

10 GHz High-Gain PhotoReceiver



SK-PR-10-H-M

The Optilab SK-PR-10-H-M is a 10 GHz bandwidth high-gain PIN photodiode receiver module designed for RF over fiber, antenna remoting, and broadband RF signals transmission applications using single mode optical fiber. The SK-PR-10-H-M utilizes a wide bandwidth PIN photodiode plus a high-gain Trans-Impedance Amplifier (TIA) of 2000 that provides optical to RF conversion to the frequency range beyond 10 GHz. The SK-PR-10-H-M is a highly linear O/E converter that can be used for both analog and digital signal, with remote status monitoring through an RS-232 I/O interface. When the SK-PR-10-H-M receiver module is linked with the LT-15-M lightwave transmitter module, the combination provides an excellent solution for ultra-wideband RF to fiber conversion applications, go to optilab.com for more details.

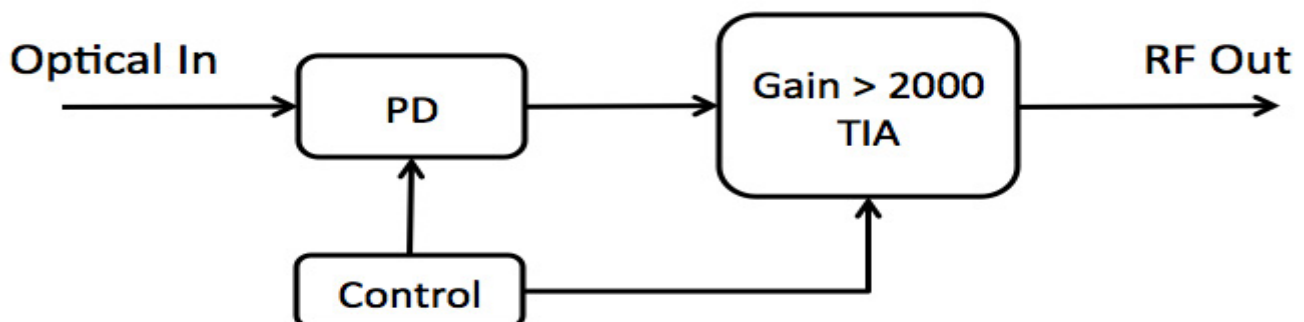
Features

- RFoF to 10 GHz
- High RF output power
- Highly Linear for Analog Transmission
- High TIA Gain of 2000
- RS-232 Monitor Interface
- Housing shields RF and thermal interference

Applications

- Wideband RF Transmission over Fiber
- RF/IF Signal Distribution
- Satcom microwave antenna signal distribution
- EW Systems
- Broadband delay-line and signal processing
- Radar system calibration
- Phased and interferometric array antenna

Functional Diagram



General Specifications	
Photodiode Wavelength Range	1250 nm to 1650 nm
Operational Bandwidth	100 KHz to 10 GHz
Optical Input Level	+3 dBm max.
Repsonsitivity	0.85 A/W @ 1550 nm typ.
Trans-Impedance Gain	2000 ohm typ.
Bandwidth	8 GHz typ.
S22 Characteristics	< -10 dB to 10 GHz typ.
Optical Return Loss	-30.0 dB typ.
2nd Harmonics Distortion	-60.0 dBc max.
3rd Harmonics Distortion	-70.0 dBc max.
Optical PDL @ 1550 nm	0.05 dB typ., 0.1 dB max
Output Coupling	AC Coupled
RF Impedance	50 Ω
Ripple over Bandwidth	± 1.0 dB
Mechanical Specifications	
Operating Temperature	-15° C to +70° C
Storage Temperature	-55° C to +85° C
Power Supply Requirements	+12 V DC, 500 mA max.
Optical Connector	FC/APC
RF Input Connector	K Connector Female, 50 Ω
DC Connector	DB-9
Local Alarm	LED: Optional Input Power
Remote Alarms	RS-232 Interface (Optional)
Dimensions	130 mm x 70 mm x 35 mm
Accessories Included	110 V - 240 V AC Adaptor & Cable
Housing	Precision Mach. Anodized Aluminum

