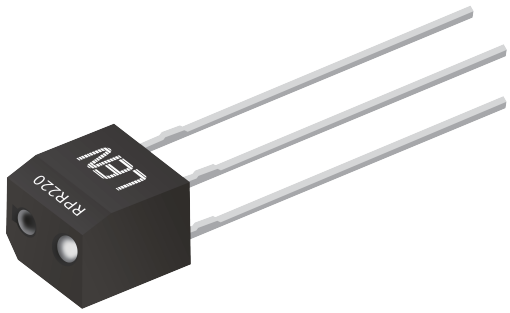
Descriptions

RPR-220 is a reflective photosensor. The emitter is a GaAs infrared light emitting diode and the detector is a highsensitivity, silicon planar phototransistor. A custom lamp was developed to enable the achievement of a smaller package than with conventional reflectors.



DIP-4

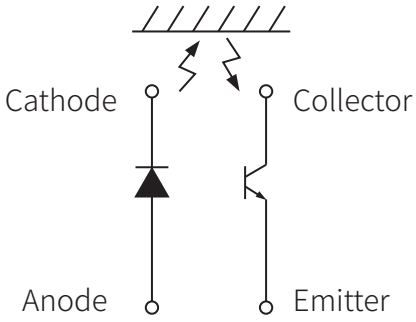
Features

- Lightweight and compact.
- A plastic lens is used for high sensitivity
- A built-in visible light filter minimizes the influence of stray light

Applications

- Copiers
- Game machines
- Compact disk players
- Office automation equipment

Schematic Diagram



Ordering Information

Part Number	Package	Shipping Quantity
RPR-220	DIP-4	200 pcs / Bag , 1000 pcs / Box

Absolute Maximum Ratings (T_A=25°C)

Parameter		Symbol	Ratings	Unit
Input(LED)	Forward Current	I_F	50	mA
	Reverse Voltage	V_R	5	V
	Power Dissipation	P_D	80	mW
Output (Phototransistor)	Collector-Emitter Voltage	V_{CEO}	30	V
	Emitter-Collector Voltage	V_{ECO}	4.5	V
	Collector Current	I_C	30	mA
	Collector Power Dissipation	P_C	80	mW
Operating Temperature		T_{OPR}	-25 ~ +85	°C
Storage Temperature		T_{STG}	-30 ~ +85	°C

Electrical and Optical Characteristics (T_A=25°C)

Parameter		Symbol	Conditions	Min	Typ	Max	Unit
Input	Forward Voltage	V_F	I_F=50mA		1.34	1.6	V
	Reverse Current	I_R	V_R=5V			10	μA
Output	Dark Current	I_{CEO}	V_{CE}=10V			0.5	μA
	Peak Sensitivity Wavelength	λ_p			800		nm
Transfer	Collector Current	I_C	V_{CE}=2V, I_F=10mA	0.08	0.3	0.8	mA
	Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	I_F=20mA, I_C=0.1mA		0.1	0.3	V
	Response Time	T_R · T_F	V_{CC}=10V, I_F=20mA, R_L=100Ω		10		μsec

Electrical and Optical Characteristic Curves

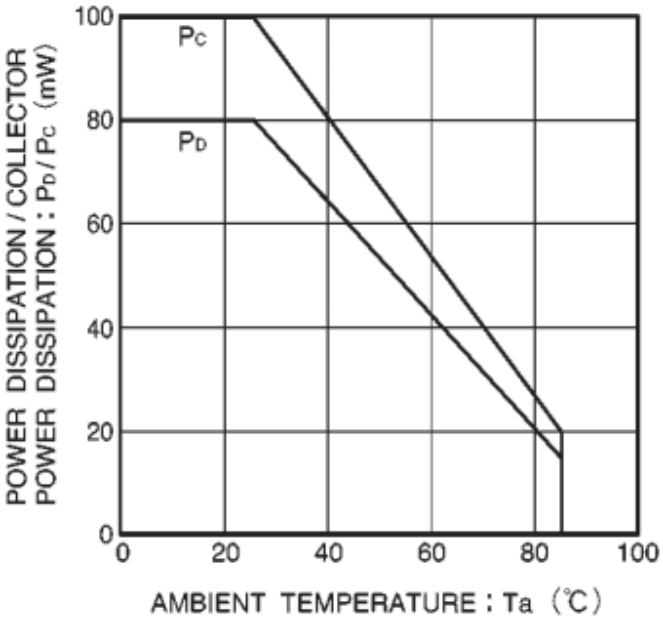


Fig.1 Power dissipation / collector power dissipation vs. ambient temperature

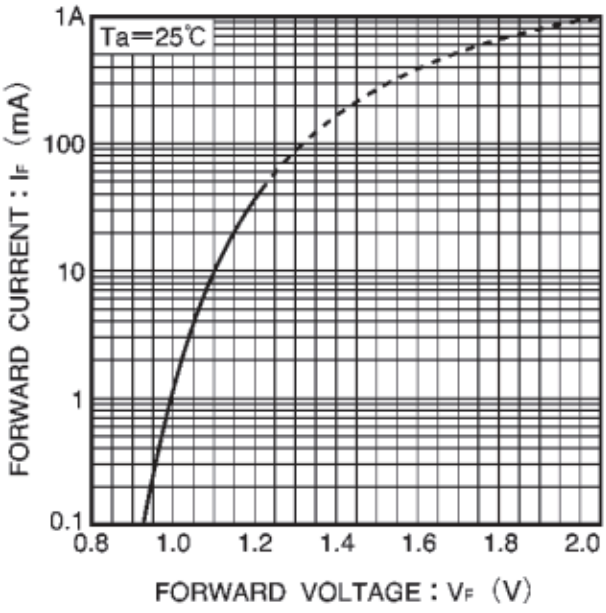


Fig.2 Forward current vs. forward voltage

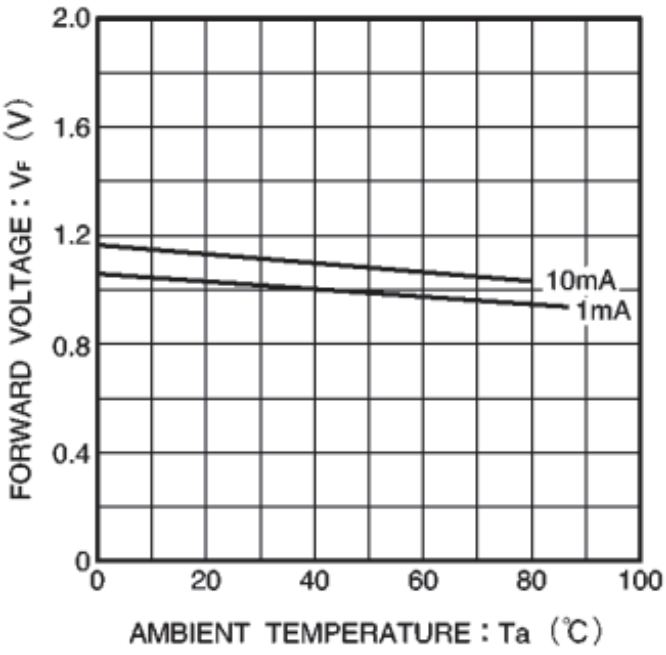


Fig.3 Forward voltage vs.ambient temperature

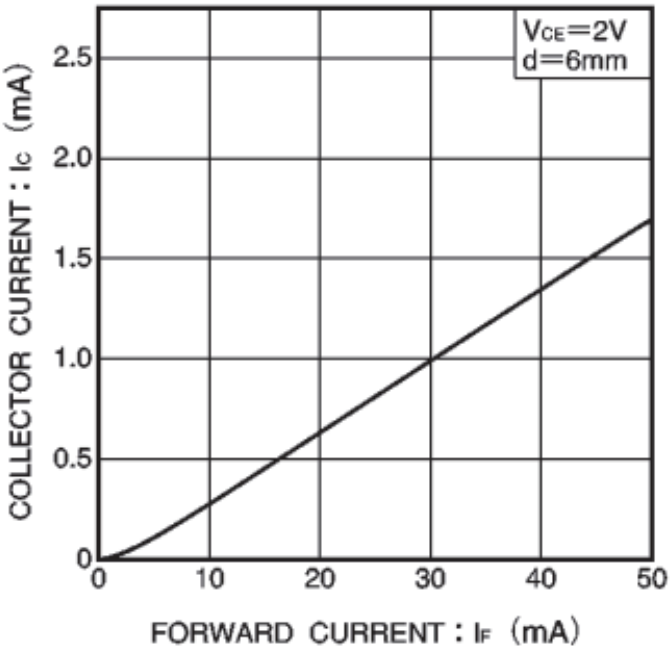


Fig.4 Collector current vs. forward current

Electrical and Optical Characteristic Curves

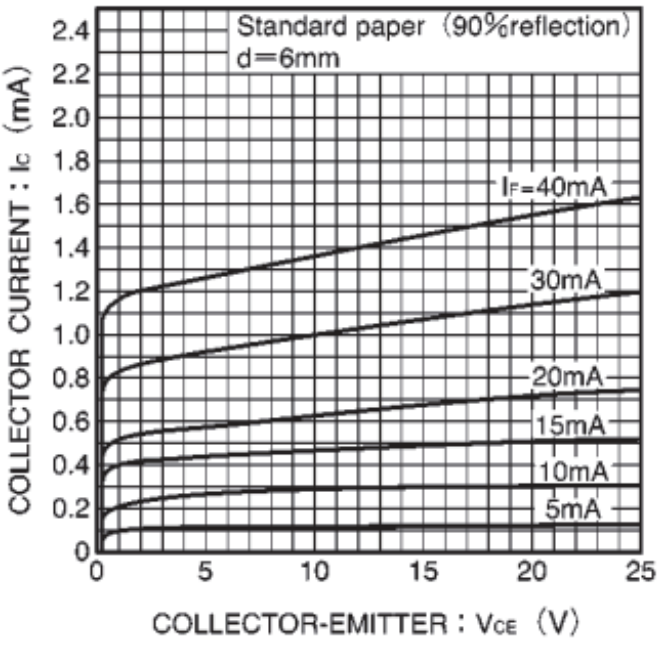


Fig.5 Output characteristics

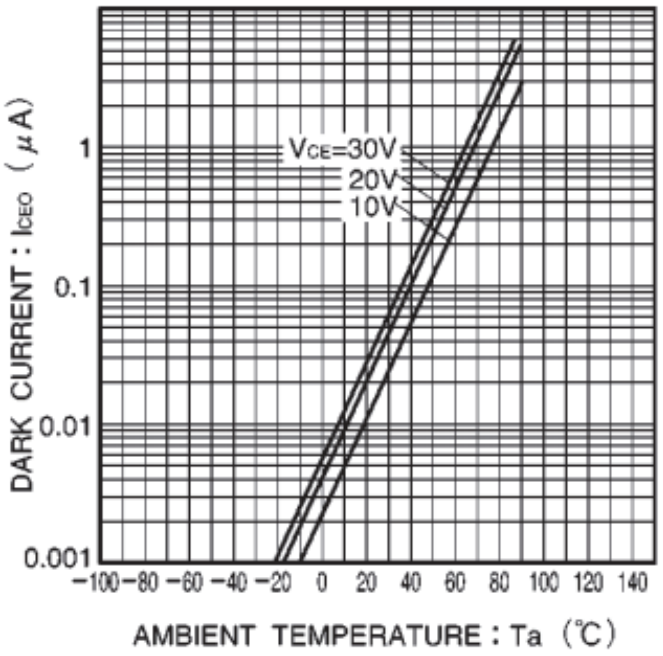


Fig.6 Dark current vs. ambient temperature

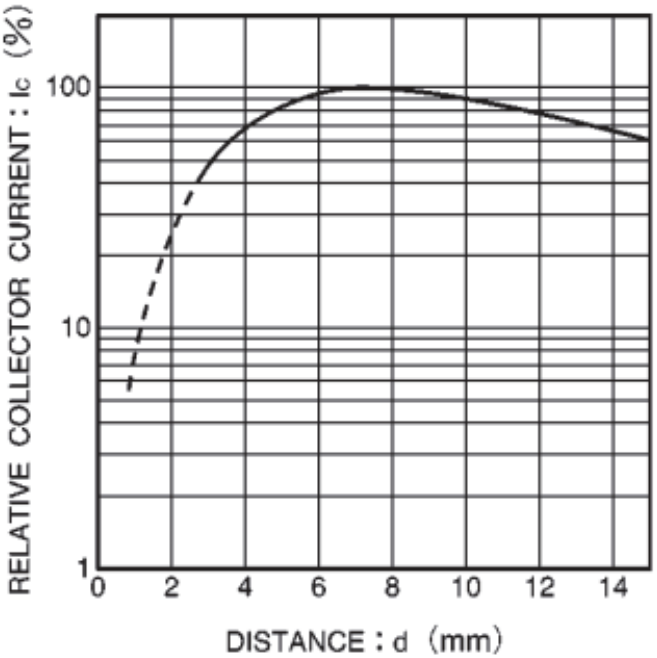


Fig.7 Relative output vs. distance

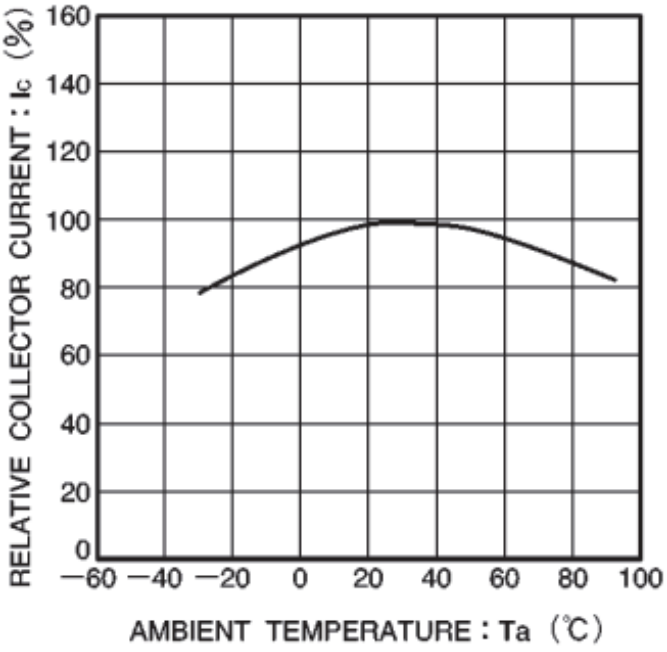


Fig.8 Relative output vs. ambient temperature

Electrical and Optical Characteristic Curves

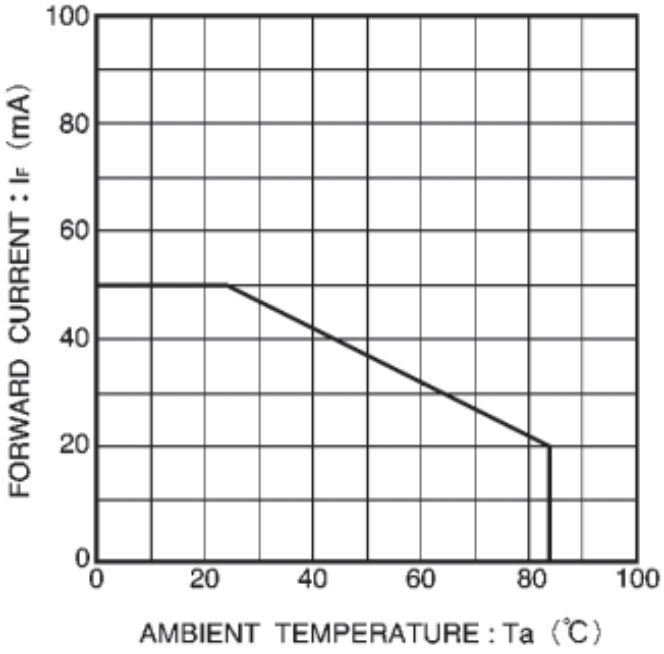
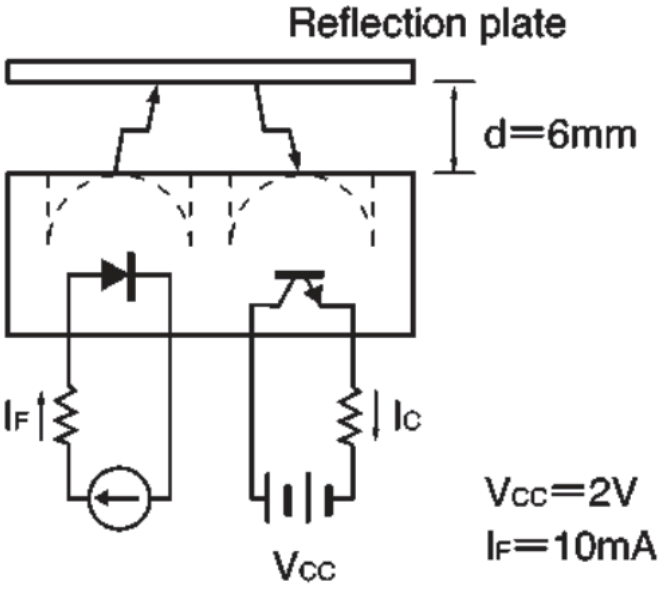


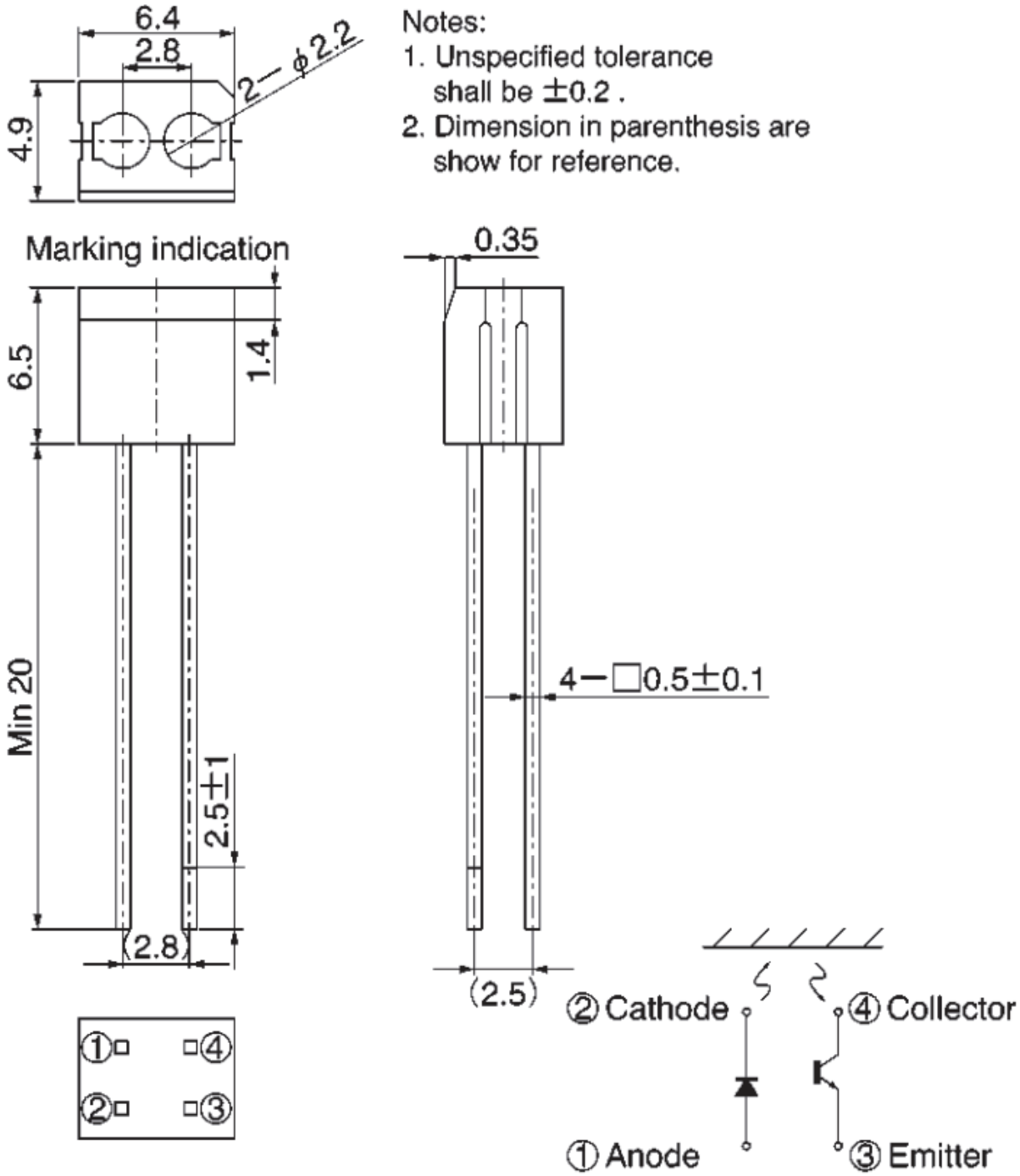
Fig.9 Forward current vs. ambient temperature

Circuit for testing transfer characteristics



Package Dimensions

DIP-4



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