

Data Sheet

1FINITY L160 Backward Raman Amplifier

Scalable high-performance, future-proof, long-range optical amplification

1FINITY™ L160 Blade at a Glance

- Compact 1RU amplifier blade
- Designed for high Optical Signal-to-Noise Ratio (OSNR) performance
- Solves the specific challenges of long-reach spans
- Supports C- and L-band amplification on the same blade
- C-band pumps support C-band applications and configurations today, with support for C- and L-band in a future release
- Operational with the L130 today, and the L100 and L200 blades in a future release



Product Overview

The 1FINITY L160 is a carrier-grade backward Raman optical amplifier blade, designed for high Optical Signal-to-Noise Ratio (OSNR) performance. The blade is especially well suited to long-reach optical network spans. The versatile L160 can be deployed in combination with the L130 today, with support for the L100 and L200 blades upcoming in a future release. 1FINITY L160 operations and management are fully integrated with the 1FINITY L130 blade.

From an operational standpoint, the L160 is fully integrated with the L130, with future releases planned to support the L100 Lambda series. As with the whole 1FINITY range, the L160 is a key building block in simple, scalable optical networks that easily accommodate rapid growth. High OSNR Performance and C- and L-band amplification

The L160 works in combination with the L130 blade to increase span reach. Deployed without the L160, the L130 span loss is 0–34 dB. When combined with the L160, the span loss changes to 16–35.5 dB for high OSNR performance.

Hardware support for C- and L-band amplification is built directly into the blade. Today, C-band pumps support C-band applications and configurations. In-service L-band amplification C- and L-band can be added on the same blade in a future release.

1FINITY CDC ROADM Solution

To stay competitive, operators need the flexibility to start small to reduce CAPEX, while maintaining the flexibility to scale to meet unpredictable growth. They must also leverage new technologies without compromising budget or margins. For operators facing limits to C-band capacity, L-band expansion is a game-changer.

The 1FINITY CDC ROADM solution is ideal for creating flexible ROADM networks with centralized software that supports autonomous control and management, such as the Virtuora® NC Solution. With CDC ROADM technology and flex-grid architecture, the solution provides optimal flexibility at the optical layer.

The 1FINITY CDC ROADM solution comprises four blades.

- 1FINITY L130 32-port CDC ROADM blade
- 1FINITY L140 8-degree × 24 CDC add/drop blade
- 1FINITY L220 4-degree × 28 CDC add/drop blade
- 1FINITY L160 backward Raman amplifier blade

Technical Specifications

Base System	
System Configuration	1RU Raman amplifier blade
Local Management Port (LMP)	1 × RJ-45
Management Port (LCN)	100/1000BASE-T, 1000BASE-SX/LX10
Front LEDs	System Status, Alarm, Port, Find Me
Fans	3 replaceable fans
Power Supply	DC -48 V
Management	
Via L130	Fully integrated with and managed from L130
Physical Characteristics	
Blade Physical Dimensions (H × W × D)	1.75 × 19 × 17.72" (482 × 545 × 42.5 mm)
Rack Compatibility	19" and 23", 2- and 4-post
Supported in Housing	Yes
Weight	19.8 lbs (9 kg) without fans Fans: 0.28 lbs (126 g) *2
Operating Environment	
Operating Temperature	+5 to +40 °C
Operating Humidity	5% to 85%
Power	
Power Supply	Dual-feed, fixed DC power supply
120 V AC	No
-48 V DC	-40 V DC to -57 V DC
Power Consumption	127.4 W (typical)

Regulatory and Compliance	
FCC	FCC Part 15, Class A
NEBS	NEBS Level 3
UL/CSA	UL/IEC60950-1, UL/IEC62368-1
CE	CE
RoHS	RoHS
CISPR	CISPR 24 & CISPR 32
ETSI	EN 300-019, EN 300-132, EN 300-753, EN 300-386
WEEE	WEEE
RCM	RCM
CDRH	FDA CDRH
ROADM Capacity and Functions	
Span Loss	In combination with L130: <ul style="list-style-type: none"> • 16–35.5 dB (SMF) • 16–36 dB (TWRS/TWC) • 16–36.5 dB (ELEAF/OLEAF, DSF)

**LASER SAFETY
CLASSIFICATION & CAUTION**
Compliant with IEC/EN
60825-1, -2 laser standards

CLASS 1M CAUTION
Invisible laser radiation
Do not view directly with optical instruments
Class 1M laser product

HAZARD LEVEL 1M CAUTION
Hazard level 1M laser radiation
Do not view directly with non-attenuating optical instruments

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