



# 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  $\mu\text{m}$ , 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	$\pm 0.5$ NA ( $\pm 0.5$ 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)	$\pm 0.05$	
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



### Santec Regional Sales Offices

**Santec Japan Corporation**  
5823 Ohkusa-Nenjozaka, Komaki,  
Aichi, 485-0802, Japan  
Tel: +81-568-79-3536 | Fax: +81-568-79-1718

**Santec Europe Ltd.**  
99 Park Drive, Milton Park, Abingdon,  
Oxfordshire, OX14 4RY, UK  
Tel: +44-20-3176-1550

**Santec USA Corporation**  
400 Kelby Street, Suite 1501  
Fort Lee NJ 07024 USA.  
Toll Free: +1-800-726-8321

**Santec (Shanghai) Corporation Limited**  
21F Room H, Hua Du Bldg., No.838 Zhangyang Road  
Pudong District, Shanghai, 200122, China  
Tel: +86-21-5836-1261

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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