

DG - 211V

The DG – 211V carrying a unique hysteresis transistor (BAMBIT) developed by KODENSHI CORP. facilitates digital output by means of two leads.

FEATURES

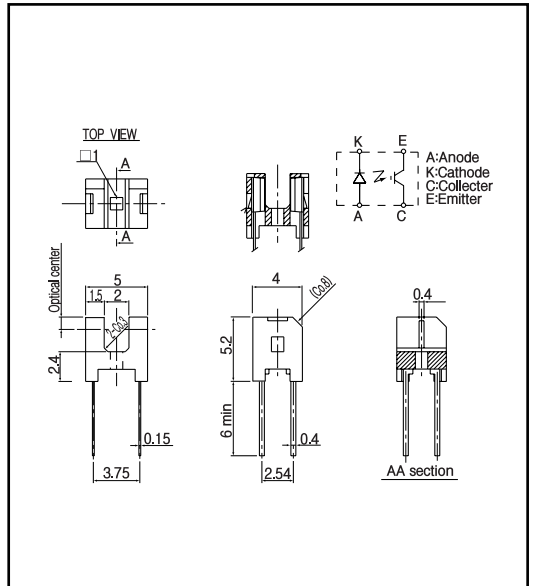
- DIGITAL OUTPUT : directly connect to a microcomputer digital port.
- HYSTERESIS : stable against chattering of the object
- HIGH– SPEED RESPONSE: faster than phototransistor type
- Setting easy

APPLICATIONS

- Detection of paper or marks
- Detection of high – speed object
- Detection of bar codes

DIMENSIONS

(Unit : mm)



MAXIMUM RATINGS

(Ta=25)

Item	Symbol	Rating	Unit	
Input	Power dissipation	P_D	75	mW
	Forward current	I_F	50	mA
	Reverse voltage	V_R	5	V
Output	Collector current	I_C	0.5	mA
	C - E voltage	V_{CEO}	10	V
	E - C voltage	V_{ECO}	0.3	V
Operating temp. ^{*1}		Topr.	- 20 ~ + 80	
Soldering temp. ^{*2}		Tsol.	240	

*1. No icebound or dew

*2. For MAX.5 seconds at the position of 1mm from the package

ELECTRO-OPTICAL CHARACTERISTICS

(Ta=25)

Item	Symbol	Conditions	Min.	Typ.	Max.	Unit.	
Input	Forward voltage	$I_F = 20\text{mA}$		1.2	1.4	V	
	Reverse current	$V_R = 5\text{V}$			10	μA	
	Peak wavelength	$I_F = 20\text{mA}$		940		nm	
Output	Operating supply voltage rang	V_{CC}	2.0		5.5	V	
	Low level output voltage	$V_{CC} = 3\text{V}, I_F = 0\text{mA}, R_E = 100\text{k}$		0.35	0.5	V	
	High level output voltage	$V_{CC} = 3\text{V}, I_F = 8\text{mA}, R_E = 100\text{k}$	2.5	2.65		V	
	Peak wavelength	p		880		nm	
Transmission	Threshold input current ^{*4}	$V_{CC} = 3\text{V}, R_E = 100\text{k}$		2.8	6.0	mA	
	Hysteresis ^{*5}	$V_{CC} = 3\text{V}, R_E = 100\text{k}$		0.85			
	L H propagation time	t_{PLH}	$V_{CC} = 3\text{V}, I_F = 12\text{mA}, R_E = 100\text{k}$		15		$\mu\text{sec.}$
	H L propagation time	t_{PHL}			40		$\mu\text{sec.}$
	Rise time	t_r			4		$\mu\text{sec.}$
Fall time	t_f			30		$\mu\text{sec.}$	

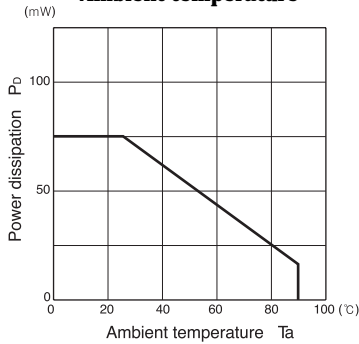
*4. IFLH represents forward current when output changes from low to high.

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

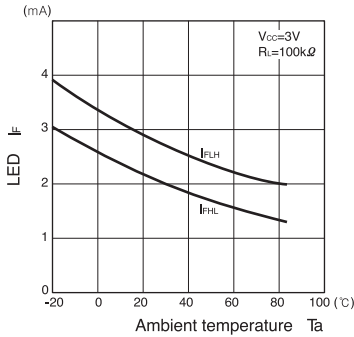
Photointerrupters(Transmissive)

DG - 211V

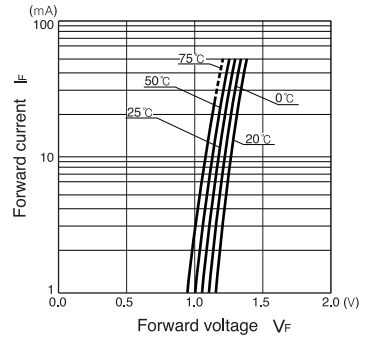
Power dissipation Vs. Ambient temperature



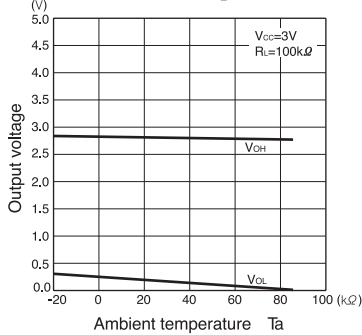
Threshold input current Vs. Ambient temperature



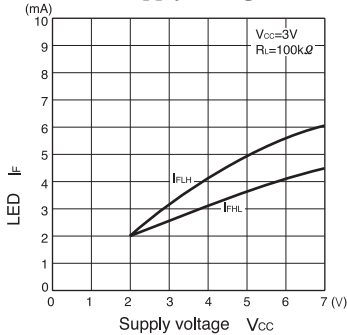
Forward current Vs. Forward voltage



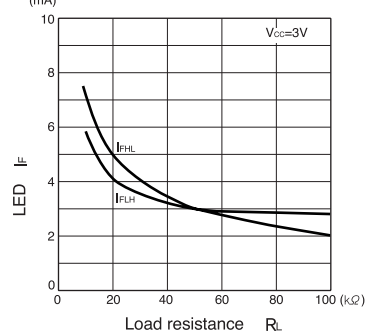
Output voltage Vs. Ambient temperature



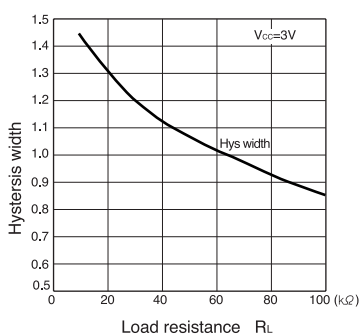
LED Vs. Supply voltage



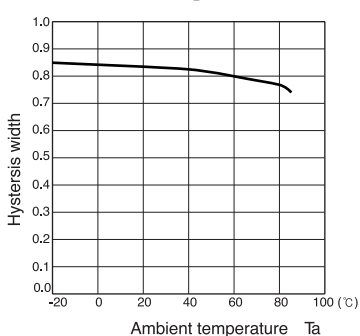
LED Vs. Load resistance



Hysteresis width Vs. Load resistance



Hysteresis width Vs. Ambient temperature



Switching current Vs. Load resistance

