



LM-65



DEVICE

65 GHz Lightwave Modulator

OVERVIEW

The Optilab LM-65 is a high performance lightwave modulator with an operational bandwidth beyond 65 GHz. It offers an ideal choice to characterize electro-optical components and provides excellent compatibility with the Keysight/Agilent network analyzers. The LM-65 is an ideal measurement solution for analog photonic applications beyond 60 GHz. By adding the Lightwave Detector, LD-65, the unit becomes a full Lightwave Component Analyzer, LCA-65. The instrument is traceable to international standards and provides guaranteed specifications for electro-optical measurements. Contact Optilab for more information.

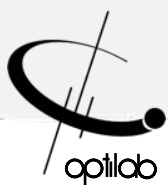
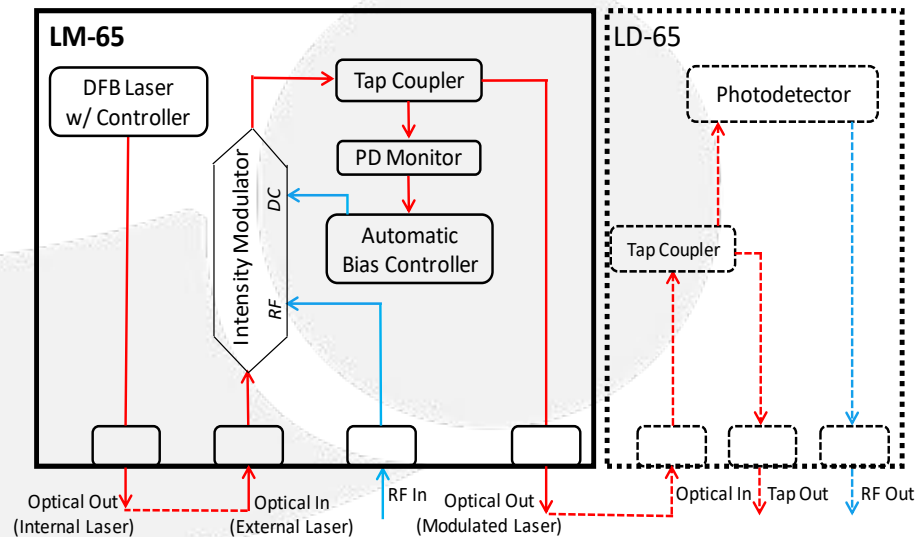
FEATURES

- Over 65 GHz Operational Bandwidth
- Full VNA Compatibility
- Touchscreen LCD & USB Interface
- Built-in Tunable Laser
- Optional Narrow Linewidth Laser
- Optional Power Monitoring

USE IN

- High-Speed Component Characterization
- EO / OE Measurement
- Fiber Channel & CATV Transmission System
- RF Over Fiber
- Research and Development
- Lab Instrument

FUNCTION DIAGRAM





LM-65

SPECIFICATIONS

Internal Laser Wavelength	1550 nm (customizable)
Internal Laser Output Power	Up to 50 mW (adjustable)
Internal Laser Linewidth	≤ 1 MHz (customizable)
Internal Laser SWSR	≤ 40 dB
Internal Laser RIN	≤ -150 dB/Hz
Modulator Bandwidth	≥ 60 GHz
Modulator Return Loss	≤ -10 dB
Modulator Input Impedance	50 Ω typical
Modulator RF V _π	2.8 V typical @ 10 GHz 5.0 V typical @ 60 GHz
Modulated Output Power	≥ 5 mW

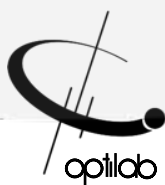
GENERAL

MECHANICAL

Operating Temperature	+5°C to + 35°C
Storage Temperature	-40 °C to +70 °C
Operating Humidity	15% to 80% Relative Humidity
Power Supply	110/220 VAC
Optical Input Fiber	Panda PM 1550
Optical Output Fiber	SMF-28
Optical Connectors	Diamond ADT UNI APC (customizable)
RF Port Connectors	NMD ruggedized 1.85 mm female (customizable)
Control Interface	Touchscreen LCD & USB 2.0
Assembly Dimension (H x W x D)	5.3" x 17.3" x 23.8"
Recommended Calibration Period	1 year

OPTIONAL PD SPECS

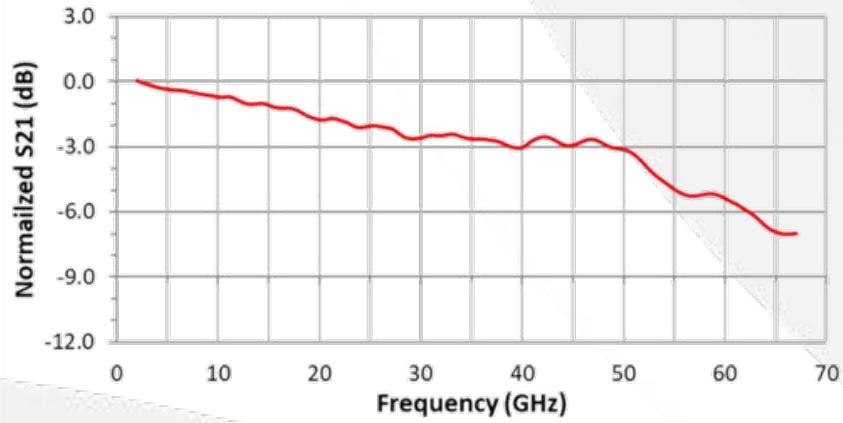
PD Operating Wavelength	1200 nm to 1650 nm
PD Bandwidth	≥ 60 GHz
PD Responsivity	0.5 A/W typical
PD S22 Characteristics	≤ -10 dB
PD Dark Current @ 25°C , -5V	10 nA typ. 100 nA max.



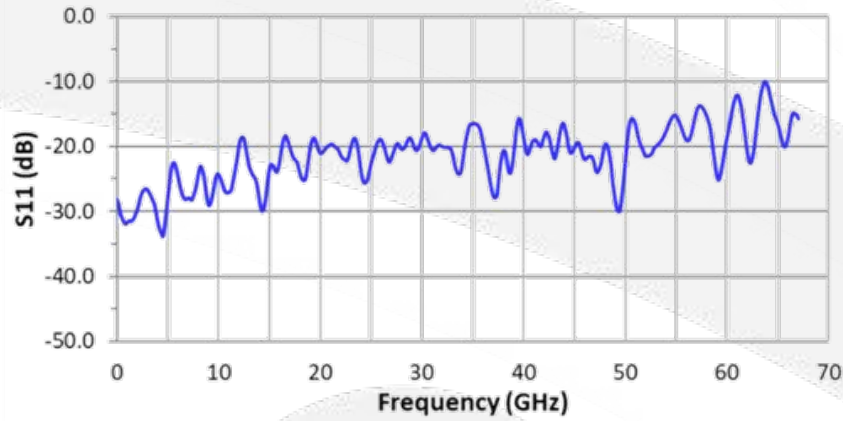


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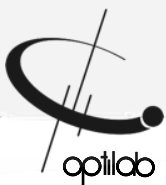
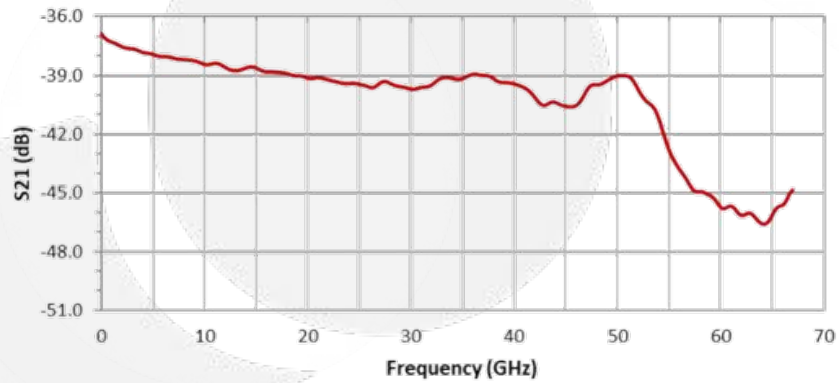
TYPICAL MODULATOR
S21 RESPONSE



TYPICAL MODULATOR
S11 RESPONSE



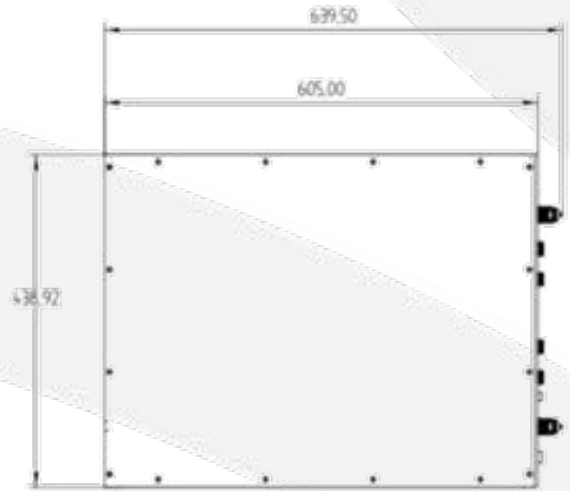
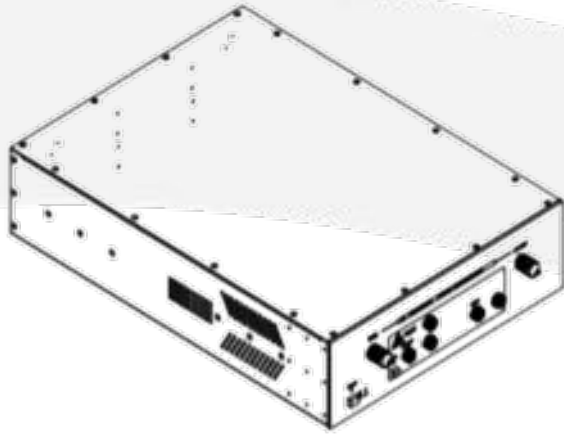
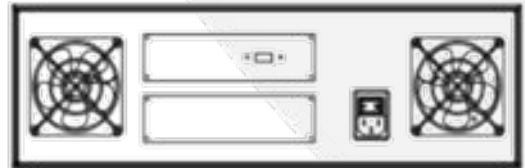
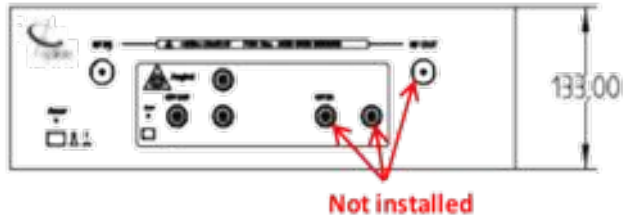
TYPICAL LINK GAIN
WITH OPTILAB PD-50





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MECHANICAL DRAWING



Unit: mm

