Excellent Integrated System Limited

Stocking Distributor

Click to view price, real time Inventory, Delivery & Lifecycle Information:

TT Electronics/Optek Technology
OPF500

For any questions, you can email us directly:
sales@integrated-circuit.com

Fiber Optic Receiver

OPF500 Series

OPF500 Series

- Interfaces with all logic circuits
- Two output options
- Optimized for fiber optic applications using 50 to 200 micron fibers
- Data rate to 200kbps NRZ
- Available with multiple packaging options

The OPF500 series receiver contains a monolithic integrated circuit which incorporates a photodiode, linear amplifier, a voltage regulator, and a Schmitt trigger on a single silicon chip. These receivers are designed for short haul fiber optic systems using 850 nm LEDs such as Optek's OPF300 series.

These devices feature TTL/LSTTL compatible logic level output. An internal voltage regulator allows operation with supply voltages ranging from 4.5V to 16V.

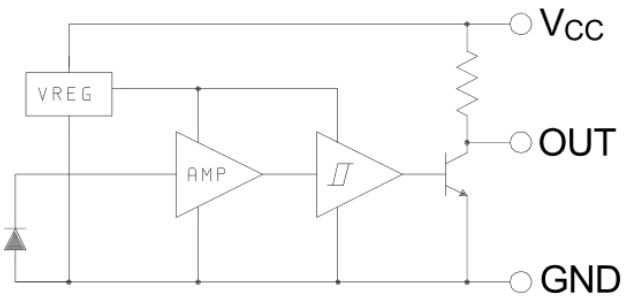
Applications

- Industrial Ethernet equipment
- Copper-to-fiber media conversion
- Intra-system fiber optic links
- Video surveillance systems

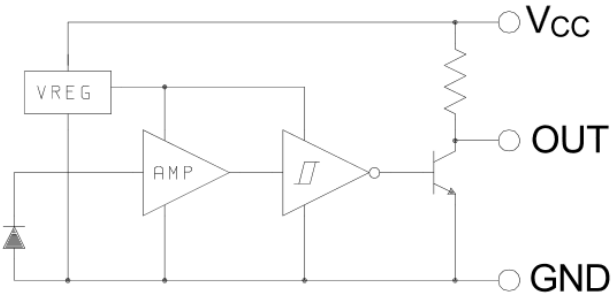
Part Ordering Information

Part Number	Description
OPF500	Buffer, 10kW Pull-Up Plastic Cap Component
OPF505	Buffer, 10kW Pull-Up Metal Can Component
OPF507	Buffer, 10kW Pull-Up Metal ST Receptacle
OPF510	Inverter, 10kW Pull-Up Plastic Cap Component
OPF512	Inverter, 10kW Pull-Up Metal ST Receptacle

Buffer/10K PU



Inverter/10K PU



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.

Pb

RoHS

OPTEK Technology Inc.— 1645 Wallace Drive, Carrollton, Texas 75006
Phone: (800) 341-4747 FAX: (972) 323– 2396 sensors@optekinc.com www.optekinc.com

Fiber Optic Receiver

OPF500 Series

Absolute Maximum Ratings

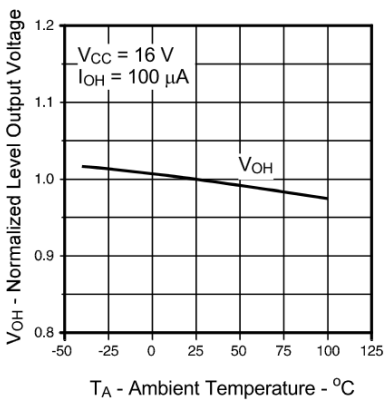
Storage Temperature	-65° C to +100° C
Operating Temperature	-40° C to +85° C
Lead Soldering Temperature (for 10 seconds)	260° C
Supply Voltage	18 V
Sinking Current	16 mA
Power Dissipation	200 mW
Open Collector Power Distribution	40mW
Voltage at Output	30 V

Electrical/Optical Characteristics

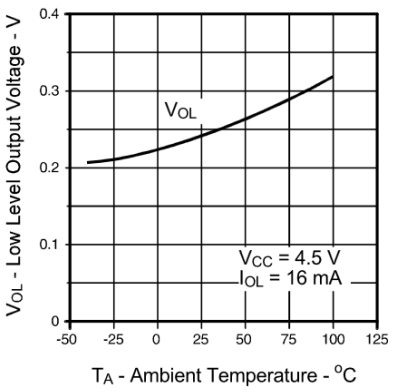
4.5 V ≤ V_{CC} ≤ 16.0 V, T_A = 25°C — unless otherwise specified

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	CONDITIONS
V_{CC}	Supply Voltage	4.5		16.0	V	
V_{OH}	High Level Output Voltage	VCC - 1.5			V	Buffer: P_{IN} > 2.0 µW Inverter: P_{IN} < 0.1 µW
V_{OL}	Low Level Output Voltage			0.4	V	Buffer: P_{IN} < 0.1 µW Inverter: P_{IN} > 2.0 µW
I_{CC}	Supply Current		5.0	12.0	mA	No output load
P_{IN}	Input Sensitivity			2.0	µW	λ_p = 850 nm
t_r	Rise Time			300 100	ns	Buffer Inverter P_{IN} = 1.5 µW (peak) V_{CC} = 5.0 V
t_f	Fall Time			300 100	ns	Inverter Buffer
BW	Bandwidth	100			kHz	P_{IN} > 2.0 µW, 50% duty cycle
PWD	Pulse Width Distortion		±10		%	1 µW < P_{IN} < 100 µW, *f* = 20 kHz 50% duty cycle

High Level Output Voltage vs Ambient Temperature



Low Level Output Voltage vs Ambient Temperature



RoHS

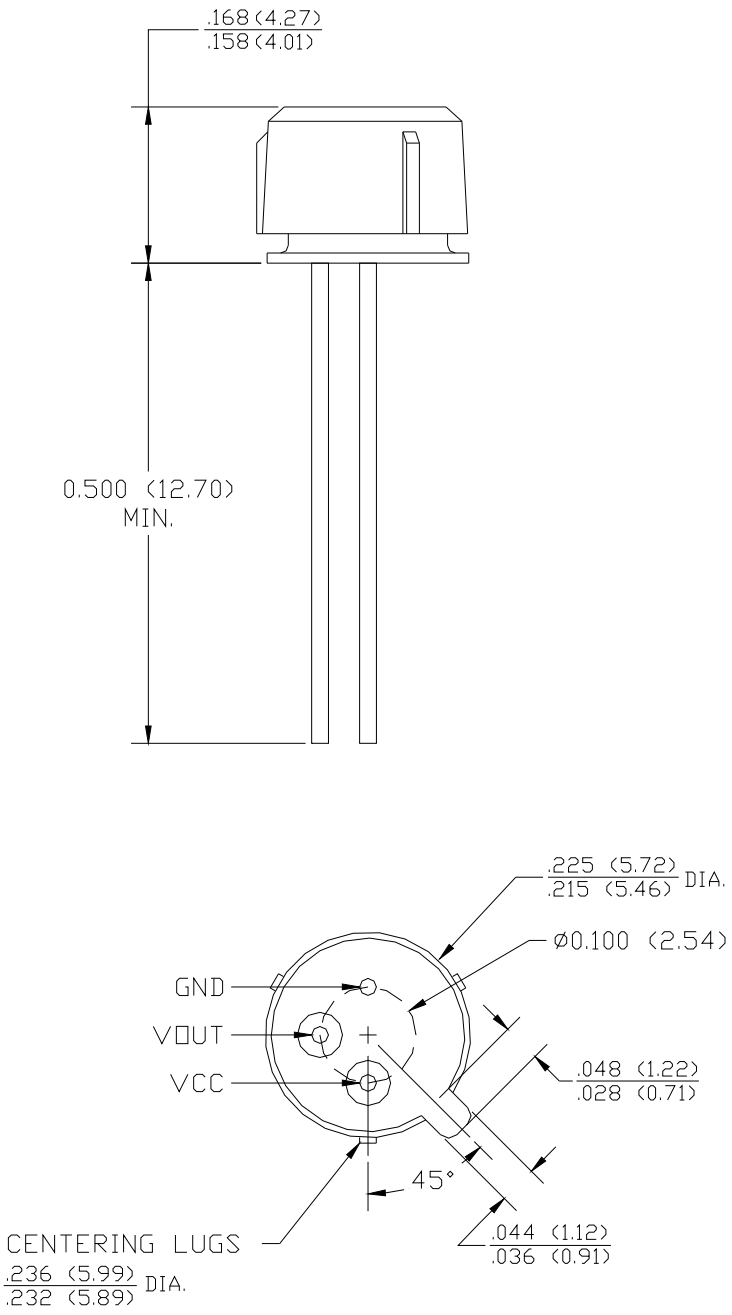
OPTEK reserves the right to make changes at any time in order to improve design and to supply the best product possible.

OPTEK Technology Inc.— 1645 Wallace Drive, Carrollton, Texas 75006
Phone: (800) 341-4747 FAX: (972) 323– 2396 sensors@optekinc.com www.optekinc.com

Fiber Optic Receiver

OPF500 Series

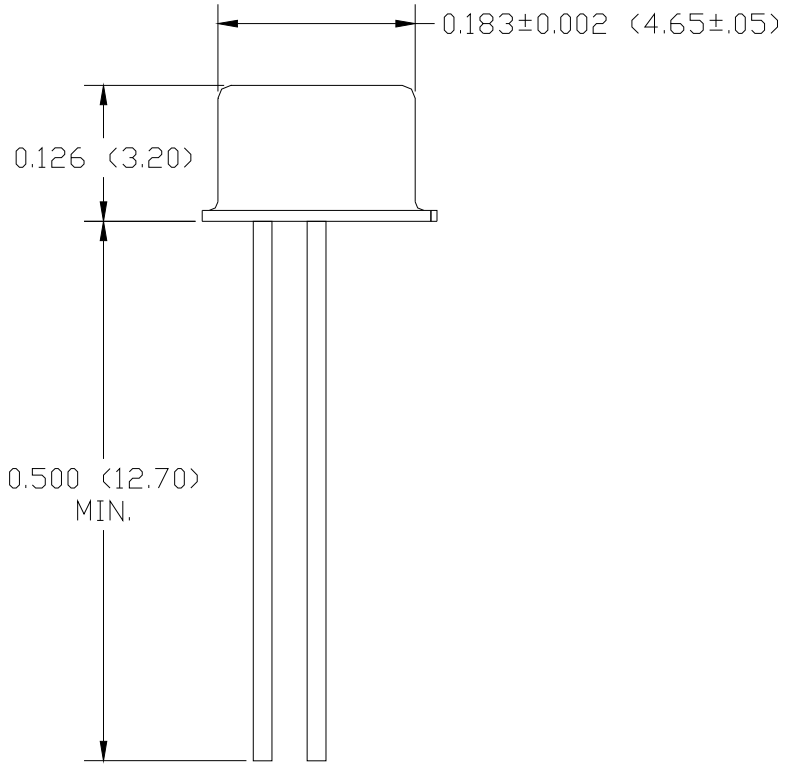
Mechanical Outline — OPF500, OPF510

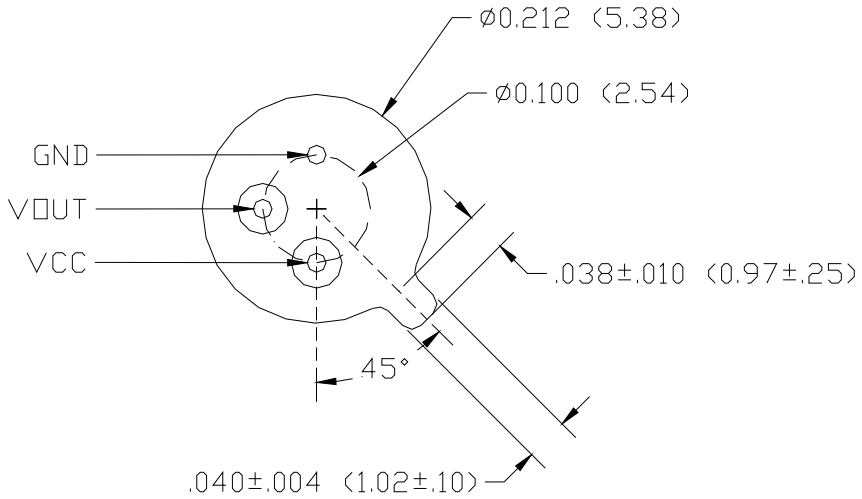


Fiber Optic Receiver

OPF500 Series

Mechanical Outline — OPF505





OPTEK Technology Inc.— 1645 Wallace Drive, Carrollton, Texas 75006
Phone: (800) 341-4747 FAX: (972) 323– 2396 sensors@optekinc.com www.optekinc.com

Fiber Optic Receiver

OPF500 Series

Mechanical Outline — OPF507, OPF512