

# KIR1004S

The KIR1004S carrying a unique hysteresis transistor(BAMBIT) developed by KODENSHI CORP. facilitates digital output by means of two leads. This digital photointerrupter, because of its ultra-compact size, requires little space.

## FEATURES

- Digital output : Directly connect to a microcomputer digital port.
- Hysteresis : Stable against chattering of the object.
- High speed response : Faster than transistor output type.
- RoHS Compliance.

## APPLICATIONS

- Detection of paper marks
- Detection of high speed object
- Detection of bar codes
- Portable video camera
- Printer
- Projection TV
- Card readerProjection TV

## MAXIMUM RATINGS

(Ta=25°C)

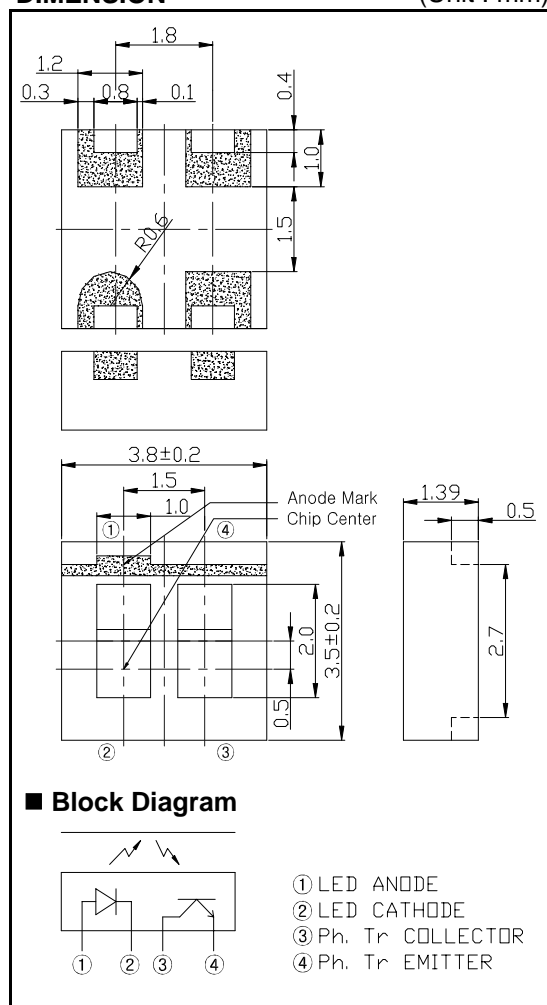
Parameter		Symbol	Rating	Unit
Input	Forward Current	IF	50	mA
	Reverse Voltage	VR	5	V
	Power Dissipation	PD	75	mW
Output	Collector-Emitter Breakdown Voltage	BVCEO	10	V
	Emitter-Collector Breakdown Voltage	BVECO	0.3	V
	Collector Current	IC	0.5	mA
	Storage Temperature	Tstg	-30~+100	°C
Operating Temperature <sup>*1</sup>		Topr	-25~+85	°C
Lead Soldering Temperature <sup>*2</sup>		Tsol	260	°C

\*1. No icebound or dew

\*2. For 2 times at 26°C reflow

## DIMENSION

(Unit : mm)



## ELECTRO-OPTICAL CHARACTERISTICS

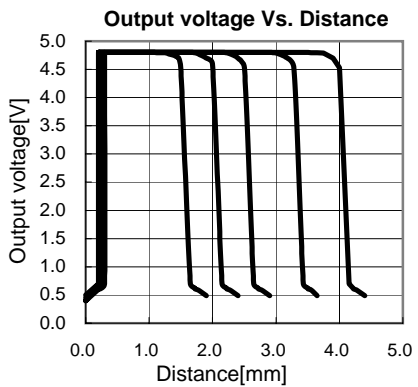
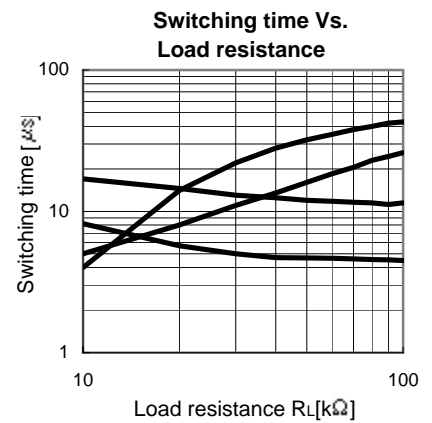
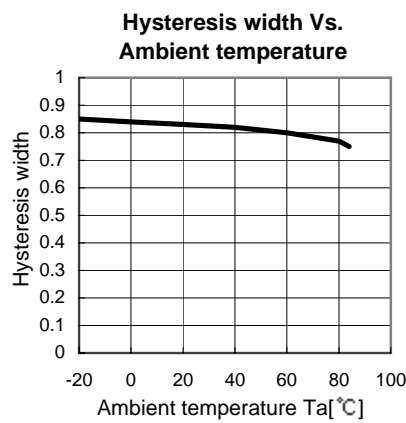
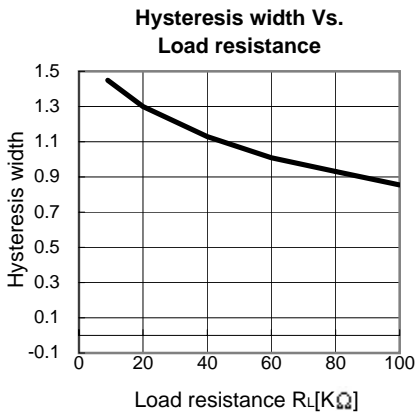
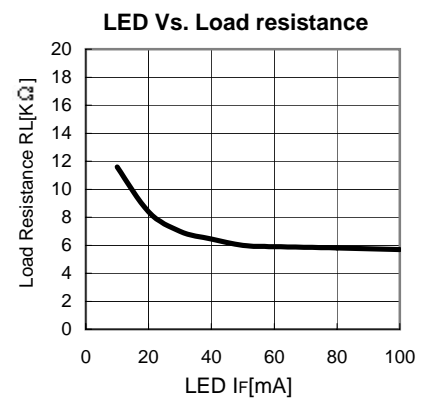
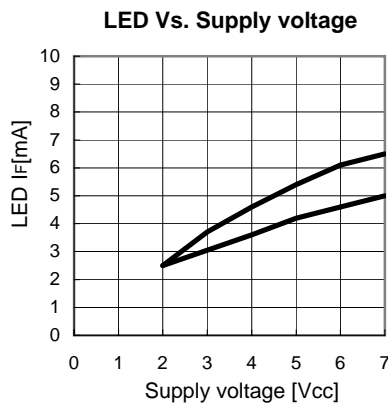
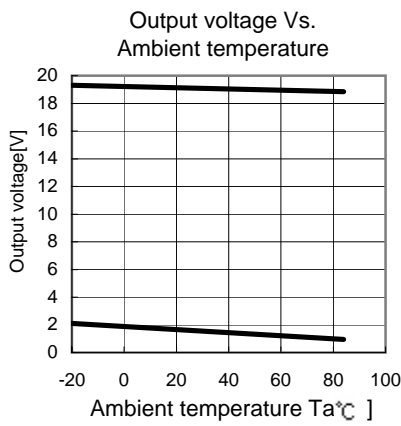
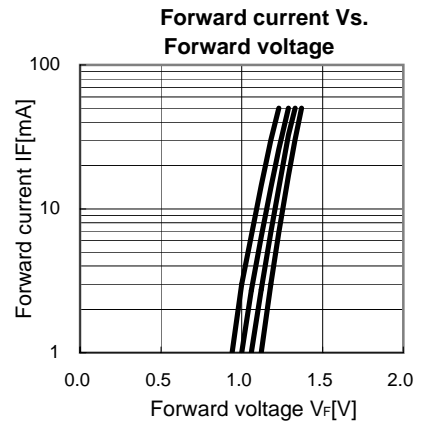
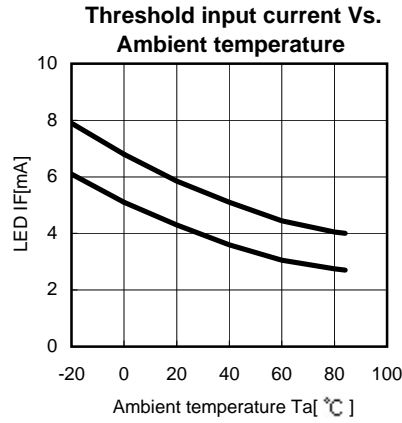
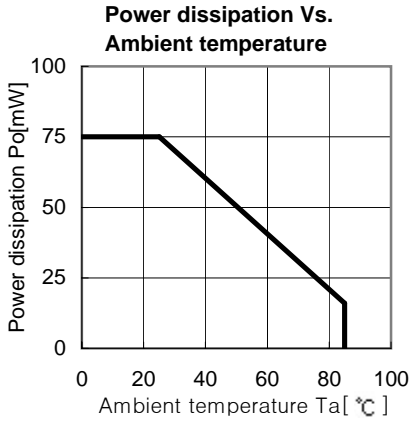
(Ta=25°C, unless otherwise noted)

Parameter		Symbol	Condition	Min.	Typ.	Max.	Unit.
Input	Forward Voltage	VF	IF=10mA	-	-	1.30	V
	Reverse Current	IR	VR=5V	-	-	10	mA
	Peak Wavelength	λP	IF=20mA	-	940	-	nm
Output	Operating Supply Voltage	VCC	-	2.0	5.0	7.0	V
	Low Level Output Voltage	VOL	VCC=5V, IF=0mA, RL=100kΩ	-	0.5	0.7	V
	High Level Output Voltage	VOH	VCC=5V, IF=20mA, RL=100kΩ	4.5	4.7	-	V
	Peak Wavelength	λP	-	-	880	-	nm
Transmission	Threshold Input Current <sup>*3</sup>	IFLH	VCC=5V, RL=100Ω	2.0	-	7.2	mA
	Hysteresis <sup>*4</sup>	IFHL/IFLH		-	0.85	-	-
	L -> H Propagation Time	tPLH	VCC=5V, IF=0mA, RL=100kΩ	-	15	0.4	ms
	H -> L Propagation Time	tPHL		-	40	-	ms
	Rise Time	tr		-	4.5	-	ms
Fall Time	tf	-	-	25	-	ms	

\*3. IFLH represents forward current when output changes from low to high.

\*4. IFHL represents forward current when output changes from high to low.

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**Measurement of propagation time**

