PremiseNode

CUSTOMER PREMISES HFC/PON OPTICAL NODE/RECEIVER
with OPTIONAL RETURN TRANSMITTER OPTN-1200C-H/L

Features and Benefits

- *Mid-Level member of the OT PremiseNode family: Cost-Effective, Full-Featured, Field-Upgradable*
- *Choice of two (2) RF Output Levels ("H" @ +38dBmV -or- "L" @ +28dBmV) @ -1dBm optical input*
- *"H" Version: incorporates internal Plug-in Equalizer for Slope control; 6dB @ 1,220MHz standard*
- *"H" Version: utilizes RF Output Level adjustment via internal user-adjustable variable attenuator. This version provides the full output level of +38dBmV at any optical input level from -8dBm to +2dBm.*
- *"L" Version: No Slope or RF Output Level controls (i.e. Slope = 0dB and RF Out varies with Optical Input) Wide Optical Input Window (+2dBm to -8dBm) @ 1310/1550nm*
- *Full CATV Forward Path Bandwidth to 1,220MHz (Analog and QAM Digital)*
- *DFB or CWDM return laser transmitter options for Two-Way DOCSIS operation*
- *Calibrated Power Meter (1V/mW) Optical Input power test point*
- *Forward and Return external RF test points (-20dB)*
- *Status LED's for optimal Optical Input and Output power ranges and unit Power-On indication*
- *+12V DC Local Direct or Remote Drop -*Coax powering via Optional Power Inserter*
- *Low Power Consumption (Rx @ 6 Watts; Rx/Tx @ 7 Watts)*
- *> 6kV surge tolerant RF output and SMT construction for consistency, reliability &*
- *performance*
- *Compact (3"x 7"x 2.1"), Lightweight and Rugged cast aluminum housing for Easy Installation*

Power supply (+12V/1.25A) and "F" Connector Adapter included.

The Olson Technology, Ind. OTPN-1200C-H/LPremiseNode is a compact, cost-effective, full-featured indoor CATV node designed using the very latest optical receiver technology to reliably deliver a full slate of multiplexed video, high speed data and telephony services in an HFC or PON broadband CATV environment.

The unit is ideally suited for direct fiber transmission of CATV RF signals in FTTH, FTTX, MDU, industrial, corporate, government, educational, I-Net or traditional HFC applications where a high performance, compact indoor node is required. The unit is constructed with high quality components to enable it to meet or exceed its performance specifications over a wide temperature range in an uncontrolled environment, but it does require protection from the elements. It is configured for desktop, shelf or wall-mounting.

The base Model OTPN-1200C-H/L is a low-profile, rugged stand-alone optical receiver with: wide ranging and exceptional optical sensitivity; excellent CNR/CSO/CTB performance; choice of two (2) RF output levels, and; external RF and optical connections, test points (optical and RF) & LED status indicators. This node also features a factory-installed or field-installable DFB or CWDM return laser option, resulting in a highly-integrated, small footprint, DOCSIS-compliant two-way node.

The OTPN-1200C-H/L also features 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). A universal wallmount power supply (+12V/1.25A Wall-Mount AC/DC Power Supply and "F" Connector Adapter) is provided with each unit. SC/APC optical connector is standard. FC/APC optical connectors are optional.

The OTPN-1200C-H/L is the perfect companion to the Olson Technology, Inc. LaserLite (Models OTOT-1220C-x & OTOR-300) and LaserPlus (Models LP-OT-x and LP-OR) forward transmitter and return receiver product families, but is also designed to mate with 1310nm and 1550nm optical transmitters and return receivers from most leading manufacturers

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OPTN-1200C-H/L Specifications

(Forward Optical Receivers: H and L Versions)

RF OUTPUT & PERFORMANCE PARAMETERS:	*(also see charts on pages 3 & 4)*
Frequency Range (±1.0dB)	54-1,220MHz Std, Optional 102-1,220MHz & 45-1,220MHz
Output Level (@ -1dBm optical input) *	H: +38dBmV; L: +28dBmV (@ 550MHz)
Return Loss	14dB min., 16dB typical
Impedance	75 Ohm
CNR (@ 0 dBm optical input) *	> 53dB
CSO (@ -1 dBm optical input) *	> 63dBc
CTB (@ -1 dBm optical input) *	> 65dBc
RF Gain Adjustment (L:none)	H: 0-20dB (via internal variable attenuator)
Slope (Standard: H = 6; L = 0)	H: 0-10dB (via plug-in equalizer - Contact Factory)
	L: 0dB (non-adjustable)
RF Test Point (forward)	-20dB (external); Type F

OPTICAL PARAMETERS:	
Wavelength	1280 - 1610nm
Optical Input Power Range	+2dBm to -8dBm
Return Loss	> 50dB with APC connector
Optical Input Power Test Point	1V/mW ± 0.1V (external)
Optical Connector	SC/APC; 8° APC, Optional FC/APC Available

** NOTE: Typical. H @ 6dB slope and L @ 0dB slope to 1,220MHz with 8dBm optical transmitter with OMI @ 3.2%, & 77 NTSC channel loading to 550MHz & digital loading to 1,220MHz (-6dB below analog).*

ELECTRICAL, ENVIRONMENTAL & MECHANICAL PARAMETERS:	
Dimensions/Weight	3" H x 7" D x 2.1" H / 12 oz.
Operating Temperature Range	-10 to +50°C (temperature at the mounting plate)
Enclosure IP Rating	IP20
Powering	+12VDc (Power supply & "F" adapter included)
DC Ripple	< 50mV
Power Dissipation (with return Tx)	<7W

&Pcrsp! Mnrga_j Rp_l qk grcpq8BD@$ AU BK t cpqgrl q'

RF INPUT & PERFORMANCE PARAMETERS:	*(also see charts on pages 3 &4)*
Frequency Range (±1.0dB)	5-42MHz Std, Optional 5-85 MHz & 5-30MHz
RF Test Point (Return)	-20dB (external); Type F
Return Loss (with Return Tx installed)	> 16dB within the return band
Return Path NPR >15dB **	DFB/CWDM over 41dB NPR **
NPR Threshold (41dB NPR)	-57dBmV/Hz

*** NOTE: As measured with 6 dB of fiber and OTOR-300 High Sensitivity Return Band Receiver*

OPTICAL PARAMETERS:	*(also see charts on pages 3 &4)*
Return Loss	> 50dB with APC connector
Optical Connector	SC/APC standard; 8° APC, Optional FC/APC Available

ELECTRICAL, ENVIRONMENTAL & MECHANICAL PARAMETERS:	
See Specifications (above)	Return transmitter is an internal plug-in PCB module

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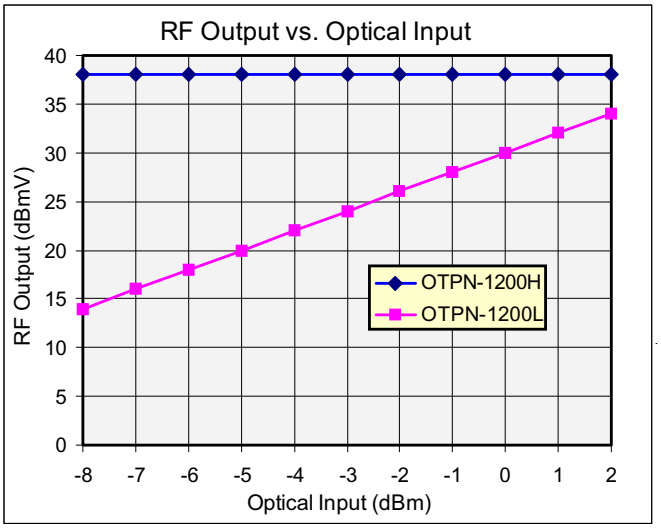
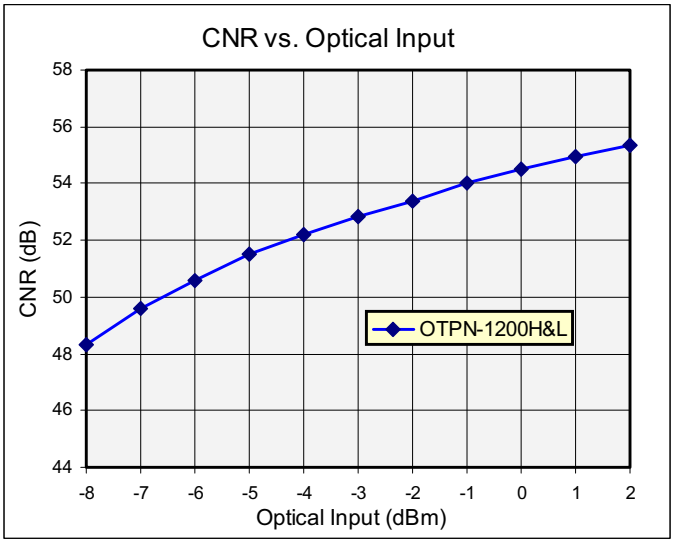
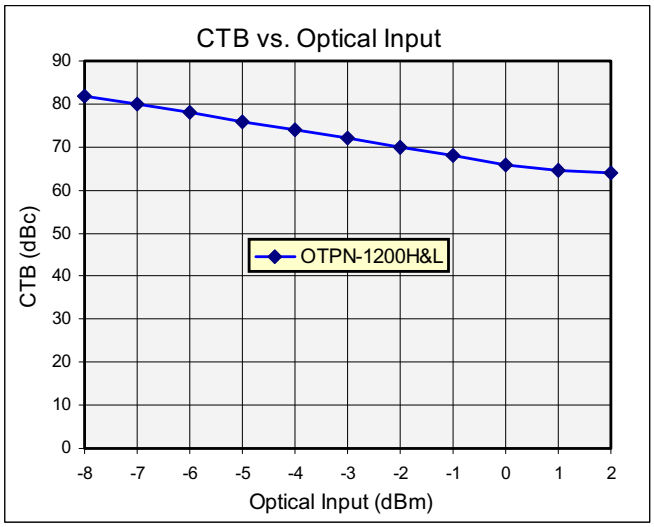
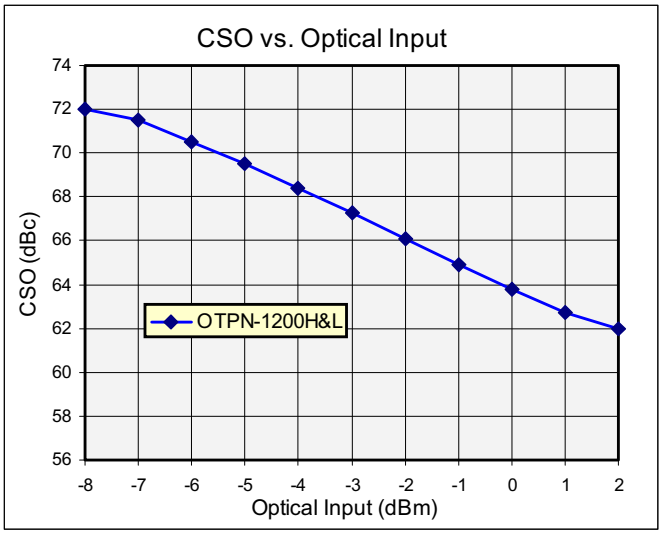
OPTN-1200C-H/L









OPTN-1200C-H/L

OTPN-1200C MODEL NUMBER CONFIGURATOR

OTPN-	12nn	- x	y	z -	cA
	Return Transmitter	**RF Output (Low/High)**	**Diplexer Split**	**Slope (dB)**	**Optical Connector**
	1200: No Return Transmitter	L: *28dBmV (LOW)*	4: *(5-42/54-1,220MHz)*	0: (Std: OTPN-1200L)	SA: *SC/APC*
		(No Pad/Slope Controls)	*(Standard)*	6: (Std: OTPN-1200H)	*(Standard)*
	1204: (3mW DFB; 1310nm)				
	1205: (2.5mW DFB; 1550nm)	H: *38dBmV (HIGH)*	3: *(5-30/45-1,220MHz)*	*Options (OTPN-1200H)*	FA: *FC/APC*
		(With Pad/Slope Controls)	*(Optional)*	0: *(0dB)*	*(Optional)*
	1247: (2.5mW CWDM; 1470nm)			1: *(1dB)*	
	1249: (2.5mW CWDM; 1490nm)		6: *(5-65/85-1,220MHz)*	2: *(2dB)*	
	1251: (2.5mW CWDM; 1510nm*)		*(Optional)*	3: *(3dB)*	
	1253: (2.5mW CWDM; 1530nm*)			4: *(4dB)*	
	1255: (2.5mW CWDM; 1550nm*)		8: *(5-85/102-1,220MHz)*	5: *(5dB)*	
	1257: (2.5mW CWDM; 1570nm*)		*(Optional)*	7: *(7dB)*	
	1259: (2.5mW CWDM; 1590nm)			8: *(8dB)*	
	1261: (2.5mW CWDM; 1610nm)			9: *(9dB)*	
				A: *(10dB)*	
		ACCESSORIES REQUIRED for OTPN-1200H/L OPERATION			
	* These four CWDM wavelengths are the recommended options for analog HFC return path transmission	AC/DC Power Supply (PS) & Power Adapter (2.1/5.5mm to "F") are included with the OTPN-1200			