

ROHM**OPTOELECTRONICS****RPI-131E****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

Phototransistor

Collector-Emitter Voltage	V_{CEO}	30V
Emitter-Collector Voltage	V_{ECO}	4.5V
Collector Current	I_C	30mA
Collector Power Dissipation	P_C	80mW

Operating Temperature T_{opr} -25°C~+85°C*Storage Temperature* T_{stg} -40°C~+100°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	-	1.25	1.6	V	$I_F=50mA$
Reverse Current	I_R	-	-	10	μA	$V_R=5V$
Terminal Capacitance	C_T	-	50	-	pF	$V_R=0V, f=1Mhz$
Input-Output Frequency	f_c		1		MHz	$I_F=50mA$
Peak Emission Wavelength	λ_p		950		nm	$I_F=50mA$

2) ELECTRICAL-OPTICAL CHARACTERISTICS OF THE PHOTOTRANSISTOR

Item	Symbol	Min.	Typ.	Max.	Unit	Condition
Dark Current	I_{CEO}	-	-	0.5	μA	$V_{CE}=10V$
Collector-Emitter Breakdown Voltage	BV_{CEO}	30	-	-	V	$I_{CE}=50 \mu A$
Emitter-Collector Breakdown Voltage	BV_{ECO}	4.5	-	-	V	$I_{EC}=50 \mu A$
Peak Sensitivity Wavelength	λ_p		800		nm	-
Response Time Constant	-		10		μS	$I_F=20mA, I_C=2mA, R_L=100\Omega$

ROHM CORPORATION, Rohm Electronics Division, 3034 Owen Dr., Antioch, TN 37013 (615)641-2020, FAX (615)641-2022

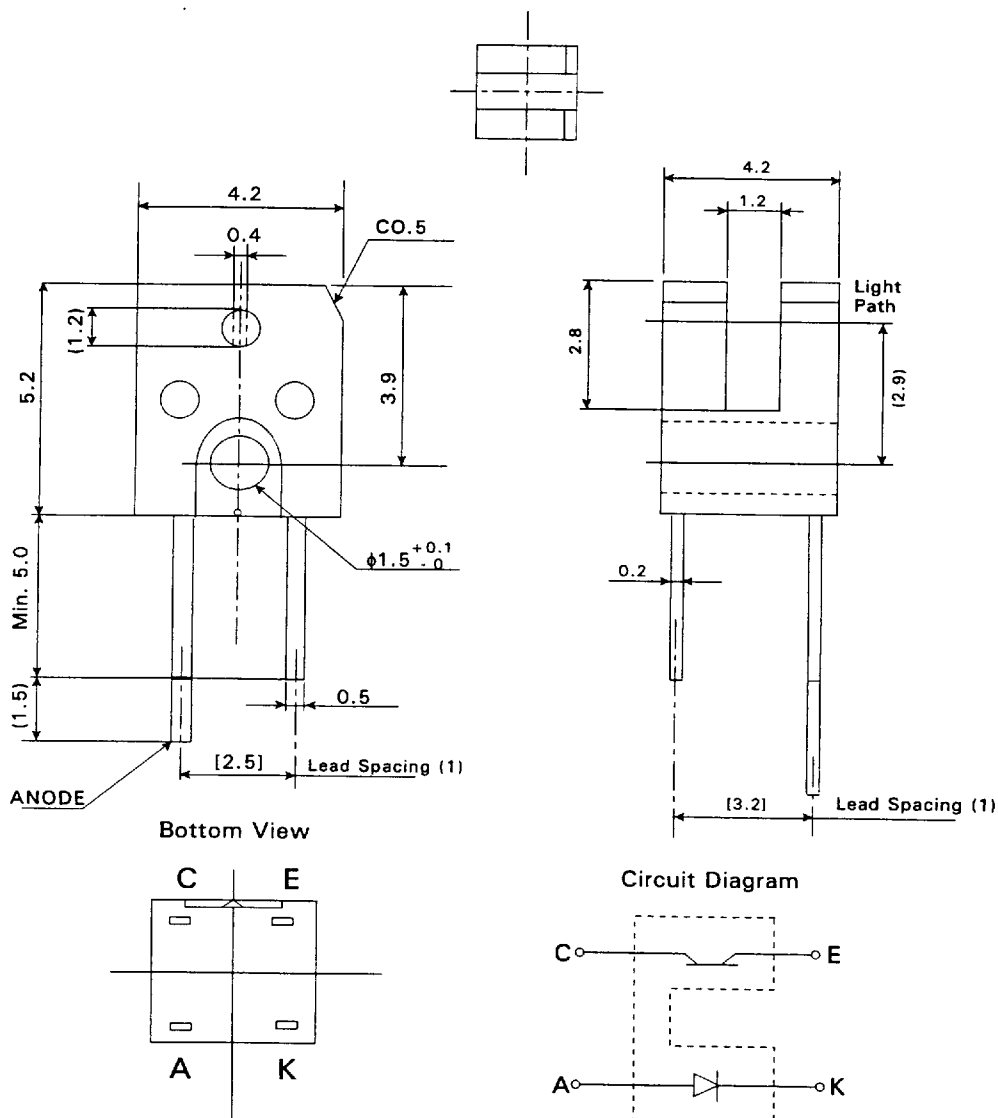
APPROVED:  DATE: 8-24-97

RPI131E.PM5, OPTOELECTRONICS, O-37 8/2/93

2) ELECTRICAL-OPTICAL CHARACTERISTICS OF THE PHOTOTRANSISTOR (Continued from page one)

Item	Symbol	Min	Typ	Max	Unit	Condition
Collector Current	I_C	0.7	-	4.5	mA	$V_{CE}=4.5V, I_F=20mA$
Collector-Emitter Saturation Voltage	$V_{CE(Sat)}$	-	-	0.3	V	$I_F=20mA, I_C=0.3mA$
Rise Time, Fall Time	t_r, t_f	-	10	-	μS	$V_{CE}=5V, I_F=20mA, R_L=100\Omega$

SLOTTED OPTICAL SWITCH

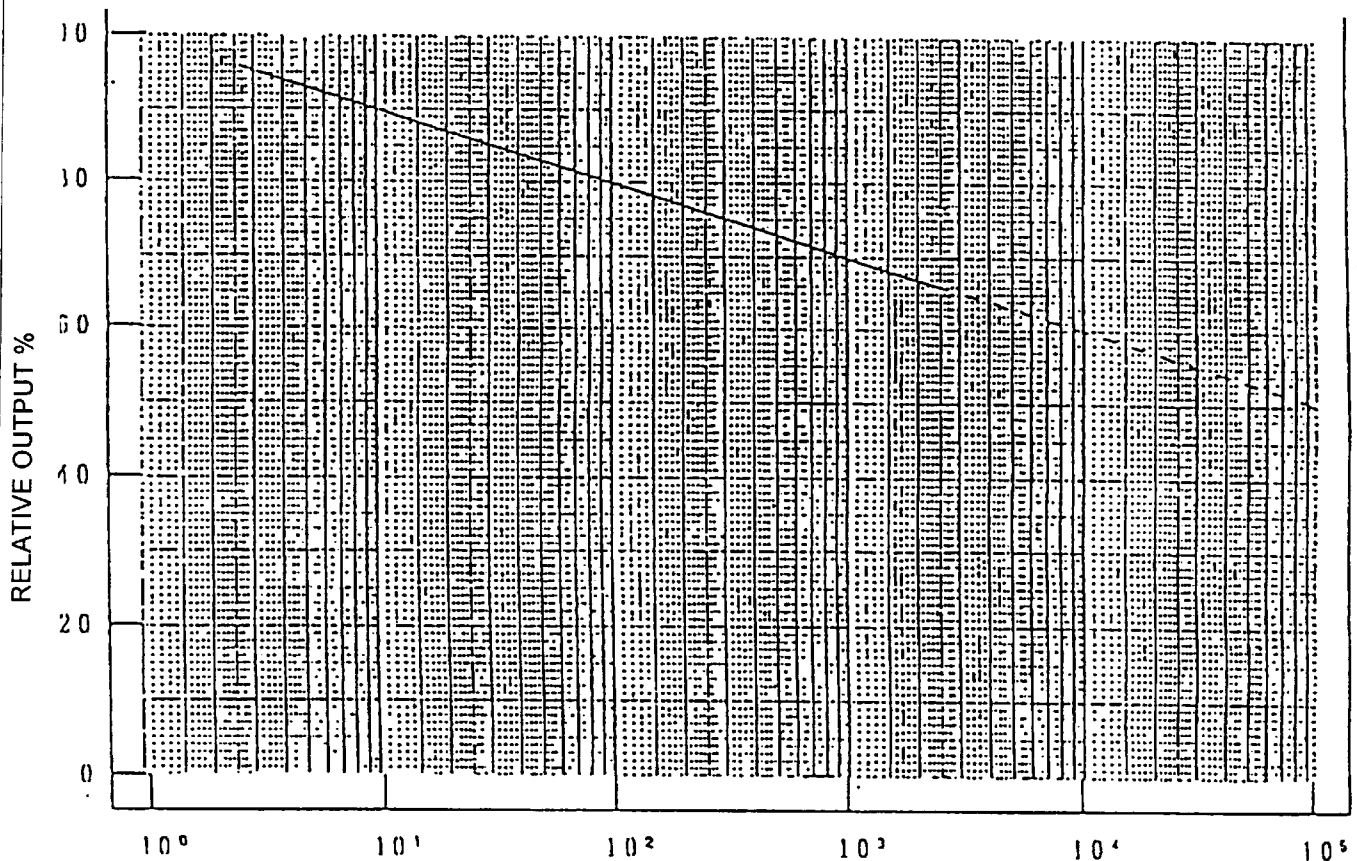


- 1) Measurement in brackets is for lead pin spacing at base of mold.
 2) Tolerance is $\pm 0.15mm$ unless otherwise indicated.

OPTOELECTRONICS

ROHM

Type No.	RPI-131E
Data	A Burn-In Degradation
Condition	$I_F=20\text{mA}$ $V_C=5\text{V}$ $T_a=25^\circ\text{C}$



THIS CURVE IS MAX DEGRADATION

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