

## Optoelectronic Devices

Order code	Manufacturer code	Description
72-8968	n/a	PHOTOTRANSISTOR (RC)

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The enclosed information is believed to be correct, Information may change 'without notice' due to product improvement. Users should ensure that the product is suitable for their use. E. & O. E.	Revision A 04/07/2003

# Kingbright®

## NPN BLACK PLASTIC PHOTOTRANSISTOR

L-610MP4BT/BD

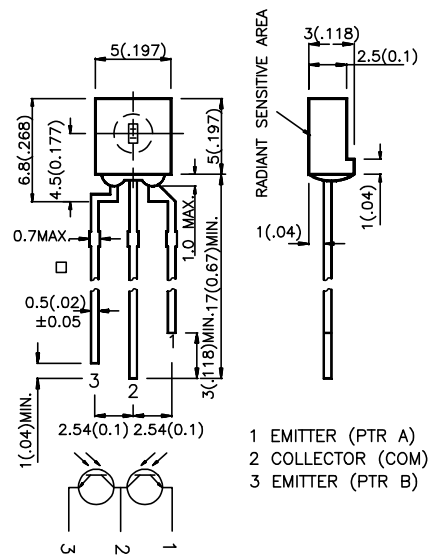
### Features

- | MECHANICALLY AND SPECTRALLY MATCHED TO THE KM-4457 INFRARED EMITTING LED LAMP SERIES.
- | BLACK PLASTIC PACKAGE.
- | COUPLED WITH KM-4457 INFRARED EMITTING LED LAMP SERIES FOR MOUSE APPLICATION.

### Description

Made with NPN silicon phototransistor chips.

### Package Dimensions



- 1 EMITTER (PTR A)
- 2 COLLECTOR (COM)
- 3 EMITTER (PTR B)

#### Notes:

1. All dimensions are in millimeters (inches).
2. Tolerance is  $\pm 0.25(0.01)$  unless otherwise noted.
3. Lead spacing is measured where the lead emerge package.
4. Specifications are subjected to change without notice.

### Absolute Maximum Ratings at $T_A=25^\circ\text{C}$

Parameter	Maximum Rating
Collector-to-Emitter Breakdown Voltage	30V
Emitter-to-Collector Breakdown Voltage	5V
Power Dissipation at (or below) $25^\circ\text{C}$ Free Air Temperature	100mW
Operating Temperature Range	$-55^\circ\text{C} \sim +85^\circ\text{C}$
Storage Temperature Range	$-55^\circ\text{C} \sim +85^\circ\text{C}$
Lead Soldering Temperature (4mm for 5sec)	$260^\circ\text{C}$

Electrical and Radiant Characteristics  $T_A=25^\circ\text{C}$

Symbol	Parameter	Min.	Typ.	Max.	Unit	Test Conduction
$V_{BRCEO}$	Collector-to-Emitter Breakdown Voltage	30	-	-	V	$I_C=100\mu\text{A}$ $E_e=0\text{mW/cm}^2$
$V_{BRECO}$	Emitter-to-Collector Breakdown Voltage	5	-	-	V	$I_E=100\mu\text{A}$ $E_e=0\text{mW/cm}^2$
$V_{CE(SAT)}$	Collector-to-Emitter Saturation Voltage	-	-	0.4	V	$I_C=0.5\text{mA}$ $E_e=5\text{mW/cm}^2$
$I_{CEO}$	Collector Dark Current	-	-	100	nA	$V_{CE}=10\text{V}$ $E_e=0\text{mW/cm}^2$
$T_R$	Rise Time (10% to 90%)	-	16	-	us	$V_R=5\text{V}$ $I_C=1\text{mA}$ $R_L=1\text{K ohms}$
$T_F$	Fall Time (90% to 10%)	-	18	-	us	
$I_{(ON)}$	On State Collector Current	0.12	-		mA	$V_{CE}=5\text{V}$ $E_e=1\text{mW/cm}^2$ $\lambda=940\text{nm}$
R	Collector Current Ratio of 2 Phototransistor	0.8	1.0	1.25		$I_{c(on)}(a) / I_{c(on)}(b)$