

Lighting

Imaging

Telecom



Fiber-Optic Receiver Modules

10 Gbps Series SRAP10

Fiber-Optic Receiver Modules



Description

The SRAP10 series incorporates a high-speed InGaAs photodiode with a low-noise GaAs HBT transimpedance amplifier in an 8 pin butterfly package for digital communication applications. The SRAP10 series conforms to Synchronous Optical Network (SONET) requirements for OC-192 (10 Gbps) receivers used in long-range, intermediate-range and short-range applications. Receiver modules are available in hermetically sealed fibered packages with single-mode fiber.

Committed to supplying the highest quality products, PerkinElmer Optoelectronics is certified to meet ISO 9001. The SRAP10 series is designed to satisfy Telcordia quality specification GR-468-CORE. All devices undergo periodic process qualification programs to assure high reliability.

Applications

- Short, Intermediate and Long-haul receivers for SONET/SDH
- DWDM systems
- High-speed networks
- Test equipment

Features

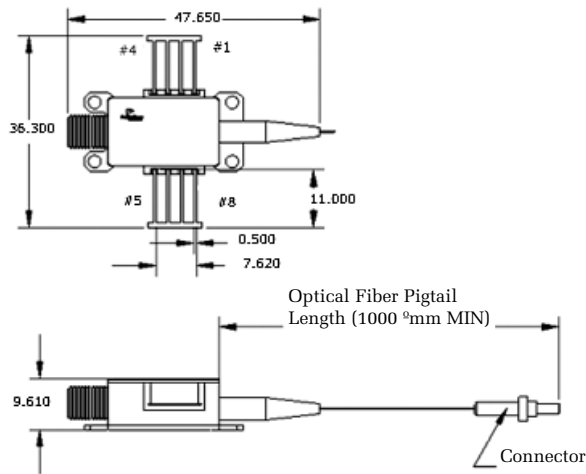
- InGaAs PIN detector
- Low-noise GaAs HBT TIA
- 10 Gbps receiver (OC-192)
- Internally bevelled fiber for low return loss
- Fibered and connectorized modules
- Single polarity power supply



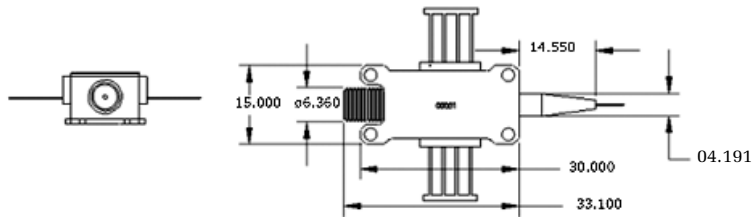
SRAP10

Figure 1. Mechanical Dimensions

PIN	DESCRIPTION
1	+Vpd
2	Case GND
3	+Vdd
4	GND
5	GND
6	GND
7	GND
8	N/C
K con.	O/P



Unit: mm (nominal)



Specifications

Test conditions: T=22° C, V_{pd} = 8 Volts, V_{dd} = 8 Volts, R_L = 50 Ohms AC. Limits applicable at 22° C (case temperature).

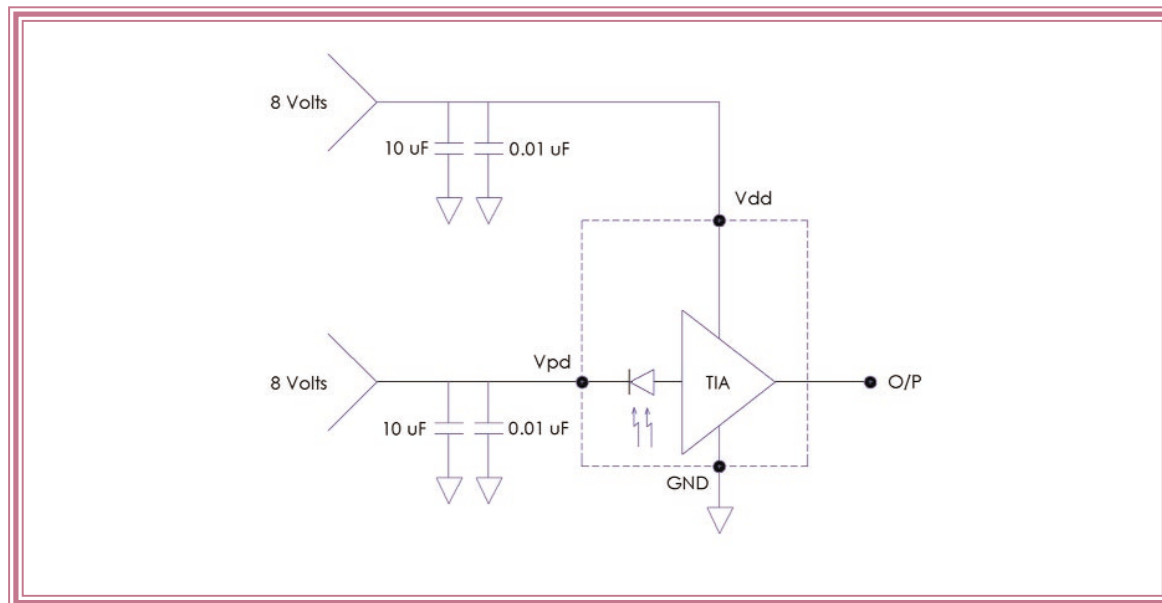
PARAMETER	SRAP10			Units
	Min	Typ	Max	
Bandwidth (-3dB, 50 Ohms)	8	9		GHz
Responsivity, single-ended (1300 - 1600 nm)	320	400		V/W
Effective transimpedance	400	500		Ohms
Sensitivity (BER=10 ⁻¹⁰)	-18	-19		dBm
Overload (BER=10 ⁻¹⁰)	0	1		dBm
Output offset voltage		3.0		Volts
Output return loss (S22), 100KHz-8 GHz	8	10		dB
TIA supply current		100	120	mA
TIA power dissipation		800	960	mW
Optical return loss	-27			dB

Note: Consult PerkinElmer Optoelectronics for typical performance characteristics over the operating temperature range.

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SRAP10

Figure 2. Typical Connection Circuitry



Maximum Ratings

Supply voltage (V_{dd})	8.5 Volts
Detector voltage (V_{pd})	15 Volts
Optical power	1.25 mW
Fiber bend radius	30 mm min.
Operating case temp.	0/70° C
Storage temperature	-40/85° C

Ordering Guide

Generic Device Type:
SRAP10-CC

Connector Type (CC):

FC: FC connector

SC: SC connector

Fiber Type (core/cladding/buffer) (FF):

09: 9/125/900 μ m

PerkinElmer Optoelectronics reserves the right to change or amend specifications and/or configurations at any time without notice.

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