

## **Model OTPT-300A**

### **Low-Cost Return Path Transmitter**

#### **Features / Benefits**

**Full-featured General Purpose Return Path Transmitter covers 5-42MHz or 5-65MHz or 5-300MHz using Ext. Aux RF Input.**

DFB (1310 or 1550nm) or CWDM (ITU-grid 1470-1610nm) return path optical transmitters

Mates with the Olson Technology OTPN-2000C or OTPN-1000 Nodes.

Low-cost alternative to digital return path hardware.

Optical connector can be field-configured for front or rear access.

Compatible with most analog return path receivers.

DC test point scaled to Laser Current (1V/50mA).

DC test point scaled to Laser Output (1V/mW).

Rugged Aluminum housing.

Powered by the Olson Technology OTPN-2000C or OTPN-1000 node.



The Olson Technology OTPT-300A is a cost-effective, field-installable return laser transmitter with an RF passband of 5 to 300MHz. The unit comes in several models including a 1310nm DFB laser with 3mW output (+4.8dBm), a 1550nm DFB laser with 2.5mW output (+4.0dBm), or a CWDM laser with a 2.5mW output (+4.0dBm). This transmitter is intended only for indoor applications. This transmitter must be mounted to an Olson OTPN-2000C or OTPN-1000. It will not function as a stand-alone device.

The diplex filter, test point, return OMI pad, and AC power supply are part of the OTPN-2000C. The actual return passband is usually determined by the diplex filter in the OTPN-2000C. The OTPT-300A is equipped with an auxiliary external RF input for 5-300MHz operation that can be used in upstream video or block converter applications.

The OTPT-300A offers a low-cost alternative to digital return path hardware. It is compatible with most analog return path receivers. The Olson Technology OTOR-300 Triple Return Path Receiver is an ideal mate to the OTPT-300A.

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

	Min	Typ	Max	Units
Operating Wavelength (1310)	1290	1310	1330	nm
Operating Wavelength (1550)	1530	1550	1570	nm
Operating Wavelength (CWDM)	-3	ITU	+3	nm
Optical Power	-0.5	Rated	+0.5	mW
Optical Return Loss	55			dB
Optical Connector (Std.)	SC/APC			
Optical Connector (Option)	FC/APC			

Notes: All measurements at +25°C

**RF Output & Performance Characteristics**

	Min	Typ	Max	Units
Frequency Range (NTSC)	5		42	MHz
Frequency Range (PAL)	5		65	MHz
Frequency Range (Aux RF)	5		300	MHz
Pass Band Flatness	-1		+1	dB
Impedance (F Connector)		75		Ohms
Input Return Loss	16			dB
RF Adjustment Range		20		dB
NPR 41dB Threshold		-57		dBmV/Hz
NPR Range	15	18		dB

**Environmental Characteristics**

	Min	Typ	Max	Units
Operating Temp. Range	-10		+55	°C
Humidity (RH Non-condensing)	10		90	%

**Test Points**

	Typ	Units
Laser Power	1.0	V/mW
Laser Current	1.0	V/50mA

**Physical Characteristics**

	Min	Typ	Max	Units
Weight		8 227		oz. g
Dimensions (H x W x L)	2.46 x 7.06 x 0.69			in.
	62.5 x 180 x 18			mm



**Ordering Information**

**Transmitter Options**

Model OTPT-304A	Low-Cost Return Path Tx, 1310nm DFB, 3mW, SC/APC Optical Connector
Model OTPT-305A	Low-Cost Return Path Tx, 1550nm DFB, 2mW, SC/APC Optical Connector
Model OTPT-347A	Low-Cost Return Path Tx, CWDM, 1470nm, 2mW, SC/APC Optical Connector
Model OTPT-349A	Low-Cost Return Path Tx, CWDM, 1490nm, 2mW, SC/APC Optical Connector
Model OTPT-351A	Low-Cost Return Path Tx, CWDM, 1510nm, 2mW, SC/APC Optical Connector
Model OTPT-353A	Low-Cost Return Path Tx, CWDM, 1530nm, 2mW, SC/APC Optical Connector
Model OTPT-355A	Low-Cost Return Path Tx, CWDM, 1550nm, 2mW, SC/APC Optical Connector
Model OTPT-357A	Low-Cost Return Path Tx, CWDM, 1570nm, 2mW, SC/APC Optical Connector
Model OTPT-359A	Low-Cost Return Path Tx, CWDM, 1590nm, 2mW, SC/APC Optical Connector
Model OTPT-361A	Low-Cost Return Path Tx, CWDM, 1610nm, 2mW, SC/APC Optical Connector