



LCM-100

Launch Condition Meter



Product Overview

The Launch Condition Meter, LCM-100, is a convenient and compact benchtop instrument for scanning optical fibers. Use Santec's software to scan and easily plot far-field patterns. Compare to standard launch templates such as the IEC 61280-4-1 Encircled Flux standard.

The LCM-100 can be equipped with two internal LEDs with 850 nm and 1300 nm wavelengths. The internal 105/125 μm , 0.22 NA fiber allows for overfill testing in most applications.

The optical interface of the instrument accepts all standard 2.5 mm ferrules. Other connector sizes available upon request.

Features

- Far-field measurements
- Auto-alignment and focusing
- Mode Field Diameter measurements
- Software to compare to common launch condition templates such as Encircled Flux

Applications

- Fiber analysis
- Insertion loss source compliance testing
- R&D

Compliance

- IEC 60793-1-45 for MFD

LCM Optical / Electrical Specifications

Parameter	Specification	
	Far-field	
Scanning Range	± 0.5 NA (± 0.5 rad)	
Scanning Resolution	2.2 mrad	
Scanning Aperture	0.22 NA	
Receiver Sensitivity (dBm)	3 to -60	
Receiver Wavelength Range (nm)	850 to 1700 / 450 to 1100	
Optical Power Resolution	0.01 dB or 0.1%	
Measurement Linearity (dB)	± 0.05	
Scanning Speed (typical) (seconds)	30	10
Connector Interface	Universal 2.5 mm	
Internal LED (optional)		
Wavelength (nm)	850 / 1300	
Output Power (typical) (dBm)	-13	
Connector Interface	FC/PC	
Data Interface	USB	
Power Supply	Input: 90 - 264 V AC, 43 - 63 Hz	

Mechanical / Environmental Specifications

Parameter	Specification
Unit Dimension W x H x D (cm)	42.5 x 9.7 x 25.4
Operating Temperature ($^{\circ}\text{C}$)	0 to 50



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Far-field Measurements

The LCM-100 can perform far-field measurement of light distribution exiting a fiber. This analysis can yield the numerical aperture of a fiber. The far-field measurement can also be used to verify proper launch conditions for military standard launches such as AS100 or AS62 specified in ARP5061.

Auto-alignment and Focusing

Using the autoalignment and focusing feature of the LCM-100 system, a technician can easily verify that the system is properly focused and aligned to yield accurate and repeatable near-field measurements

Mode Field Diameter Measurements

Using the far-field scanning apparatus of the LCM-100 system, the mode field diameter can be measured for single-mode fibers per the reference method as defined in IEC 60793-1-45