

# iRCVR-1



## Compact Optical Receiver

The Optilab iRCVR-1 optical receivers are versatile, low cost and compact for use in HFC, PON and deep fiber applications. The iRCVR-1 uses a broadband PIN diode and a low distortion RF amplifier circuit to deliver a sufficient level of CNR, while maintaining optimal CSO and CTB distortion specifications. Designed to operate with very low input level, iRCVR-1 provides high optical gain, and at -8 dBm of input level (OMI index of 3.5%), can still provide 44 dB of CNR and RF output level of 17 dBmV. With compact dimensions and light weight housing, the iRCVR-1 is the most cost effective solution, and can be utilized in almost any space requirement. Contact Optilab for more information.

### Features

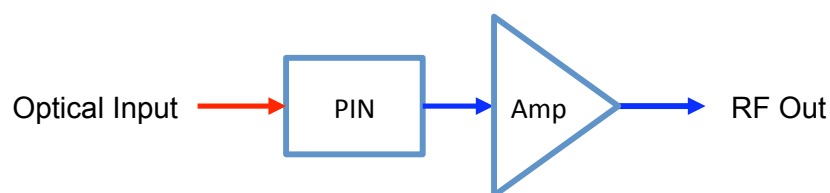
- High linearity with low-noise, high-gain amplifier
- Wide range of input power from +3 dBm to -12 dBm
- Gain control knob for RF output adjustment
- LED input optical power status indicators
- 45 - 870 MHz modulation bandwidth
- Compact, light weight with metal housing
- Operating temperature range from -20°C to +50°C
- 110 V AC power adaptor included
- **3 year warranty standard**

### Applications

- HFC
- PON
- RFoG
- Deep Fiber Applications
- Optilab is RUS/USDA accepted



### Functional Diagram



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## OPTIONS

**iRCVR-1**

## TECHNICAL INFO

For technical info and support:

[sales@optilab.com](mailto:sales@optilab.com)

[www.optilab.com](http://www.optilab.com)

## WEB ORDER

To order, please visit [OEQuest.com](http://OEQuest.com).



## Optilab Advantage

- Innovation
- Performance
- Quality
- Customization
- Warranty

Optical Specifications - Forward Path (Receiver)	
Receiver Wavelength Range	1200 nm - 1600 nm
Input Optical Power	+3 dBm to -12 dBm
RF Output Power Level	> 25 dBmV @ 0 dBm
Number of Outputs	1
Optical Return Loss	50 dB max..
Carrier to Noise Ration (CNR)	50 dBc typ. @ -5 dBm
Composite Second Order (CSO) Distortion	-61 dBc max. @ -5 dBm
Composite Triple Beat (CTB) Distortion	-63 dBc max. @ -5 dBm
Output Attenuation Range	0 - 18 dB (manual adjustment)
Frequency Range	45 MHz to 870 MHz
Flatness in Frequency Range	±1.0 dB
Output Impedance	75 Ω
Output RF Return Loss	13 dB min.
Optical Fiber	SMF-28
Mechanical Specifications	
Operating Temperature Range	-20°C to +50°C
Storing Temperature Range	-40°C to +70°C
Optical Connectors	1, SC/APC or customer specified
Power Supply	12 VDC, 100 mA (receiver)
Power Consumption	5 W max.
Housing Dimensions	2.5" x 4' x 0.9"
Accessories Included	80 – 240 V, 43 – 63 Hz AC (AC adaptor)