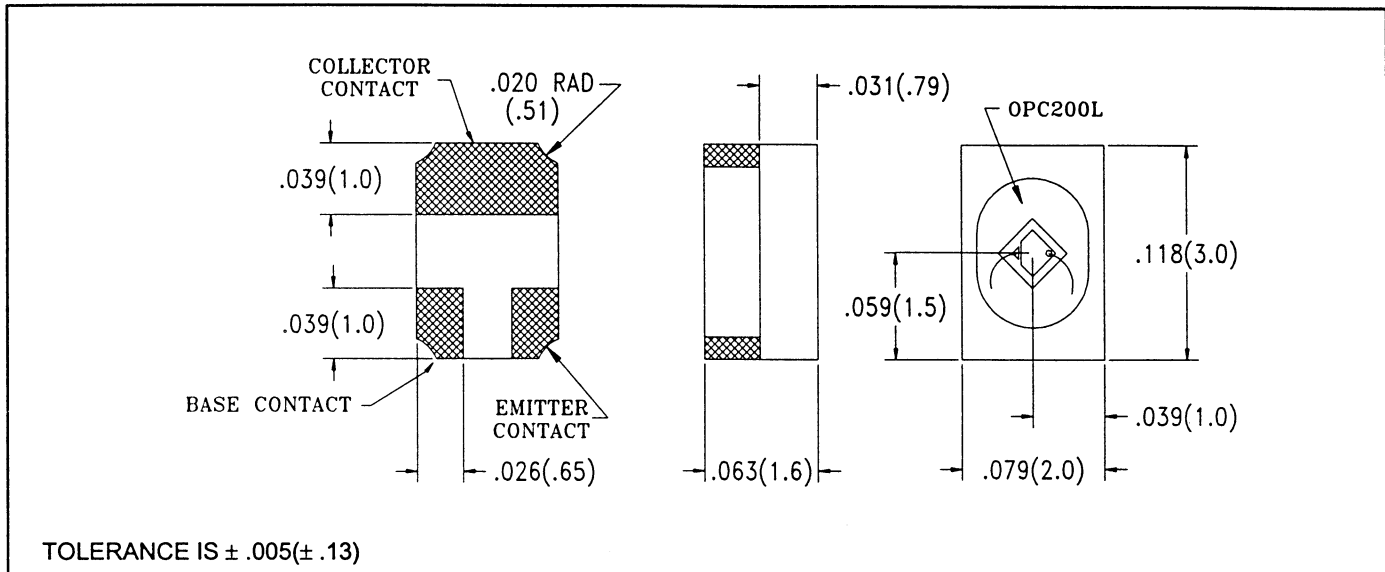


# Surface Mount Phototransistor OPR5500



## Features

- Stackable on 2 mm centers
- Vertical or horizontal mounting
- Automatic pick and place compatible

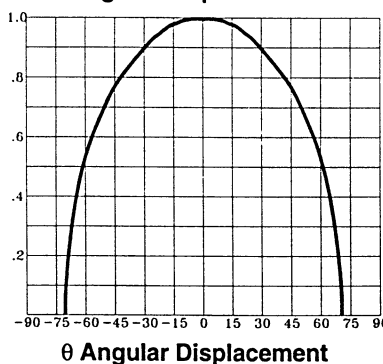
## Description

The OPR5500 is an NPN silicon phototransistor in a high temperature polyimide chip carrier. Its small size is well suited to applications requiring close channel spacing. It can be placed with any standard SMD equipment and can be reflow soldered by virtually any conventional means. Wrap around contacts enable the part to be mounted face up or on edge for beam detection parallel to the seating plane. In combination with the OPR5200, the miniature SMD LED, this lateral mounting option can be used to create a slotted switch configuration.

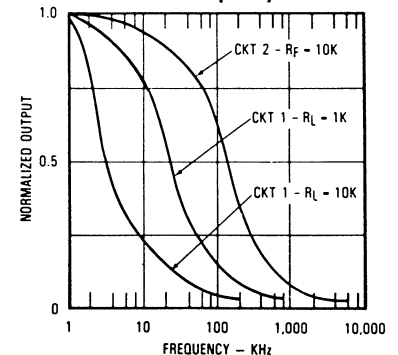
## Absolute Maximum Ratings ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

Collector-Emitter Voltage	30 V
Emitter-Collector Voltage	5 V
Storage and Operating Temperature	$-55^\circ\text{C}$ to $+125^\circ\text{C}$
Soldering Temperature (Vapor Phase Reflow for 30 sec.)	$235^\circ\text{C}$
Power Dissipation (derate @ $1.00\text{ mW}/^\circ\text{C}$ above $25^\circ\text{C}$ )	100 mW

## Normalized Collector Current vs. Angular Displacement



## Normalized Output vs. Frequency



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

SYMBOL	PARAMETER	MIN	TYP	MAX	UNITS	TEST CONDITIONS
$I_{C(ON)}$	On State Collector Current	36			$\mu\text{A}$	$V_{CE} = 5\text{ V}$ , $E_e = 150\ \mu\text{W}/\text{cm}^2$ (890 nm light source)
$I_{CEO}$	Dark Current			100	nA	$V_{CE} = 5\text{ V}$ , $E_e = 0$
$V_{(BR)CEO}$	Collector-Emitter Breakdown Voltage	30			V	$I_C = 100\ \mu\text{A}$
$V_{(BR)ECO}$	Emitter-Collector Breakdown Voltage	5			V	$I_e = 100\ \mu\text{A}$
$V_{CE(SAT)}$	Saturation Voltage		0.4		V	$I_C = 100\ \mu\text{A}$ , $E_e = 5\text{ mW}/\text{cm}^2$
$t_r, t_f$	Rise Time, Fall Time		2.5		$\mu\text{s}$	$V_{CC} = 5\text{ V}$ , $I_C = 800\ \mu\text{A}$ , $R = 100\ \Omega$