

Features and Benefits

Entry level member of the Olson Technology's Premise-Node family offers high sensitivity, no frills, and low cost.

- Receive only indoor optical node for fiber-deep FTTX/PON CATV applications.
- Wide optical input window of 0 to -8dBm at 1310/1550nm.
- High RF output range: +28dBmV @ -1dBm optical input and +14 dBmV @ -8 dBm optical input.
- Full forward path bandwidth of 40 - 1220 MHz with low noise and distortion.
- Calibrated DC test point for optical input power (1V/mW).
- Tri-colored LED indicates optimal input range and power on.
- +12 V_{DC} for local or remote "up-the coax" powering via a Power Inserter Coupler (PIC).
- 6kV surge tolerant RF output and SMT construction for consistency, reliability, and performance.
- Low power consumption.
- New compact, light-weight, rugged cast aluminum housing for easy installation.
- Optional PON bypass available

The Olson PremiseNode OTPN-412C Optical Node is a lowcost, compact, indoor CATV receive-only node in a cast Aluminum housing. It is designed with the latest optical receiver technology to reliably deliver a full slate of multiplexed video, data, and telephony services in an HFC (hybrid fiber/coax) or PON (passive optical network) broadband CATV environment.

The Model OTPN-412C is ideal for direct fiber transmission of CATV RF signals in FTTH, FTTx, MDU, corporate, government, educational, and other applications where a high performance, compact indoor node is required. The unit is constructed with high quality components to enable it to meet its performance specifications over a wide temperature range in an uncontrolled environment, but it does require protection from the elements. It is designed for desktop, shelf or wall-mounting.

The Model OTPN-412C offers good optical sensitivity, high RF output level, optical input power DC test point and optical level LED indicator. The unit includes a provision for flexible powering of the node, either locally through the DC Power IN "+12V" port, or remotely up the coax drop DC through the "RF OUT/+12V" port via an optional Power DC Inserting Coupler (PIC). The OTPS-12A-F ships with the unit.

The OTPS-12A-F consists of a +12V/1.5A AC/DC power supply and a "F" connector adapter. The Model OTPN-412C is the perfect companion to the Olson Technology, Inc. LaserLite and LaserPlus forward transmitter product families. It is also designed to mate with 1310nm, 1550nm, CWDM and DWDM optical transmitters from most leading manufacturers.



Advanced Optical Components

Optical and Signal Characteristics (with SM 9/125µm Fiber)				
	Min	Type	Max	Units
Operating Wavelength	1270		1610	nm
Optical Input Power	-8		0	dBm
Optical Return Loss	-55			dB
Optical Input LED				
Orange			-8	dBm
Green	-8		-1	dBm
Red	-1			dBm
Optical Connector (Std.)		SC/APC		
Optical Connector (Option)		FC/APC		
Optical Input Power TP	1V/mW (external)			

Electrical and Environmental Characteristics				
	Min	Type	Max	Units
Power Supply Voltage	+11	+12	+13	V _{DC}
Current Draw		300		mA
DC Ripple Tolerance			50	mV
Power Dissipation		3.5	5	W
Operating Temp. Range	0		+70	°C

(1) Via Power Supply Model OTPS-12A-F.

RF Output and Performance Characteristics				
Receiver	Min	Type	Max	Units
Frequency Range	40		1,220	MHZ
Flatness	-1		+1	dB
Optical Level (@ -1dBm) (1)		+28		dBmV
Optical Level (@ -8dBm) (1)		+14		dBmV
Return Loss		14 75		dB
Impedance				Ohms
CNR (@ -2dBm Opt. In) (1)	52			dB
CNR (@ -6dBm Opt. In) (1)	48			dB
CSO (@ -2dBm Opt. In) (1)		-59		dBc
CTB (@ -2dBm Opt. In) (1)		-62		dBc

(1) Typical; measured with 0dB slope; +8dBm optical transmitter with OMI at 2.8% and 77 NTSC channel loading to 550MHz and digital loading from 550 to 1,220MHz at -6dB below analog signals.

Physical Characteristics				
	Min	Type	Max	Units
Weight		11.0		oz.
		0.31		kg
Dimensions (H x D x W)	3.05 x 6.96 x 0.975			in.
	7.75 x 17.67 x 2.48			cm



Ordering Information	
OTPN-412C	PremiseNode (40-1,220MHz), Receive Only, +28dBmV @ -1dBm, SC/APC Optical Connector
	The OTPN-412C comes with an OTPS-12A-F power supply - See Below for details
OTPS-12A-F	Power Supply and "F" Connector Adapter, 110/220 Volts AC => +12 Volts/1.5A DC
OTPS-12A-PIC	Power Supply and Power Inserter Coupler, 110/220 Volts AC => +12 Volts/1.5A DC
OTLL-SCFCKIT	Optical Connector Adapter Kit, SC/APC to FC/APC

All Specifications Subject To Change Without Notice