

PremiseNode Model OTPN-400C

Receive Only Optical Node

Features / 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 FTTH/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 40-1,000MHz 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.



The Olson *PremiseNode* OTPN-400C Optical Node is a low-cost, 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-400C is ideal for direct fiber transmission of CATV RF signals in FTTH, FTTH, 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-400C 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_{DC}" port, or remotely up the coax drop through the "RF OUT/+12V_{DC}" port via an optional Power 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-400C 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.

**Optical and Signal Characteristics
(with SM 9/125µm Fiber)**

| | Min | Typ | 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) | | | |

RF Output and Performance Characteristics

| Receiver | Min | Typ | Max | Units |
|-----------------------------|-----|-----|-------|-------|
| Frequency Range | 40 | | 1,000 | MHz |
| Flatness | -1 | | +1 | dB |
| Optical Level (@ -1dBm) (1) | | +28 | | dBmV |
| Optical Level (@ -8dBm) (1) | | +14 | | dBmV |
| Return Loss | | 14 | | dB |
| Impedance | | 75 | | 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 |

Electrical and Environmental Characteristics

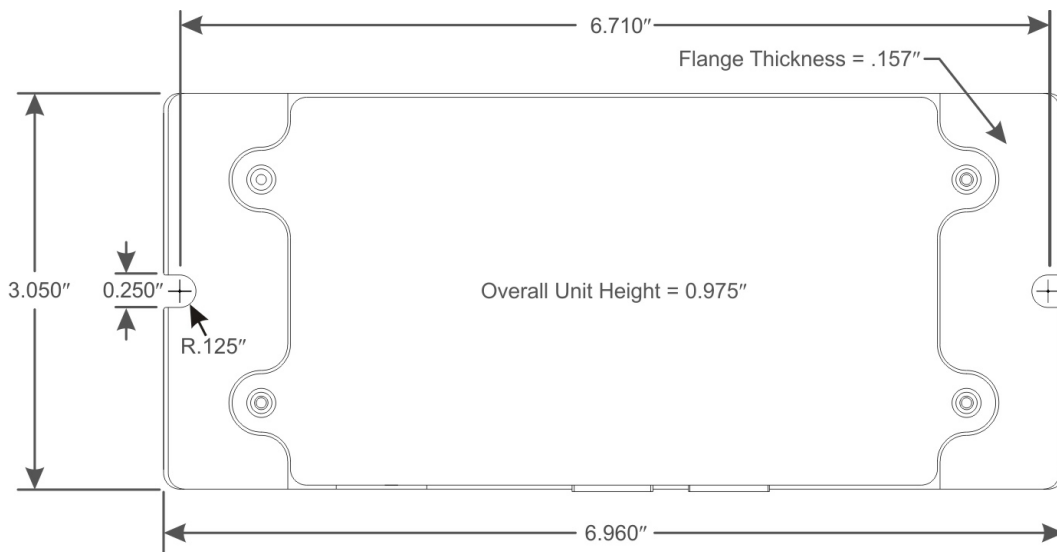
| | Min | Typ | Max | Units |
|--------------------------|-----|-----|-----|-----------------|
| Power Supply Voltage (1) | +11 | +12 | +13 | V _{dc} |
| Current Draw | | 300 | | mA |
| DC Ripple Tolerance | | | 50 | mV |
| Power Dissipation | | 3.5 | 5 | W |
| Operating Temp. Range | 0 | | +70 | °C |

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

(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 1,000MHz at -6dB below analog signals.

Physical Characteristics

| | Min | Typ | 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-400C | PremiseNode (40-1,000MHz), Receive Only, +28dBmV @ -1dBm, SC/APC Optical Connector |
| | The OTPN-400C 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 |