

Cascade Microtech, Inc.

SPECIFICATION SHEET



**Multi-configurable optical probe for
measurement and characterization
of photonic devices**

LWP

LWP Series Lightwave Probe

The LWP series of lightwave probes enable optical measurements for on-wafer and hybrid photonics devices. It features user-replaceable fiber pigtails allowing the probe to be optimized for a variety of light delivery and light collection applications including the characterization of topside illuminated photodiodes, Vertical Cavity Surface Emitting Lasers (VCSELs), hybrid transmitters and receivers, and LEDs.

The LWP probe can illuminate and collect optical signals used in the characterization of a variety of photonic devices. When combined with Cascade Microtech's probe stations and RF/DC probes, the LWP probe can provide modulation, spectral, time domain and low-level DC/CV measurements. The choice of field-replaceable fiber pigtail depends on the required illumination pattern or collection efficiency. The fiber pigtails are available as single-mode or multi-mode with either a lensed or cleaved end face. The lensed fiber pigtails provide high numerical aperture (NA) illumination and collect light with extremely low back-reflection. The lensed single-mode fiber can provide an illumination area as small as 5 μm . The multi-mode pigtails are well suited for high-efficiency collection of light.

FEATURES

- Field interchangeable fiber-type
- Optimized for Cascade Microtech probe stations
- Patented contact protection design
- Fiber-types optimized for a variety of applications
- Standard FC type fiber-optic connector

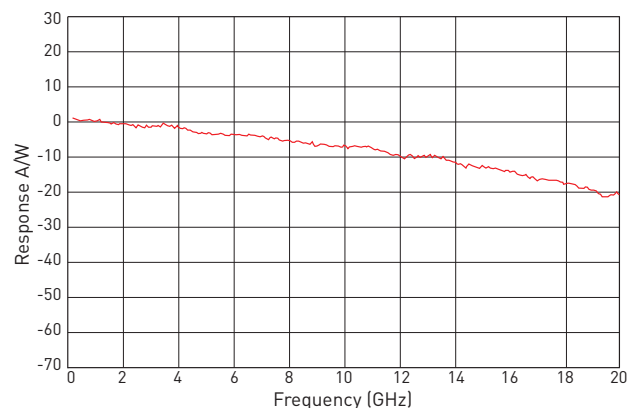
BENEFITS

- Brings test equipment capability to the wafer and substrate level
- Enables fast, accurate, and repeatable measurements
- On-wafer capability eliminates need to dice wafer before test and eliminates electrical parasitics for at-speed testing
- Makes wafer mapping and visual display of key parameters possible
- Standard FC type fiber-optic connector

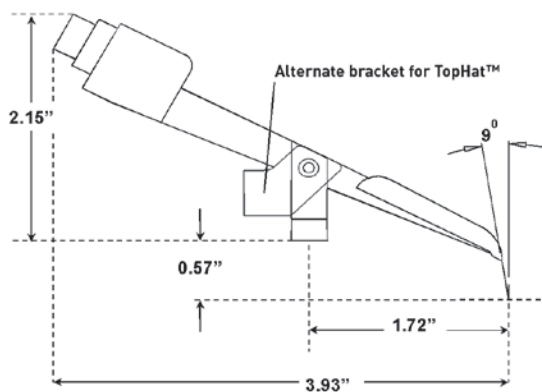
SPECIFICATIONS

| Fiber Type | Minimum Illumination Diameter | Wavelength | Numeric Aperture | Insertion Loss |
|------------------------------|-------------------------------|------------------|------------------|----------------|
| Cleaved single-mode (CLV-SM) | 25 μm | 1300 nm, 1550 nm | 0.13 | 0.5 dB |
| Cleaved multi-mode (CLV-MM) | 100 μm | 850 nm – 1550 nm | 0.28 | 0.5 dB |
| Lensed single-mode (LEN-SM) | 5 μm | 1300 nm, 1550 nm | NA | 0.5 dB |
| Lensed single-mode (LEN-MM) | 50 μm | 850 nm – 1550 nm | NA | 0.5 dB |

Responsivity measurement of an 80 μm photodiode using the LWP series lightwave probe and the Agilent Technologies 83420A Lightwave Test Set



DIMENSIONS



ORDERING INFORMATION

PART NUMBERS

| | Probe* with Fiber | | Replacement Fibers | |
|-------------|-------------------|--------------|--------------------|--------------|
| | Cleaved Fiber | Lensed Fiber | Cleaved Fiber | Lensed Fiber |
| Single mode | LWP-CLV-SM | LWP-LEN-SM | FT-CLV-SM | FT-LEN-SM |
| Multi mode | LWP-CLV-MM | LWP-LEN-MM | FT-CLV-MM | FT-LEN-MM |

*Probe orders include:

Two eyepiece filters for safe viewing of CDRH Class-1 laser sources for wavelengths of 800 nm -1550 nm.

Alternate mounting bracket for use with Summit™ series probe stations (AP/M models with MicroChamber®).

© Copyright 2010 Cascade Microtech, Inc.
All rights reserved. Cascade Microtech and MicroChamber are registered trademarks, and Summit and TopHat are trademarks of Cascade Microtech, Inc. All other trademarks are the property of their own respective owners.

Data subject to change without notice

LWP-SS-0110

Cascade Microtech, Inc.
toll free: +1-800-550-3279
phone: +1-503-601-1000
email: cmi_sales@cmicro.com

Cascade Microtech GmbH
phone: +49-811-60005-0
email: cmg_sales@cmicro.com

Cascade Microtech Japan
phone: +81-3-5615-5150
email: cmj_sales@cmicro.com

Cascade Microtech Shanghai
phone: +86-21-3330-3188
email: cmc_sales@cmicro.com

Cascade Microtech Singapore
phone: +65-6873-7482
email: cms_sales@cmicro.com

Cascade Microtech Taiwan
phone: +886-3-5722810
email: cmt_sales@cmicro.com

www.cascademicrotech.com

