

ONU - 1.2 GHz Optical Node for HFC & RFoG

LBN220 SERIES

LINDSAY
BROADBAND

Lindsay's LBN220 ONU is a tough, indoor/outdoor-hardened optical node offering single or dual high RF outputs for HFC, RFoG and MDU architectures. Advanced GaAs FET technology achieves superior distortion performance to 1.2 GHz, with low power consumption.

This low noise optical node comes complete with optical AGC, an automatic switching mode power supply, HFC-powered 40-90 VAC or 100-240 VAC mains-powered, all in a 15 PSI pressure tested housing. Unique onboard EQ allows slope/tilt setup by use of a simple resistive attenuator, greatly reducing operational expenses.

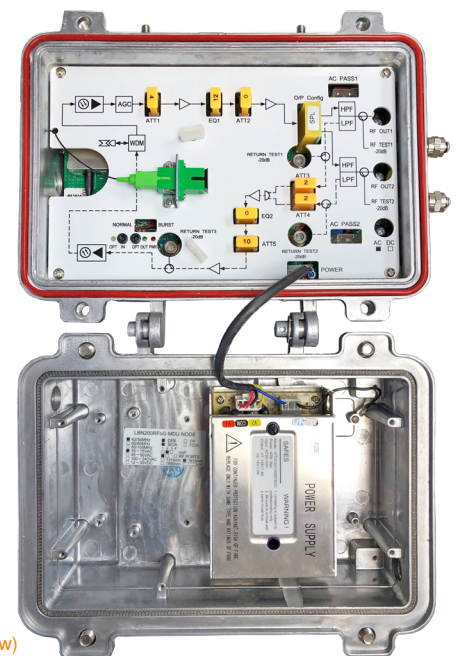
The LBN220 ONU offers flexibility in choice of wavelength, laser types and band splits to meet all applications.



LBN220
(front view)

FEATURES

- High RF output level 52/48 dBmV for 1-port/2-port
- GaAs FET technology provides low distortions & power consumption
- Downstream bandwidth: 54/85/102 MHz to 1.2 GHz
- Upstream bandwidth: 5 MHz to 42/65/85 MHz
- Extended optical input level range: -8 to 0 dBm
- 1310, 1610 or CWDM; DFB burst return laser options
- Built-in microprocessor controlled AGC tracks input optical level changes
- Optical receiver input & output transmit indicator LEDs & test point
- Weather-sealed, diecast aluminum housing
- Efficient switch mode power supply
- HFC-powered 40-90 VAC or 100-240 VAC mains-powered



LBN220
(open view)

ORDERING INFORMATION

	# of Outputs	Powering ⁽¹⁾	TX Power	Laser Type	Tx Wavelength	Optical Connector	Sub-Split	Power Adapter	# of Fibers
LBN220	X	X	X	D	XX	SA	XX	XX	X
	1 = one output	H = 40-90 VAC (HFC-powered)	2 = 2 mW	DFB	31 = 1310 nm	SC/APC	45 = 42/54	00 = None	S = Single (WDM)
	2 = two outputs	M = 100-240 VAC (mains)	3 = 3 mW		47 = 1470 nm		68 = 65/85	01 = N. America	
					49 = 1490 nm		81 = 85/102	02 = Europe	
					51 = 1510 nm				
					53 = 1530 nm				
					55 = 1550 nm				
					57 = 1570 nm				
					59 = 1590 nm				
				61 = 1610 nm					

EXAMPLE:

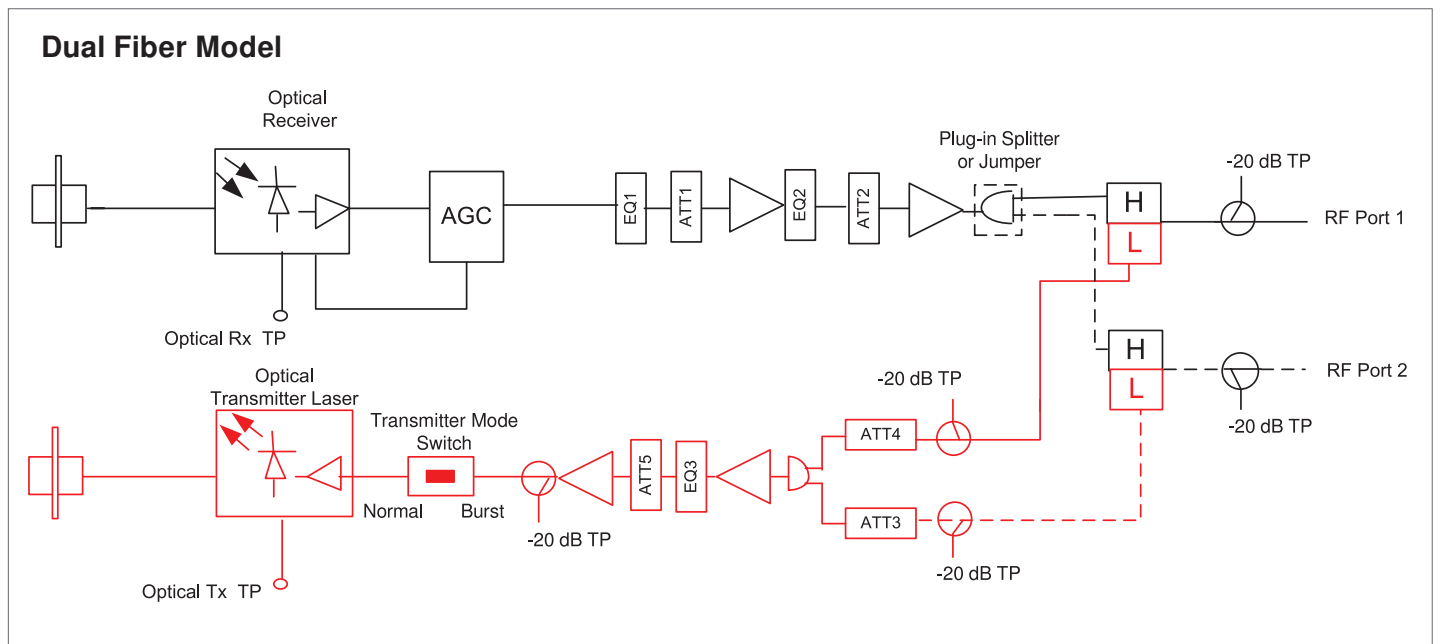
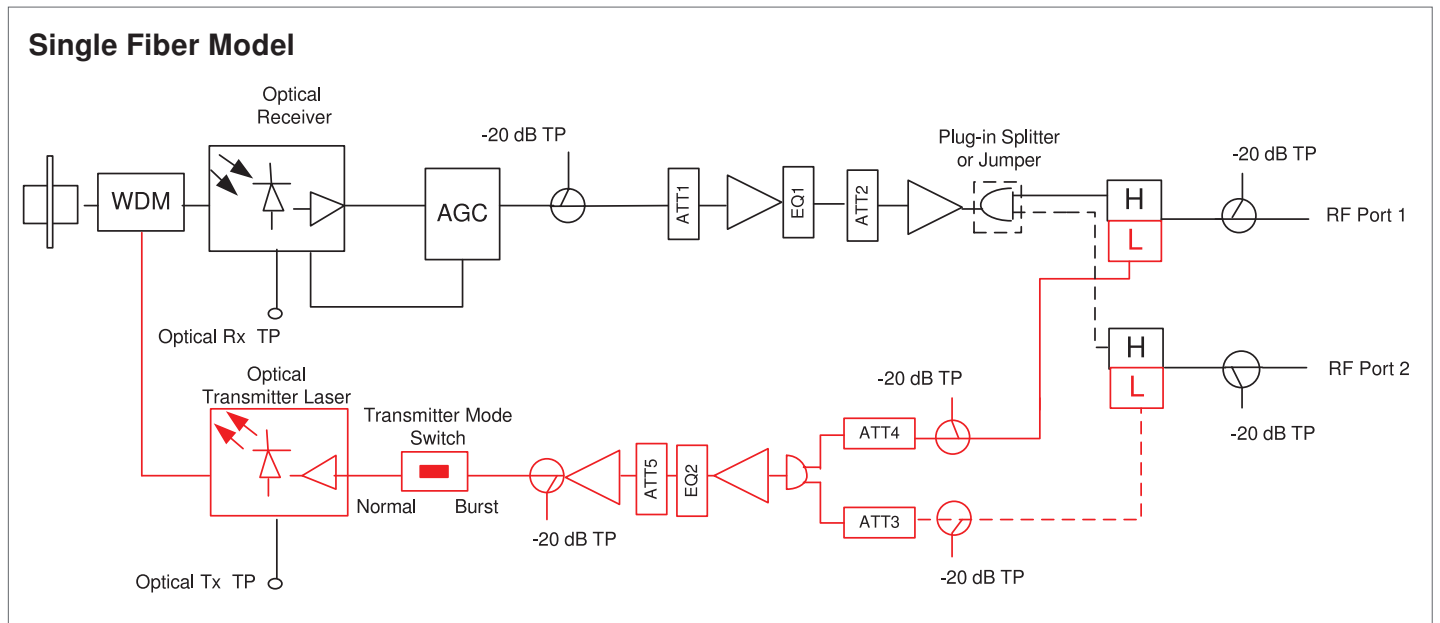
Part # LBN220-2M2-D31-SA-68-02-S

Indoor/outdoor, RFoG/HFC ONU; dual output ports 1218 MHz, 100-240 VAC (mains), 2 mW DFB transmitter, 1310 nm wavelength, SC/APC connectors, 65/85 splits, N. American power adapter, single fiber

NOTE:

(1) For mains-powered in North America, select H for Powering & 01 for Power Adapter

FUNCTIONAL SCHEMATICS





SPECIFICATIONS

Parameter	Minimum	Typical	Maximum
Forward Receiver			
Optical Wavelength	Normal Dual Fiber	1270-1610 nm	
	Optional WDM	1540-1565 nm	
Monitor Voltage		1 V/mW	
Optical Input Power (optical AGC)	-8 to 0 dBm		
Frequency Range (optional) ⁽¹⁾	54 MHz		1218 MHz
Flatness of Frequency Response (f = 54-1218 MHz)		±0.75 dB	
Output Return Loss	16 dB		
Reference Output Level (1-port/2-port)	52/48 dBmV		
Slope (0-18 dB adjustable)		12 dB	
Optical Input Return Losses	45 dB		
C/N ⁽²⁾	50 dB	51 dB	
CTB ⁽²⁾			-65 dB
CSO ⁽²⁾			-60 dB
Return Transmitter			
Optical Wavelength	1310 nm, 1610nm, or CWDM		
Optical Output Power		2 mW	3 mW
RF Input Level	20-40 dBmV		
Dynamic Input Range (NPR ≥ 38)		20 dB	
Frequency Range (optional)	5 MHz		42 MHz
Flatness of Frequency Response (f = 5-42 MHz)		±1 dB	
Input Return Loss (f = 5-42 MHz)	16 dB		
Optical Output Return Loss	45 dB		
Power at which Laser Turn ON ⁽³⁾		10 dBmV	
Power at which Laser Turn OFF ⁽³⁾		-4 dBmV	
Power, Environmental & Physical			
Total Power Consumption (100-240 VAC or 40-90 VAC)		≤20 W	
Operating Humidity	5-95%, non-condensing		
Operating Temperature	-40 °C to +60 °C (-40 °F to +140 °F)		
Dimensions (H x W x D)	8.0"H x 10.5"W x 4.8"D (20.3H x 26.7W x 12.1D cm)		
Weight	4.9 lb (2.2 kg)		

NOTES:

- (1) 42/54 MHz (other options = 65/85 MHz; 85/102 MHz)
- (2) -1 dBm optical input; 3.5% OMI/ch; 79 ch NTSC; digital ch above 550 MHz at -6 dB offset
- (3) Burst-mode parameters can be adjusted to customers' requests

<https://www.go2mhz.com/product/optical-node-for-hfc-rfог-2/>



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