is also capable of locating the highest intensity spot of the far-field beam profile to ensure compliance with IEC human eye safety standards.

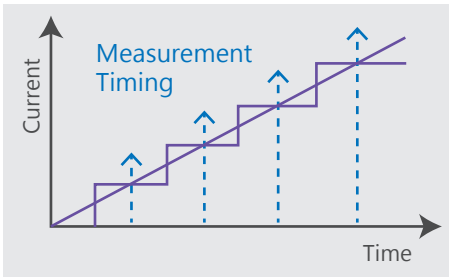
LIV- λ & Near Field Two-in-One Measurement

The 58635-LN can test all LIV- λ and near field test items with one probe touchdown. The proprietary two-in-one optical head design allow to test LIV- λ and near field simultaneously. Now both tests can be performed with one probe mark and reduced overall test time within same system footprint, thus save precious clean room floor space as well.

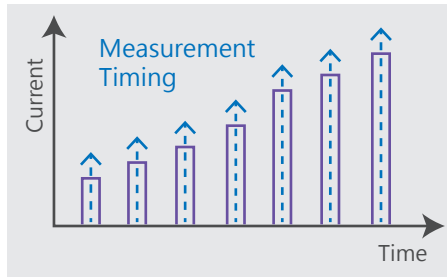


Chroma

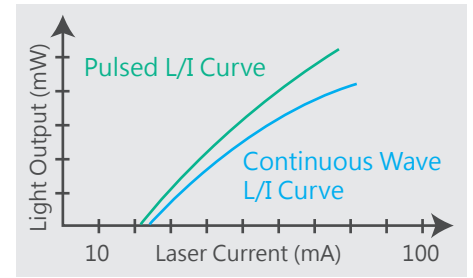
APPLICATIONS



CW Mode



Pulse/QCW Mode



L/I Curve

SPECIFICATIONS

Model	58635-L	58635-N	58635-F	58635-LN
Measurements	LIV and λ	Near Field	Far Field	LIV- λ & Near Field two-in-one
Measurement Capability	LIV sweep, Leakage current, Ith, Kink, Center wavelength (λ_c), Peak wavelength (λ_p), FWHM	Beam Diameter, Beam divergence angle, Beam propagation ratio, Emitter power uniformity, Dead emitter count	Beam divergence, Max energy/power through 7mm aperture	All LIV- λ and Near Field test items
Optical Test Module	Integrating sphere with spectrometer	CCD Camera with auto focus microscope system	CCD Camera	Special two-in-one test-head design
Temperature Control Capability	25~85°C (standard) 0~100°C (option)			
SMU Specifications				
Channel Counts	Depend on DUT structure, configurable by PXI base			
SMU Features	PXI base, Bi-polar, 25W/channel, 4 wires, CW and QCW			
Voltage Ranges	$\pm 25V$, $\pm 12.5V$, $\pm 10V$, $\pm 5V$, $\pm 2V$, $\pm 1V$, $\pm 500mV$, $\pm 200mV$, $\pm 100mV$			
Current Ranges	$\pm 6A$ (only pulse mode), $\pm 3.5A(\leq 5V)$, $\pm 2.5A(\leq 10V)$, $\pm 1A$, $\pm 100mA$, $\pm 10mA$, $\pm 1mA$, $\pm 100\mu A$, $\pm 10\mu A$, $\pm 1\mu A$			
Current Pulse Width	$>100\mu s$			
Pulse Duty Cycle	$<10\%$ (when $2.5A < \text{current} < 3.5A$, pulse width $\leq 5ms$, voltage $< 5V$) $<5\%$ (when $3.5A < \text{current} < 6A$, pulse width $\leq 5ms$, voltage $< 5V$)			

Items	
Coverage Devices	
Wafer Size	2~6 inch
Wafer Thickness	100~3,000 μm
Wafer Warpage	≤ 10 mm
Chip Size	≥ 150 μm
Pad Size	≥ 50 μm
Optical Power	0.1~5,000 mW
Wavelength	800~1,000 nm

* The max. chip size may vary by DUT design and test requirements.

* All specifications are subject to change without notice.

ORDERING INFORMATION

58635-L : Photonics Device Probing LIV Test System

58635-N : Photonics Device Probing Near Field Test System

58635-F : Photonics Device Probing Far Field Test System

58635-LN : Photonics Device Probing LIV & NF Test System

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