

FEATURES

- **SURFACE MOUNTABLE**
- **SMALL SIZE FLAT CERAMIC PACKAGE:**
7.6 x 12.7 x 3 mm
- **HIGH SENSITIVITY**
- **DIFFERENTIAL OUTPUTS**
- **INTERNAL SUPPLY BYPASS CAPACITOR**
- **WIDE OPERATING TEMPERATURE RANGE:**
 $T_c = -40$ to $+85^\circ\text{C}$
- **DETACHABLE PIGTAIL INTERFACE**
- **SINGLE SUPPLY VOLTAGE:**
3.0 to 3.5 V

DESCRIPTION

The OD-S589A and OD-S589B are new surface mount low cost InGaAs-PIN-PD modules with Pre-Amps. These devices can achieve stable operation over a wide temperature range of -40 to $+85^\circ\text{C}$ and have differential clock and data outputs. These modules have detachable pigtail interfaces and are packaged in 8 pin surface mount packages. They can be soldered like an ordinary IC by the standard I.R. reflow soldering process.

The OD-S589 series can be operated at speeds of 155/622 Mb/s and are especially suitable for the use of the subscriber loop, SONET and FITL.

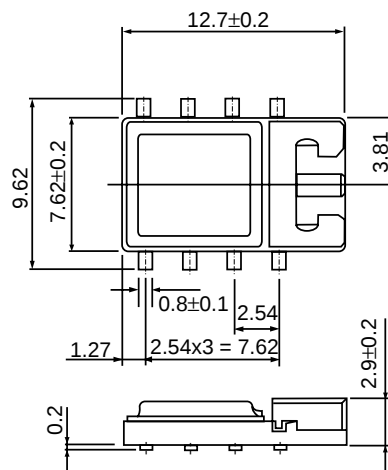
APPLICATIONS

- **SUBSCRIBER LOOP**
- **TELECOMMUNICATIONS**
- **DATA COMMUNICATIONS**
- **LOCAL AREA NETWORKS**

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$, Unless otherwise specified.)

PART NUMBER			OD-S589A			OD-S589B		
SYMBOLS	PARAMETERS AND CONDITIONS	UNITS	MIN	TYP	MAX	MIN	TYP	MAX
	Sensitivity at BER = 10^{-10} -40 to $+85^\circ\text{C}$	dBm		-36	-35 -32		-31	-30
	Optical Overload	dBm	-3	0		-3	0	
BW	Bandwidth at 3 dB down	MHz	100	150	-	500	600	-
	Trans Impedance	k Ω		44			21	
VOP	Operating Voltage	V	+3.0	+3.3	+3.5	+3.0	+3.3	+3.5
R	Responsivity	A/W		0.9			0.9	

OUTLINE DIMENSIONS (Units in mm)



ABSOLUTE MAXIMUM RATINGS¹

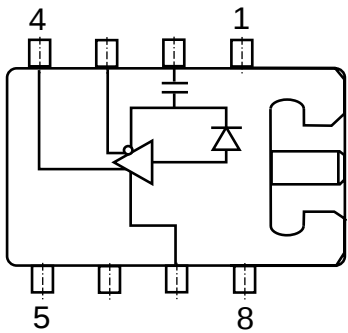
(TC = 25°C, unless otherwise specified)

SYMBOLS	PARAMETERS	UNITS	RATINGS
P _{IN}	Optical Input Power	mW	8.0
V _{DD}	Supply Voltage	V	2.0
T _{OP}	Operating Temperature	°C	-40 to +85
T _{STG}	Storage Temperature	°C	-40 to +85
T _{SOL}	Lead Soldering Temperature ²	°C	230 ²

Notes:

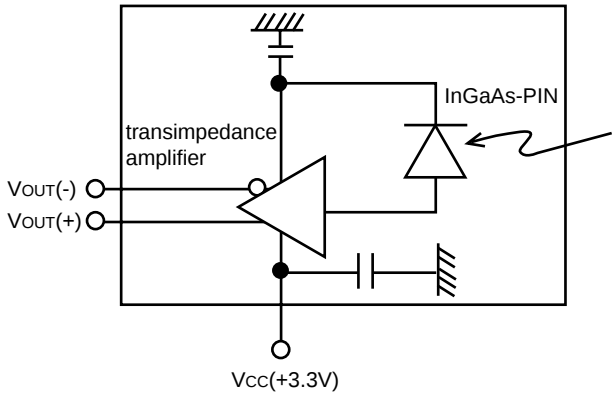
- 1. Operation in excess of any one of these parameters may result in permanent damage.
- 2. Reflow Soldering, 30 sec.

PIN CONNECTIONS



TOP VIEW

PIN	FUNCTION
1	GND
2	GND
3	V _{OUT} (-)
4	V _{OUT} (+)
5	GND
6	GND
7	V _{CC} (+3.3V)
8	GND



ORDERING INFORMATION

PART NUMBER	PACKAGE
OD-S589A	155 Mb/s (STM-1/OC3)
OD-S589B	622 Mb/s (STM-4/OC12)