Superior Accuracy and Faster Light Testing

T100L

AUTOMATIC FLYING SCANNER LED LIGHT TESTER

Detect Any LED Light Defect and Bring Your Products Faster to Market

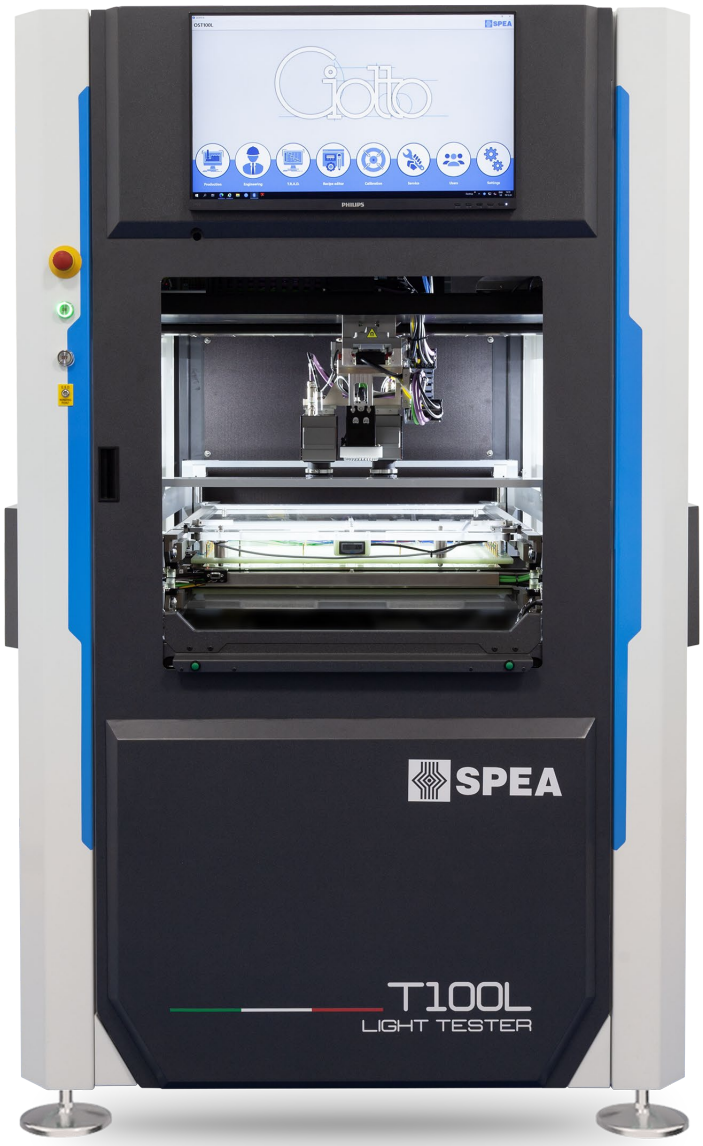
The T100L Automatic LED Light Tester is the ultimate test equipment for **high-volume production testing of LED light products**. Whether you are testing automotive products, lighting products, hi-density LED panels, or any other type of LED light device, the T100L can help identify defects and ensure quality.

With its advanced technology, the T100L can **quickly measure a wide range of light properties with superior accuracy**, including light intensity, color characteristics, spectrum, and more.

The integrated Flying Scanner technology **eliminates the need for expensive and complex single-product test fixtures** with fiber optics. The tester can simultaneously **acquire and process the parameters of each LED on a single acquisition**, providing exceptional performance, maximum adaptability, and lower cost of manufacturing.

The T100L is the complete testing solution that provides **repeatable and consistent test results** to bring your product to market faster and more efficiently while ensuring the highest quality standards.

- Automatic Light Test of LED Light Products
- Repeatable and Consistent Test Results
- Max Flexibility and Lower Cost-of-test
- Multi-product Fiberless Test Fixture
- Superior Light Measurement Accuracy
- High-speed Parallel Acquisition & Real-time Test
- Automatic Test Program Generation
- Industry 4.0 & Smart Automation Compliant



MAXIMIZE YOUR TESTING: AUTOMATIC & CONSISTENT TESTING FOR LED LIGHT PRODUCT

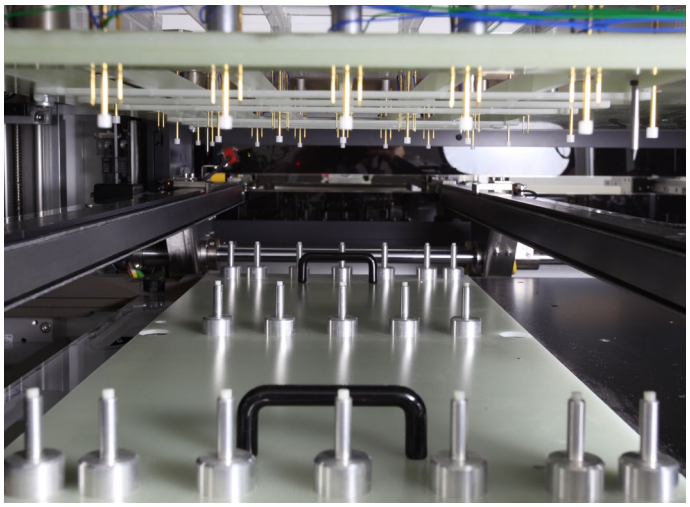
The T100L offers automatic testing capabilities that **eliminate the need for labor-intensive and error-prone manual testing**. This not only allows a **faster time-to-market** and **lower testing costs**, but also ensures **consistent and reliable test results**, giving you the confidence that your products meet industry standards and exceed customer expectations.

The T100L's automatic testing capabilities cover a **wide range of LED light products**, including automotive lighting, architectural lighting, industrial lighting, and consumer electronics. Its **flexibility and adaptability** mean it can handle testing for any type of LED light product, regardless of the industry or application.

WIDE RANGE OF TESTABLE LED LIGHT APPLICATIONS

- **Automotive Lighting** - Headlamps, Taillights, and Interior Lighting
- **Industrial Lighting** - Street Lights, High Bay Lights, and Flood Lights
- **Medical and Scientific Equipment** LED-based Lighting
- **Aviation and Aerospace Applications** LED-based Lighting
- **Consumer Lighting** - Desk Lamps, Table Lamps, and Ceiling Lights
- **High-density LED Panels** for Television and Computer Displays
- **LED-based Signs and Displays** for Advertising and Signage
- ... & More

GET MAXIMUM FLEXIBILITY AND SAVE COSTS WITH MULTI-PRODUCT FIBERLESS TEST FIXTURE



The T100L LED light tester offers **maximum flexibility** and **cost savings** with its fiberless, multi-product test fixtures.

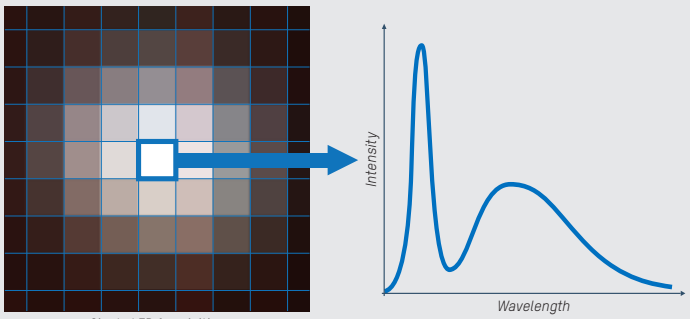
Traditional test fixtures for LED light testing often rely on **complex and costly optical fibers** to test individual LEDs, limiting the types of products testable with one fixture. Additionally, the complexity of these test fixtures leads to **higher development costs and a higher risk of failure** and maintenance.

The T100L, however, thanks to the fiberless multi-product test fixture, **eliminates the need for optical fibers**, allowing for **testing multiple LED light products**. The **fiberless test fixtures** are highly adaptable for the testing of a variety of LED products **regardless of their shape, layout, and number of LEDs**.[1] This not only helps to cut test application costs, but also **increases efficiency and time-to-market**, making it the perfect solution for high-volume productions of a broad range of lighting products.

UNMATCHED ACCURACY: WIDE SPECTRAL RANGE AND PIXEL-BY-PIXEL ANALYSIS

The T100L's Flying Scanner technology delivers a high level of diagnostics and in-depth analysis of a wide range of LED light products. With a **wide spectral range of 448 bands** in the visible and near-infrared spectrum, and a **resolution of 130µm x 130µm**, the tester is able to perform light and color tests with **exceptional accuracy in the range of 400-1.000nm**.

Additionally, the test system provides **pixel-by-pixel measurement and analysis** that enable unparalleled diagnostic capabilities through **granular-level testing and analysis of each pixel**'s spectrum and light properties. This level of precision and detail guarantees **consistent and reliable results**, giving you confidence in the quality and standards of your LED light products.



Single LED Acquisition

EXTENDED COVERAGE WITH COMPLETE LIGHT TESTING

The T100L can perform a wide range of light tests with extraordinary accuracy and in-depth diagnostic levels, ensure all light characteristics meet pre-defined specifications. Our tests include measurement of light intensity, color characteristics, spectrum, and more.

LIGHT INTENSITY TEST

- Light Intensity (100% Full Scale)
- Light intensity (Candle)
- Luminous Flux (Lumens)

ADDITIONAL TEST TECHNIQUES

- Functional Test
- Power-on Test
- Flashing

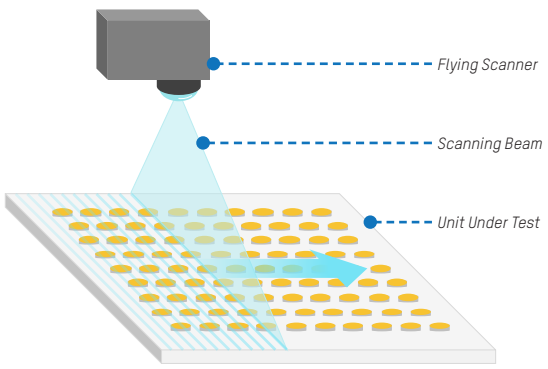
LIGHT COLOR TEST

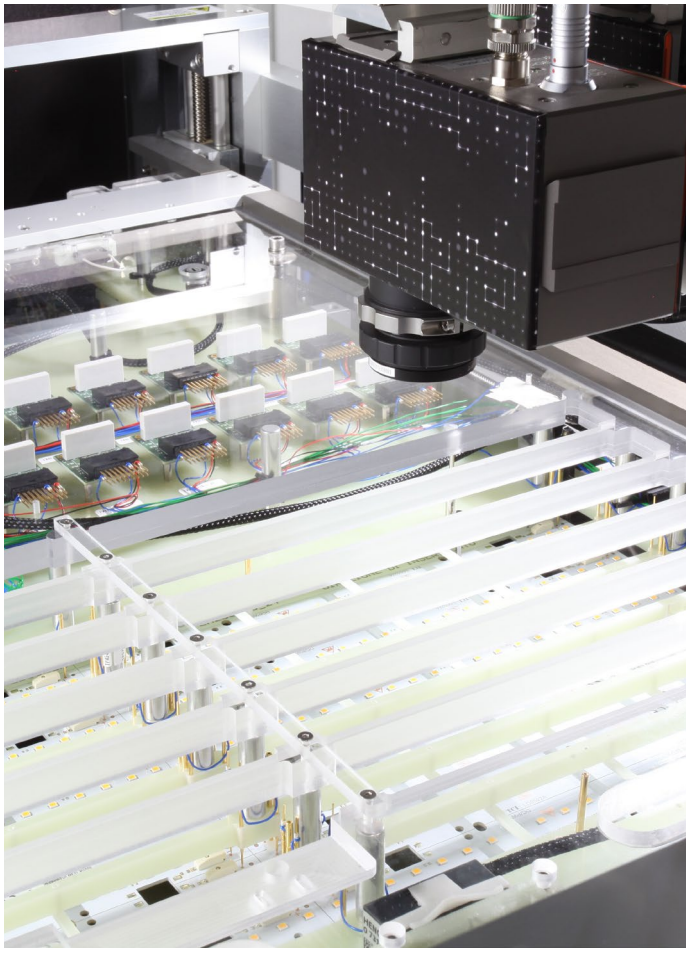
- HSL (Hue/saturation/luminance)
- Red/Green/Blue (% value)
- XY Coordinates (CIE 1931)
- CCT (Color Temperature)
- CRI (Chromatic Rendering Index)
- LED Binning
- Spectrum
- Dominant Wavelength

HIGH-SPEED ACQUISITION AND REAL-TIME TEST OF MULTIPLE LEDs WITH FLYING SCANNER TECHNOLOGY

The T100L's advanced **Flying Scanner technology** allows for efficient and fast light acquisition of a wide range of LED lighting products. The technology features up to **2x independent XY Flying Scanners** that can **capture the light image** of the entire surface under test or of a region of interest (ROI). With a scanning beam width of up to 240mm and a pixel resolution of 130µm x 130µm, each Flying Scanner can **test the most advanced LED technologies**, including mini-LEDs and multi-LEDs.

The high-speed scanning of 200mm/s enables **parallel acquisition of multiple light sources**, regardless of the number of LEDs on the device, and the ability to scan the entire surface or select specific regions of interest. This results in a **faster and more accurate testing process**. Furthermore, the Flying Scanner technology allows for **real-time testing**, where the tester processes and analyzes the acquired spectrum of each light source. This allows for **fast testing and immediate analysis of the results**, which helps to bring products to market faster and more efficiently.

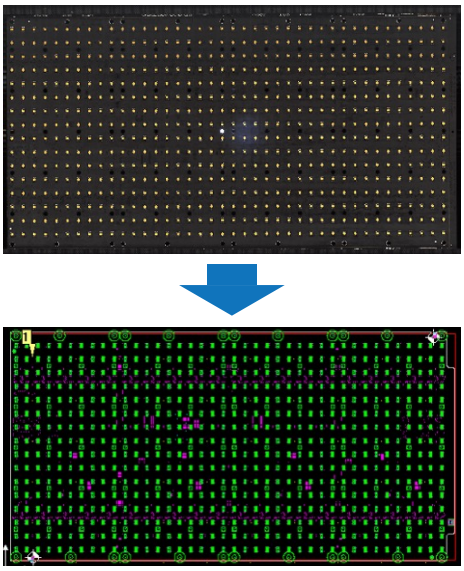




FAST AUTOMATIC TEST PROGRAM GENERATION

The T100L Automatic Test Operating System (ATOS), **GIOTTO**, simplifies the testing process for LED light products, providing a **simple and intuitive interface** for both skilled and non-skilled users.

Thanks to its **self-programming capabilities** and extensive library of pre-configured test methods, GIOTTO simplifies the test program development by automatically generating up to 95% of the **production-ready test program** from CAD files and test specifications, **saving valuable time and effort**.



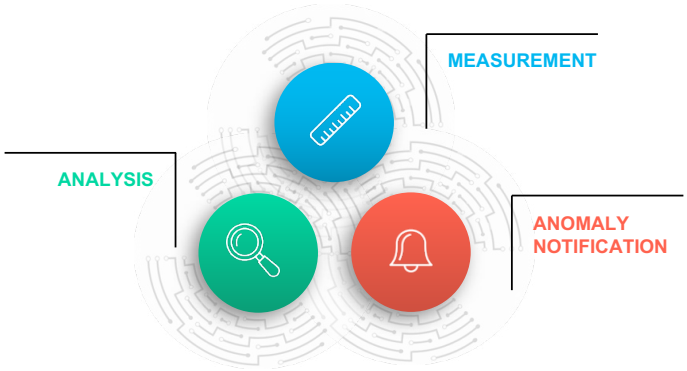
TESTER 4.0: CONNECTED TO THE DIGITAL FACTORY

The T100L is compliant with **Industry 4.0** and **Internet of Things (IoT) standards** and can exchange information, notifications, and commands with the **factory digital ecosystem**.

The test system provides **maximum autonomy** and **minimum operator intervention**. It features **full integration with the MES** via SECS/GEM, CFX, OPC UA, TEMS, and TCP/IP protocols for **remote monitoring and control** of the test equipment.

The T100L is made for **long-lasting, intensive use in production**. Internal sensors **monitor in real-time** the environmental condition and the internal parts to support **predictive maintenance, intercept defects**, and **estimate the remaining life** of its components.

On-board **diagnostics modules** perform the **simultaneous calibration of the instrumentation** without requiring additional dedicated tools, such as diagnostics fixtures.



Main Characteristics

EQUIPMENT CHARACTERISTICS

Flying Scanner No.	1 Top or 2 Top
Scanning Beam Width	1x Flying Scanner: 1x 240 mm or 1x 120 mm 2x Flying Scanner: 2x 240 mm or 2x 120 mm
Scanner Resolution	130 x 130 µm
Max Scanning Speed	200 mm/s
Spectral Range	400-1000 nm
Spectral Bands No.	448
Light Detection Mode	Visible Light, Near-infrared Light
Vision Camera Resolution	5 Mpx
Footprint (LxW)	1250 x 1250 mm (1.56 m²) 4.1 x 4.1 ft (17 ft²)

BOARD LOADING

Automatic Loading via Tester Conveyor	• From Production/SMD line, Conveyor, Rack Loader • Left-to-Right and Right-to-Left • Pass-Through and Pass-Back
Manual Loading	• Side loading via Tester Conveyor

TEST AREA

Max. UUT Size (L x W)[2]	600x610mm (23.6" x 24")
Max. Test Area (L x W)	600x600 mm (23.6" x 23.6")
Max. Component Height	150 mm (Top & Bottom)
Max. UUT Thickness	10 mm
Max. UUT Weight	3 kg

1. Fiberless Multi-product Test Fixtures can be used on different products designed according to Design for Testability (DFT)
2. For larger boards, please contact SPEA.

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kiwa certified
SISTEMA DI GESTIONE CERTIFICATO
UNI EN ISO 9001:2015
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SPEA
info@spea.com - www.spea.com