SK-PR-10-H-M

10 GHz High-Gain Photo Receiver

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 signal 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 lightwavetransmitter module, the combination provides an excellent solution for ultra-wideband RF to fiber conversion applications.Contact Optilab for more information.

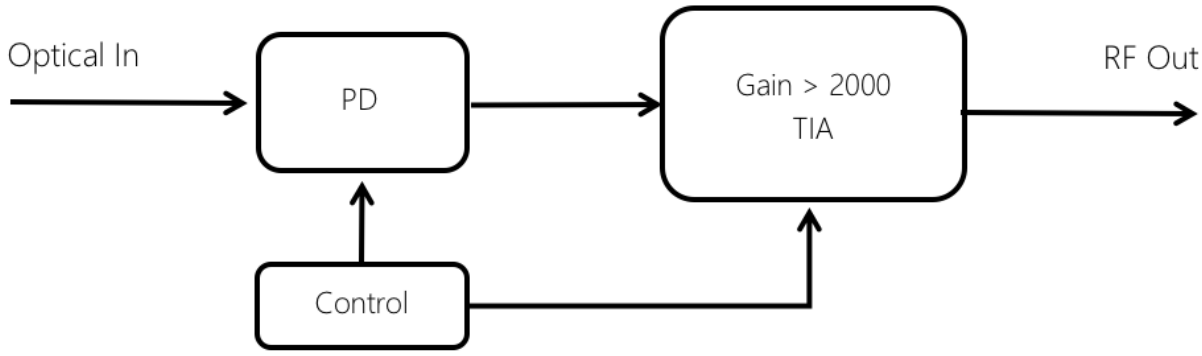
FEATURES:

- RFoFto10GHz
- HighRFOutputPower
- HighlyLinearforAnalogTransmission
- HighTIAGainof2000Ω
- RS-232MonitorInterface
- HousingShieldsRF&ThermalInterface

USE IN:

- WidebandTransmissionOverFiber
- RF/IFSignalDistribution
- SatcomMicrowaveAntennaSignalDistribution
- EWSystems
- BroadbandDelay-Line&SignalProcessing
- RadarSystemCalibration
- Phased&InterferometricArrayAntenna

FUNCTION DIAGRAM

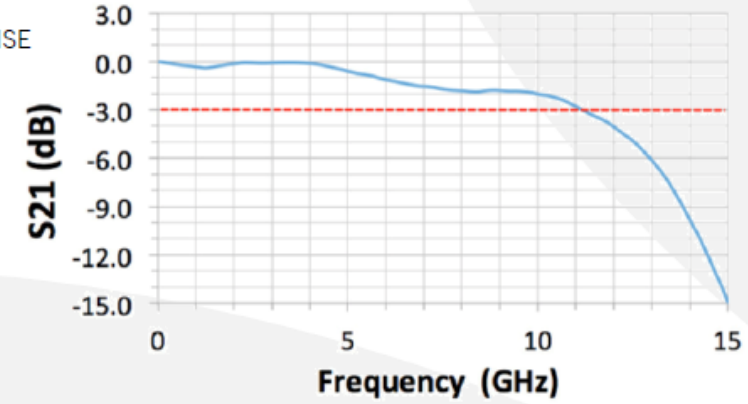


SK-PR-10-H-M

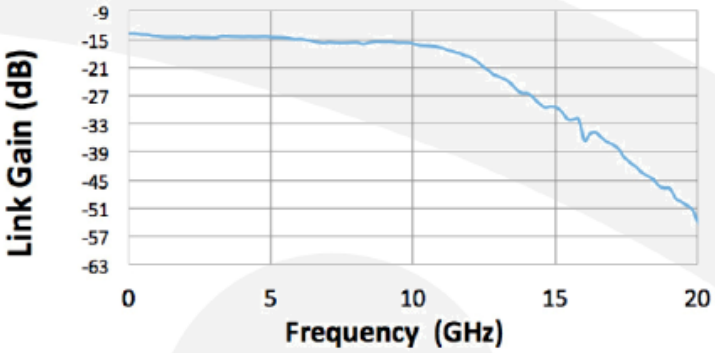
GENERAL	Photodiode Wavelength Range	1250 nm to 1650 nm
	Operational Bandwidth	100 KHz to 10 GHz
	Optical Input Level	+3 dBm Maximum
	Responsivity	0.85 A/W @ 1550 nm Typical
	Trans-Impedance Gain	2000 Ω Typical
	Bandwidth	8 GHz Typical
	S22 Characteristics	<-10 dB to 10 GHz Typical
	Optical Return Loss	-30.0 dB Typical
	2nd Harmonic Distortion	-60.0 dBc Maximum
	3rd Harmonic Distortion	-70.0 dBc Maximum
	Optical PDL @ 1550 nm	0.05 dB Typical, 0.1 dB Maximum
	Output Coupling	AC Coupled
	RF Impedance	50 Ω
	Ripple Over Bandwidth	± 1.0 dB

MECHANICAL	Operating Temperature	-15°C to +70 °C
	Storage Temperature	-55 °C to +85 °C
	Power Supply Requirements	+12 VDC, 500 mA Maximum
	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	130mm x 70mm x 35mm
	Included Accessories	110 V - 240 V AC Adaptor & Cable
	Housing	Precision Mach. Anodized Aluminum

TYPICAL S21 RESPONSE

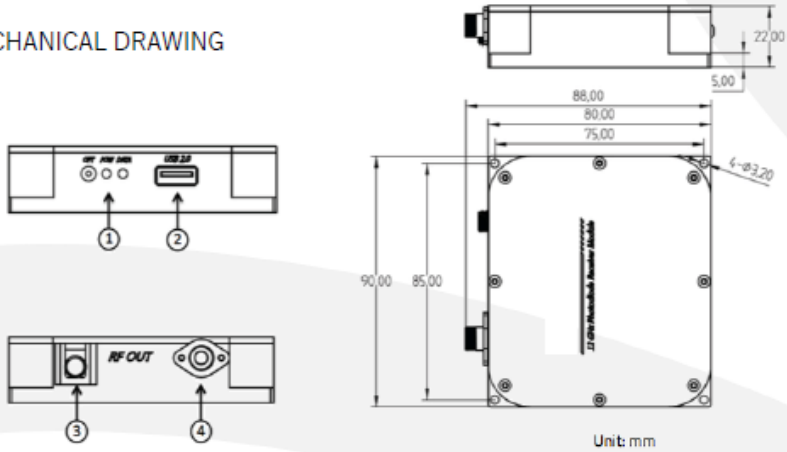


LINK GAIN



TEST CONDITIONS & LINK GAIN MEASUREMENTS

MECHANICAL DRAWING



1	Status LED
2	USB 2.0
3	RF Output
4	Optical Input

REMOTE LABVIEW INTERFACE

Optilab offers remote interface via LabVIEW software, for parameter adjustment and status monitoring, con- tact Optilab for more details.