

TOSHIBA**TLP812**

TOSHIBA PHOTOINTERRUPTER INFRARED LED + PHOTOTRANSISTOR

TLP812

MOTOR ROTATION AND IRIS DETECTION FOR CAMERA

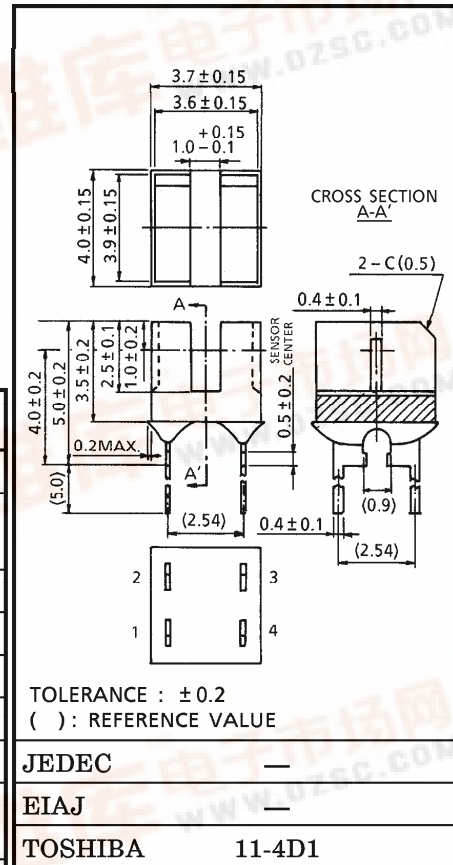
TRUCK DETECTION OF MICRO FLOPPY DISK DRIVE

Unit in mm

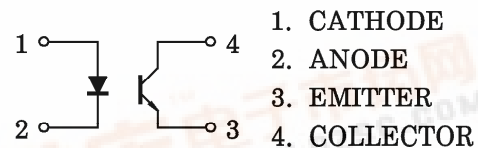
- Very small package
- High resolution : Slit width 0.4mm
- Gap : 1mm
- Directly mountable on PCB using the stand off of lead

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	RATING	UNIT
LED	Forward Current	I_F	50	mA
	Forward Current Derating (Ta > 25°C)	$I_F / ^\circ\text{C}$	-0.67	mA / °C
	Reverse Voltage	V_R	5	V
DETECTOR	Collector-Emitter Voltage	V_{CEO}	35	V
	Emitter Collector Voltage	V_{ECO}	5	V
	Collector Current	I_C	20	mA
	Collector Power Dissipation	P_C	75	mW
	Collector Power Dissipation Derating (Ta > 25°C)	$\Delta P_C / ^\circ\text{C}$	-1	mW / °C
Operating Temperature Range		T_{opr}	-25~85	°C
Storage Temperature Range		T_{stg}	-40~100	°C



PIN CONNECTION



961001EBC2

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OPTO-ELECTRICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC		SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
LED	Forward Voltage	V_F	$I_F = 10\text{mA}$	1.00	1.15	1.30	V
	Reverse Current	I_R	$V_R = 5\text{V}$	—	—	10	μA
	Capacitance	C_T	$V = 0, f = 1\text{MHz}$	—	30	—	pF
DETECTOR	Dark Current	$I_D (I_{CEO})$	$V_{CE} = 20\text{V}, I_F = 0$	—	—	100	nA
	Capacitance	C_T	$V = 0, f = 1\text{MHz}$	—	13	—	pF
COUPLED	Current Transfer Ratio	I_C / I_F	$V_{CE} = 0.6\text{V}, I_F = 5\text{mA}$	5	—	—	%
	Collector-Emitter Saturation Voltage	$V_{CE} (\text{sat})$	$I_F = 8\text{mA}, I_C = 0.1\text{mA}$	—	0.1	0.4	V
	Rise Time	t_r	$V_{CC} = 5\text{V}, I_C = 2\text{mA}, R_L = 1\text{k}\Omega$	—	50	—	μs
	Fall Time	t_f		—	50	—	μs

PRECAUTION

Please be careful of the followings.

1. Soldering temperature : 260°C max Soldering time : 5 sec max
Soldering portion : at above 1.5mm from the lower part of the body.
2. Be careful of not attaching residual flux and chemicals to the light emitting surface and light receiving surface.

ENVIRONMENT

- Should not be exposed to corrosive gas such as hydrogen sulfide gas and a sea breeze.
- Should not be exposed to visible dust.
- Should not be exposed to direct sunlight.
If any case, should not be subject to load which may result in deformation / deterioration of products.

