

**ROHM****OPTOELECTRONICS****RPI-1373****PHOTO INTERRUPTER****ABSOLUTE MAXIMUM RATINGS (TA = 25°C)****Infrared Emitter**

Forward Current	$I_F$	50mA
Reverse Voltage	$V_R$	5V
Power Dissipation	$P_d$	80mW

**Photo IC**

Power Supply Voltage	$V_{CC}$	17V
Output Current	$I_O$	20mA
Power Dissipation	$P_O$	80mW

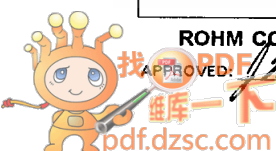
**Operating Temperature** $T_{opr}$  -25°C ~ +85°C**Storage Temperature** $T_{stg}$  -40°C ~ +100°C**Soldering Temperature\***  
(\* 5 sec) $T_{sol}$  260°C**ELECTRICAL OPTICAL CHARACTERISTICS (TA = 25°C)**

## 1) ELECTRICAL-OPTICAL CHARACTERISTICS OF THE INFRARED LIGHT EMITTING DIODE

Item	Symbol	Min.	Typ.	Max.	Unit	Condition
Forward Voltage	$V_F$	-	1.3	1.5	V	$I_F = 50mA$
Reverse Current	$I_R$	-	-	10	$\mu A$	$V_R = 5V$
Input-Output Frequency	$f_c$		1		MHz	$I_F = 50mA$
Peak Emission Wavelength	$\lambda_p$		950		nm	$I_F = 50mA$

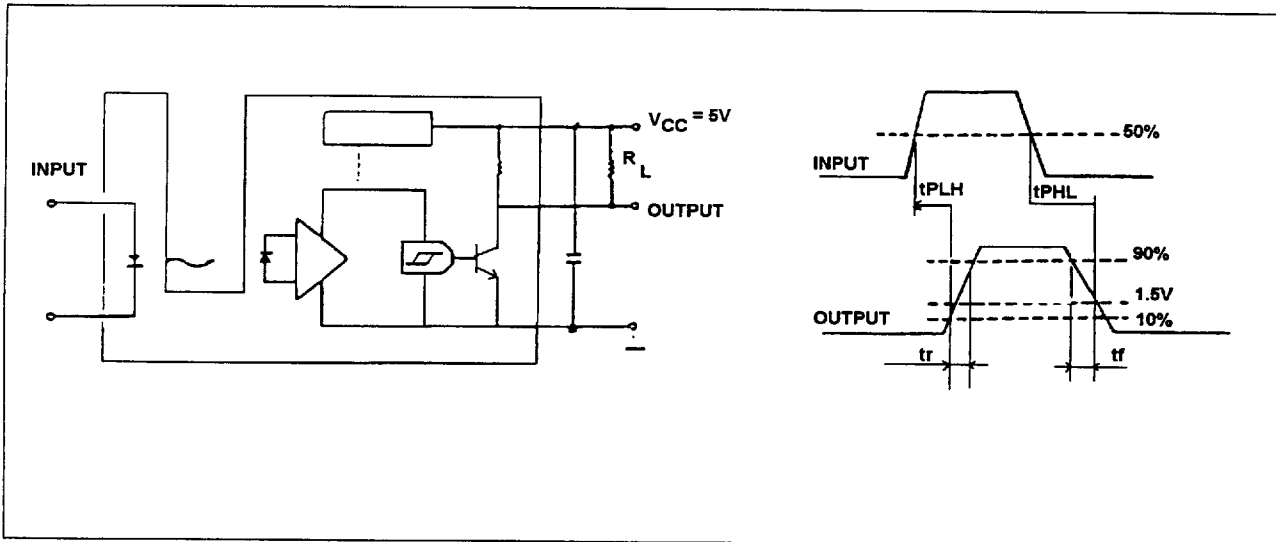
## 2) ELECTRICAL-OPTICAL CHARACTERISTICS OF THE PHOTO IC

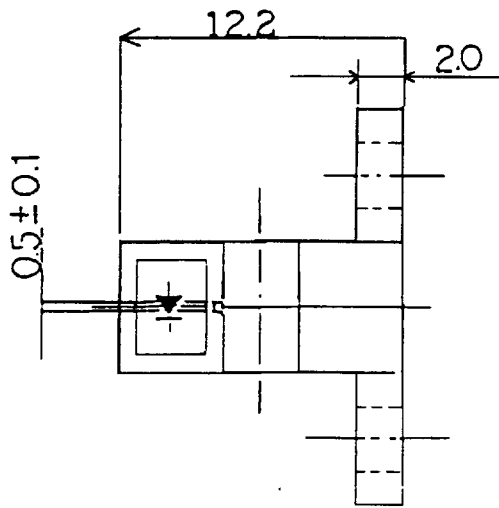
Item	Symbol	Min.	Typ.	Max.	Unit	Condition
Power Supply Voltage	$V_{CC}$	4.5	-	17	V	
Output Low Level Voltage	$V_{OL}$	-	0.14	0.4	V	$V_{CC} = 5V, I_{OL} = 16mA$
Output High Level Voltage	$V_{OH}$	3.5	-	-	V	$V_{CC} = 5V, R_L = 1K\Omega$
Power Supply	Output Low $I_{CCL}$	-	1.8	5.0	mA	$V_{CC} = 5V, I_F = 0mA$
Current Requirement	Output High $I_{CCH}$	-	1.7	3.0	mA	$V_{CC} = 5V, I_F = 10mA$



2) ELECTRICAL-OPTICAL CHARACTERISTICS OF THE PHOTO IC

Item	Symbol	Min.	Typ.	Max.	Unit	Condition
Low-High Threshold Input Current	$I_{FLH}$	-	1.0	4.0	mA	$V_{CC} = 5V$
Hysteresis	$I_{FHL}/I_{FLH}$	-	0.7	-	-	$V_{CC} = 5V$
L-H Propagation Delay Time	$t_{PLH}$	-	1.6	-	$\mu S$	$V_{CC} = 5V$ $I_F = 20mA$ $R_L = 680 \Omega$
H-L Propagation Delay Time	$T_{PHL}$	-	2.2	-		
Rise Time	$t_r$	-	0.28	-		
Fall Time	$t_f$	-	0.12	-		





SLOTTED OPTICAL SWITCH

Fig. 1

- 1) Measurements in brackets are for lead pin spacing at base of mold.
- 2) Tolerance is  $\pm 0.2$  mm unless otherwise indicated.
- 3) Unit: mm

