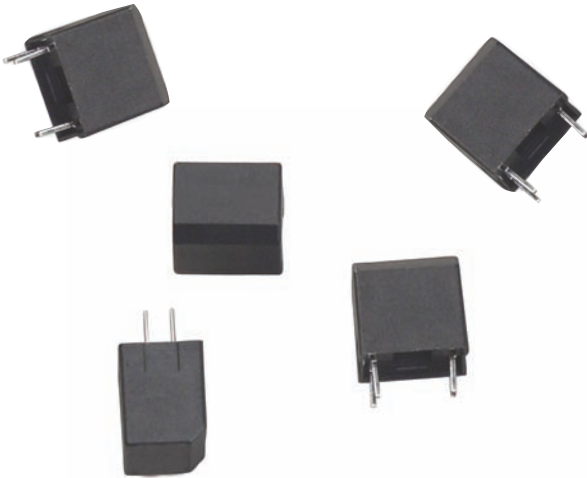


# Optical Tilt Switch

Tilt Angles: 15°, 30° & 45° For Virticle Mount PCP



**RP-RUB-45-000-NB= 45° Tilt Angle**  
**RP-RUB-30-000-NB= 30° Tilt Angle**  
**RP-RUB-15-000-NB= 15° Tilt Angle**

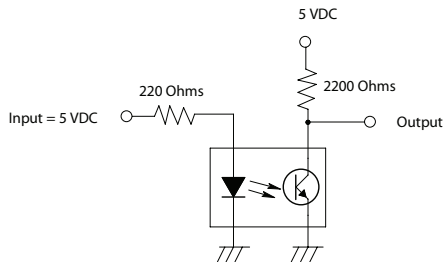
## Materials & Specifications

1. Housing: Glass-filled Polyamide, UL94-V0
2. Photo Trans: Silicon Photo Transistor
3. Base: Glass-filled Polyamide, UL94-V0
4. Tilt Angle Housing: Copper alloy, Nickel plated
5. Ball: Stainless Steel
6. IR Diode: Infrared LED
7. Terminals: Tinned
8. Temperature range: -25°C to +85°C (operating)  
-40°C to +85°C (storage)
9. Life: 100,000 hours typ.
10. Solderability: Lead Free wave soldering  
260 –5°C for 5 –0.5 seconds
11. Tilt Angle Character: Tilt angle 0<sub>j</sub> to 35<sub>j</sub>, Output current = *I<sub>ceo</sub>* (off)  
Tilt angle 35<sub>j</sub> to 55<sub>j</sub>, Output current = *Undeterminant*  
Tilt angle > 55<sub>j</sub>, Output current = *Coupled I<sub>c</sub>* (on)
12. Patent: pending

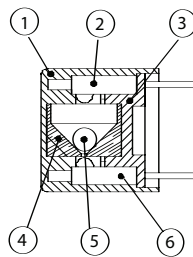
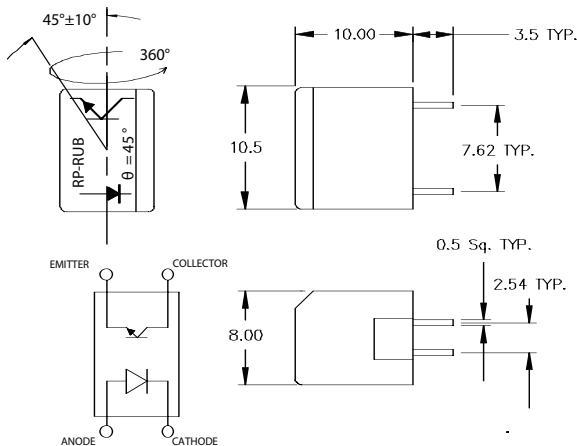
## \* Mercury Switch Alternative

## Applications

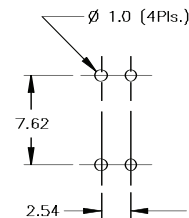
- |                   |                   |
|-------------------|-------------------|
| Alarm Devices     | Meters            |
| Heating Equipment | Appliances        |
| Games             | Medical Equipment |
| Vending Machines  | Handheld Devices  |
| Seismic Equipment |                   |



Typical Circuit



CROSS SECTION



PC BOARD LAYOUT

## ELECTRICAL CHARACTERISTICS (Ta = 25°C)

Items	Symbols	Min.	Typ.	Max.	Unit	Conditions
<b>INPUT</b>						
Forward Voltage	V <sub>f</sub>	-	1.2	1.2	V	I <sub>f</sub> = 20mA
Reverse Current	I <sub>r</sub>	-	-	10.0	μA	V <sub>r</sub> = 5V
<b>OUTPUT</b>						
Dark Current	I <sub>ceo</sub>	-	-	2	μA	V <sub>cc</sub> = 10V
<b>COUPLED</b>						
Output Current	I <sub>c</sub>	0.5	5.0	-	mA	V <sub>ce</sub> = 5V
Rise/Fall Time	T <sub>r</sub> /T <sub>f</sub>	-	5.0	-	μs	I <sub>c</sub> = 0.8mA, V <sub>cc</sub> = 30V, R <sub>L</sub> = 1K Ω