



Four-way Return Path Optical Receiver

OP-OR124R



Shenzhen Optostar Optoelectronics Co., Ltd

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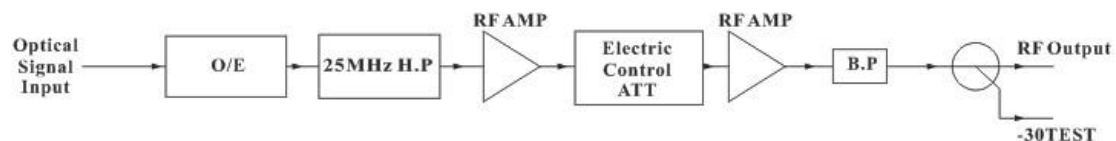
1. Summary

OP-OR124R is an special equipment developed for CATV HFC two-way BMAN for uplink; It is mainly used to receive reverse transmission of TV image signal, telephone voice signal and data (or compressed data) signal. Automatic power control circuit and high performance multistage band pass filter are used to improve SNR of back channel and ensure the stable RF output level, so the reliability of CATV HFC network uplink is improved. 4 independent optical receiving unit that independently receive, amplify and monitor and with independently adjustable output level are used in 19" 1U standard rack; This reasonably structured receiver with high integration density is easy to install and debug.

2. Features

- PHILIPS or E-O detector who's receiving optical power threshold is low and line SNR is high with low noise and high sensitivity for optical is selected.
- Microwave low-noise tube push-pull circuit with low power consumption, small noise figure, high output level, good nonlinear index is used for RF amplifier circuit.
- The multistage high-performance high-pass filter is added to suppress noise below 25MHZ and raise uplink NPR indexes efficaciously.
- Advanced automatic power control circuit is added to make it easier to debug uplink. When the input optical power is varied from 0dBm to 8dBm, the RF output level is constant reversely.
- As a maximum,4 independent optical receiver module in the 19" 1U standard rack; Each optical receiver module receives and amplifies independently.

3. Block Diagram



WR2004R Four-way Reverse Transmission Optical Receiver Block Diagram

4. Technique Parameters

Items	Unit	Technical Parameters
Optical Input Range	dBm	-15~-3
Nominal Wavelength	nm	1310、1550 dual window
Optical Fiber Connect or Type		FC/APC, SC/APC
Optical Return Loss	dB	> 45
Frequency Range	MHz	5~65/200

Output Level	dB μ V	≥ 90 (Receive-8dBm)	
Link Flatness	dB	± 1.5	
Return Loss	dB	≥ 16	
Output Impedance	Ω	75	
Output Voltage Regulation Range	dB	20	
RF Test Port	dB	-20	
RF Output Level Stability	dB	± 1.5 (-25 $^{\circ}$ C ~ +55 $^{\circ}$ C)	
Noise Power Ratio Dynamic Range		≥ 15 (NPR ≥ 30 dB) transmitter with DFB laser	≥ 10 (NPR ≥ 30 dB) transmitter with FP laser
Supply Voltage	V	AC 220V $\pm 10\%$ (50Hz) or DC ~48V	
Power Consumption	W	25	
Operating Temperature	$^{\circ}$ C	0 ~ 45	
Relative Humidity	%	Maximum 95% No Condensation	
Dimension	mm	483 (L) X 282 (W) X 44 (H)	
<p>Notes: 1. "link flatness" and "dynamic range of noise power ratio" are link indexes of uplink optical transmitter and uplink optical receiver.</p> <p>2. Output level will change because of the different RF excited power and signal modulation system of uplink optical transmitter. So the indexes of output level included above are for your reference only.</p>			

5. Ordering Guide

- 1、 The default fiber-optic interface profile is FC/APC interface. Please state clearly in your order when special needs is required.
- 2、 Please verify the operating frequency range for RF signal in your order .
- 3、 The DC -48V current power supply will de used if you state in your order.

Contact OPTOSTAR

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