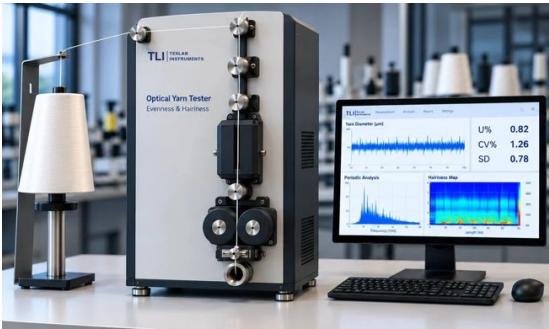


TXL-IPL-018 / 28 October 2026 · One-year manufacturer warranty

Optical Yarn Evenness and Hairiness Tester (OPTIYARN OPT01)

Optical diameter measurement at 0.5 mm intervals along the yarn; evenness (U%, CV%, SD), hairiness and filament anomaly analysis at 20–300 m/min. Spectrogram and periodic fault evaluation; statistics, PDF test reports and CSV data export in the external PC software.



Model technical data

1	Measuring speed: 20–300 m/min.
2	Measuring interval: 0.5 mm along the yarn.
3	Diameter and evenness: optical yarn diameter; U%, CV% and SD from the optical diameter signal.
4	Surface analysis: yarn hairiness and filament anomalies.
5	Periodic analysis: spectrogram and periodic fault evaluation.
6	Software and outputs: external PC software; PDF test reports and CSV data export.
7	Method references: ASTM D5647 (photo-electric yarn hairiness guide), ISO 139 (conditioning and testing atmosphere), ASTM D2258 (yarn sampling).
8	Evenness statistics are calculated from optical diameter data.

Physical specifications and utilities

Electrical supply	Approx. 220–240 V AC, 50/60 Hz, single phase; build-dependent.
Power / connected load	Approx. 100–300 W connected load for preliminary planning.
Overall instrument dimensions	Approx. 500 × 450 × 750 mm (W × D × H).
Instrument weight	Approx. 30–60 kg net.
Gross / shipping weight	Approx. 45–85 kg gross; estimated packing allowance.
Interfaces	External PC software; PDF test report and CSV data export.
Lab requirements	Conditioned laboratory atmosphere (per the selected method); workspace for the external PC.

Dimension order and approximate values are stated in each row. Packaging data are separate from instrument dimensions and net mass. Approx. rows are preliminary engineering estimates based on comparable equipment and function/capacity; they are not verified manufacturing measurements or standard requirements. Installation and shipment are finalised against the approved drawing and nameplate. Estimate scope: base product / one unit; external computer, bench and auxiliary plant excluded.

Specifications, dimensions, and power requirements are approximate and subject to change without prior notice for continuous design improvements.

Product technical specifications and images may vary according to manufacturing conditions and applicable standards.

Test and configuration

Measured output / function	Optical diameter evenness (U%, CV%, SD), hairiness and filament anomalies
Parameters selected for the method	Measuring speed, test length, measuring interval and conditioning
Verification points	Optical measuring channel, feed speed and reference specimen

Control and recording specification

Method-specific software and recording requirements follow. Delivered software modules are defined by the order scope.

- Method code and edition, specimen ID, operator and selected test parameters are linked to the record.
- The optical diameter signal, measuring interval, speed and test length are stored together with U%, CV%, SD, hairiness and spectrogram results.
- Raw measurements, units, valid/invalid test flags and the reported result remain traceable.
- Calculations are checked against known inputs and an independent calculation; sensor channels are checked against calibration values.

Related test methods

ASTM D5647 · ISO 139 · ASTM D2258

Listed methods are application references. Suitability is established by assessing hardware, method edition and calibration together.