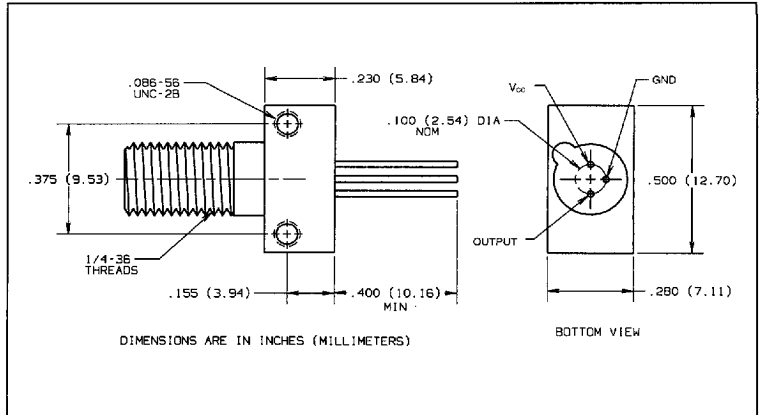
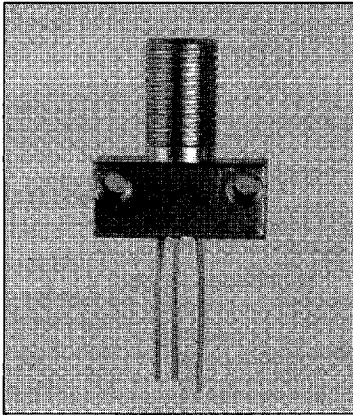


5 MBd Fiber Optic Receiver Type OPF521



Features

- Component pre-mounted and ready to use
- Pre-tested with fiber to assure performance
- Popular SMA style receptacle
- Optimized for fiber optic applications using 50 to 200 micron fiber

Description

The OPF521 contains a monolithic photo-IC comprised of a photodetector and DC amplifier driving an open collector output Schottky transistor. The output makes the OPF521 compatible with TTL and CMOS logic.

The receiver is designed to operate from a single +5V supply. It is essential that a bypass capacitor be connected from V_{cc} to Common of the receiver.

Absolute Maximum Ratings (T_A = 25° C unless otherwise noted)

Storage Temperature	-55° C to +115° C
Operating Temperature	-40° C to +85° C
Lead Soldering Temperature (for 10 sec.)	260° C
Supply Voltage	-0.5 to 7.0 V
Output Current	25 mA
Output Voltage	-0.5 to 18.0 V
Open Collector Power Dissipation	40 mW
Fan Out (TTL)	5 ⁽¹⁾

This component is susceptible to damage from electrostatic discharge (ESD). Normal static precautions should be taken in handling and assembly of this component to prevent ESD damage or degradation.

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Types OPF521

Electrical Characteristics ($T_A = 25^\circ \text{C}$ unless otherwise noted)

$4.75 \leq V_{CC} \leq 5.25$, Fiber Sizes ≤ 100 Microns, N.A. ≤ 0.35 , BER $\leq 10^{-9}$

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
I _{OH}	High Level Output Current		5	250	μA	$V_O = 18 \text{ V}$, $P_R < -40 \text{ dBm}$
V _{OL}	Low Level Output Voltage		0.4	0.5	V	$I_O = 8 \text{ mA}$, $P_R > -24 \text{ dBm}$
I _{CCH}	High Level Supply Current		3.5	6.3	mA	$V_{CC} = 5.25 \text{ V}$, $P_R < -40 \text{ dBm}$
I _{CLL}	Low Level supply Current		6.2	10	mA	$V_{CC} = 5.25 \text{ V}$, $P_R > -24 \text{ dBm}$
P _{RIH}	Peak Input Power Level Logic HIGH			-40	dBm	$\lambda_p = 840 \text{ nm}^{(2)}$
				0.1	μW	
P _{RL}	Peak Input Power Level Logic LOW	-25.4		-9.2	dBm	$\lambda_p = 840 \text{ nm}$, $I_{OL} = 8 \text{ mA}^{(2)}$
		2.9		120	μW	
		-24		-10	dBm	$-40^\circ \text{C} \leq T_A \leq +85^\circ \text{C}$
		4.0		100	μW	
t _{PLHR}	Propagation Delay LOW to HIGH		65		ns	$P_R = -21 \text{ dBm}$, Data Rate = 5 MBd
t _{PHLR}	Propagation Delay HIGH to LOW		49		ns	

Notes:

(1) 8 mA load (5 x 1.6 mA), $R_L = 560 \ \Omega$.

(2) Measured at the end of 100/140 μm fiber cable with a large area detector.

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Optek reserves the right to make changes at any time in order to improve design and to supply the best product possible.

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