



BOS Optical Transmitter

1 GHz RF Spectrum

The laser transmitter is the latest cutting-edge technology from CommScope's BOS portfolio. This addition to the BOS product line is a result of our commitment to supporting service providers with a complete end-to-end FTTx solution from the electronics in the headend or central office to the outside plant passive devices to the optical network unit at the customer premise.

The BOS Laser Transmitter is an innovative "chirp-free" transmitter with the distance independent performance of external modulation, making it well suited for Radio Frequency over Glass (RfOG) applications. Both the standard one-wavelength transmitter and the four-wavelength transmitter come in a 1-RU 19" housing. Each wavelength supports a 1 GHz RF spectrum (50 – 550 MHz analog, 550 – 1002 MHz digital). In addition to an SBS threshold of up to 19 dBm, into 20 km of fiber, this transmitter also provides exceptional CNR, CSO, and CTB performance.

- Multiple wavelengths in one unit
- SBS Suppression
- Front panel RF test points
- Support for various link lengths



Broadband Solutions

760151134 | BOS-TX-05-0033-LSANA-SC

Optical Transmitter, 5 dBm output, ITU 33, standard SBS, AGC, ac powering, SC/APC connectors, one optical output

Optical Specifications

ITU Channels	33
Output Ports, quantity	1
SBS Threshold	14 dBm into 45 km
Distortion Performance (CNR), minimum	47 dB
Distortion Performance (CSO), maximum	60 -dBc (relative to carrier)
Distortion Performance (CTB), maximum	63 -dBc (relative to carrier)
Distortion Performance Note (CNR)	With 77 NTSC channels plus 75 QAM, up to 40 km of fiber -5 dBm received power into analog receiver with noise current density <5pA/sqrt(Hz), with EDFA
Distortion Performance Note (CSO)	With 77 NTSC channels plus 75 QAM, up to 40 km of fiber -5 dBm received power into analog receiver with noise current density <5pA/sqrt(Hz), with EDFA
Distortion Performance Note (CTB)	With 77 NTSC channels plus 75 QAM, up to 40 km of fiber -5 dBm received power into analog receiver with noise current density <5pA/sqrt(Hz), with EDFA
Output Power per Wavelength	5 dBm
Wavelength on ITU Channels at 100 GHz Spacing	1550.92 nm (ITU 33)

Rf Specifications

Flatness at Frequency Band, typical (Peak to Valley)	0.8 dB @ 50–550 MHz 1.2 dB @ 50–1002 MHz
Input Level at Broadcast Port, AGC mode	18 dBmV
Input Level at Broadcast Port, MGC mode	15 dBmV
Input Return Loss, typical	16 dB
Operating Frequency Band	50–1002 MHz
Set-point Offset Range, nominal, AGC mode	±2.0 dB
Test Point Flatness, typical	±0.8 dB
Test Point Level (Analog), typical	-2.0 dBmV

Electrical Specifications

Voltage Range	85–240 Vac
Electrical Safety Standard	c-UL-us CE US FCC Part 15A
Power Consumption, maximum	80.0 W

Environmental Specifications

Operating Temperature	0 °C to +50 °C (+32 °F to +122 °F)
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Mechanical Specifications

Communications Port Interface	RJ45
Optical Port Interface	SC/APC Female

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RF Port Impedance	75 ohm
RF Port Interface	F Female
Serial Port	RS-232

General Specifications

Brand	BOS®
Rack Type	EIA 19 in
Rack Units	1
Warranty	One year

Dimensions

Depth	431.80 mm 17.00 in
Height	44.45 mm 1.75 in
Net Weight	8.16 kg 18.00 lb
Width	482.60 mm 19.00 in

Regulatory Compliance/Certifications

Agency	Classification
ISO 9001:2008	Designed, manufactured and/or distributed under this quality management system

* Footnotes

Distortion Performance (CNR), minimum	CNR—Composite Carrier to Noise Ratio
Distortion Performance (CSO), maximum	CSO—Composite Second Order
Distortion Performance (CTB), maximum	CTB—Composite Triple Beat
Distortion Performance Note (CNR)	CNR—Composite Carrier to Noise Ratio
Distortion Performance Note (CSO)	CSO—Composite Second Order
Distortion Performance Note (CTB)	CTB—Composite Triple Beat
Input Level at Broadcast Port, AGC mode	AGC—Automatic Gain Control; 80 analog channels +73 QAM at 6 dB below analog channels
Input Level at Broadcast Port, MGC mode	MGC—Manual Gain Control; 80 analog channels +73 QAM at 6 dB below analog channels
SBS Threshold	SBS—Stimulated Brillouin Scattering