

Absolute Maximum Ratings (Ta = 25°C)

Characteristic		Symbol	Rating	Unit
LED	Forward current	I _F	30	mA
	Forward current derating (Ta ≥ 25°C)	ΔI _F /°C	-0.3	mA/°C
	Reverse voltage	V _R	5	V
	Diode power dissipation	P _D	50	mW
	Diode power dissipation derating (Ta ≥ 25°C)	ΔP _D /°C	-0.5	mW/°C
	Junction temperature	T _J	125	°C
Detector	Off-State output terminal voltage	V _{OFF}	40	V
	On-State current	I _{ON}	120	mA
	On-State current derating (Ta ≥ 25°C)	ΔI _{ON} /°C	-1.2	mA/°C
	Output power dissipation	P _O	202	mW
	Output power dissipation derating (Ta ≥ 25°C)	ΔP _O /°C	-2.02	mW/°C
	Junction temperature	T _J	125	°C
Storage temperature range		T _{stg}	-40 to 125	°C
Operating temperature range		T _{opr}	-20 to 85	°C
Lead soldering temperature (10 s)		T _{sol}	260	°C
Isolation voltage (AC, 60 s, R.H. ≤ 60 %) (Note 1)		BV _S	1500	V _{rms}

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

(Note 1): Device considered a two-terminal device: Pins 1 and 2 shorted together, and pins 3 and 4 shorted together.

Precautions

This device is sensitive to electrostatic discharge. When using this device, please ensure that all tools and equipment are earthed.

Recommended Operating Conditions

Characteristic	Symbol	Min	Typ.	Max	Unit
Supply voltage	V _{DD}	—	—	32	V
Forward current	I _F	—	—	20	mA
Operating temperature	T _{opr}	25	—	60	°C

Note: Recommended operating conditions are given as a design guideline to obtain expected performance of the device. Additionally, each item is an independent guideline respectively. In developing designs using this product, please confirm specified characteristics shown in this document.

Individual Electrical Characteristics (Ta = 25°C)

Characteristic		Symbol	Test Condition	Min	Typ.	Max	Unit
LED	Forward voltage	V _F	I _F = 5 mA	1.15	1.30	1.45	V
	Reverse current	I _R	V _R = 5 V	—	—	10	μA
	Capacitance	C _T	V _F = 0 V, f = 1 MHz	—	30	—	pF
Detector	Off-state current	I _{OFF}	V _{OFF} = 35 V	—	10	200	pA
	Capacitance	C _{OFF}	V = 0 V, f = 100 MHz, t < 1 s	—	0.45	0.8	pF

Coupled Electrical Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Condition	Min	Typ.	Max	Unit
Trigger LED current	IFT	ION = 100 mA	—	—	3	mA
Return LED current	IFC	IOFF = 1 μA	0.1	—	—	mA
On-state resistance	RON	ION = 120 mA, IF = 5 mA, t < 1 s	—	12	14	Ω

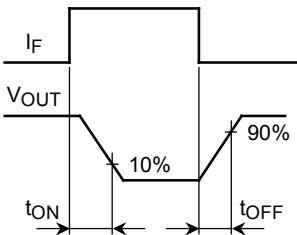
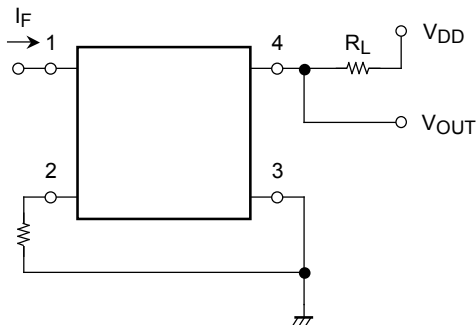
Isolation Characteristics (Ta = 25°C)

Characteristic	Symbol	Test Condition	Min	Typ.	Max	Unit
Capacitance input to output	CS	VS = 0 V, f = 1 MHz	—	0.6	—	pF
Isolation resistance	RS	VS = 500 V, R.H. ≤ 60 %	5 × 10 ¹⁰	10 ¹⁴	—	Ω
Isolation voltage	BVS	AC, 60 s	1500	—	—	Vrms

Switching Characteristics (Ta = 25°C)

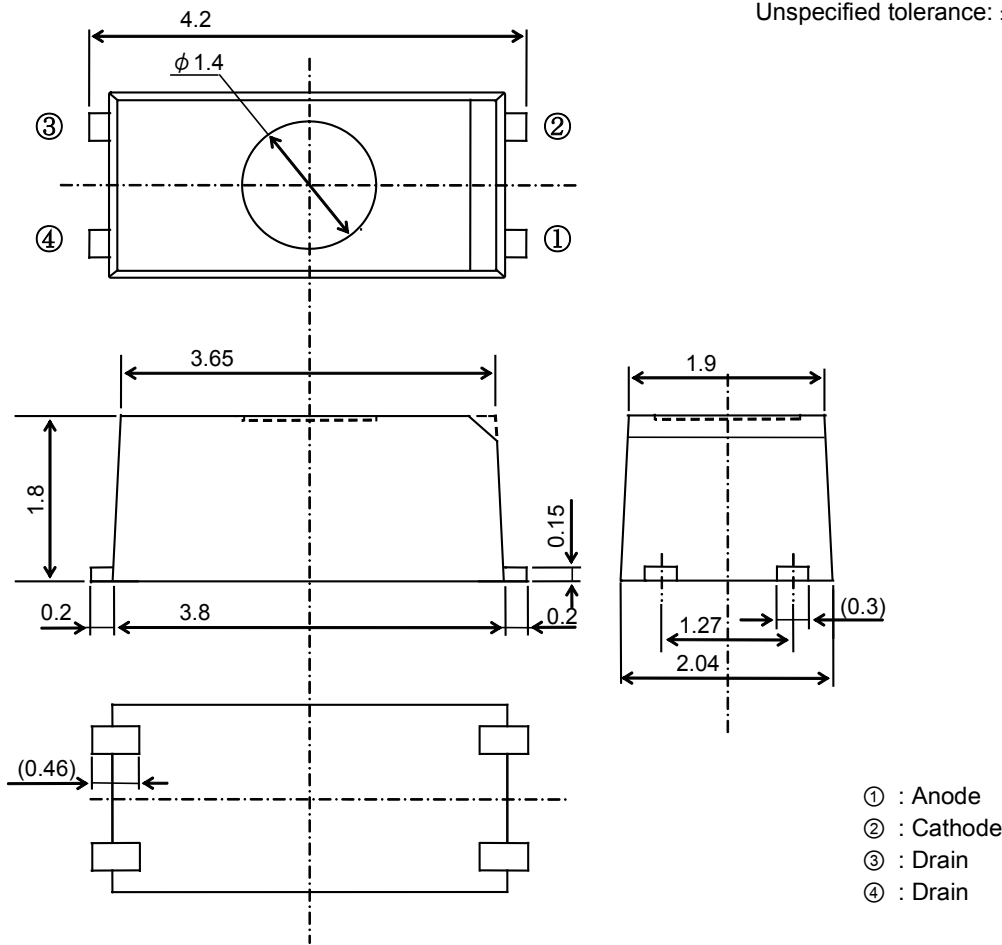
Characteristic	Symbol	Test Condition	Min	Typ.	Max	Unit
Turn-on time	tON	RL = 200 Ω VDD = 10 V, IF = 5 mA (Note 2)	—	26	200	μs
Turn-off time	tOFF		—	140	200	

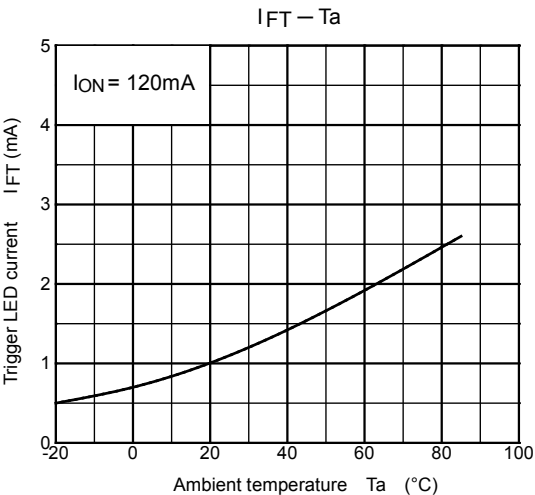
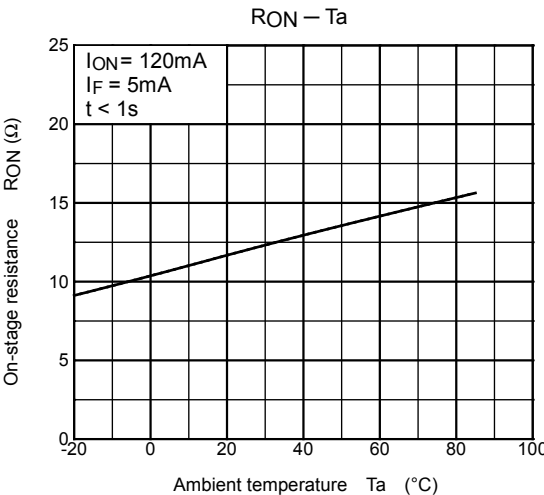
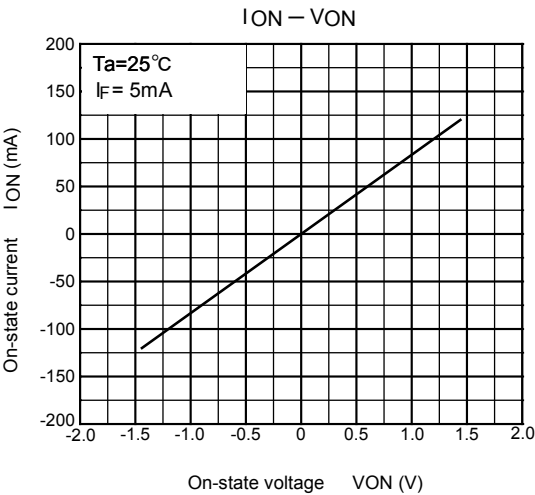
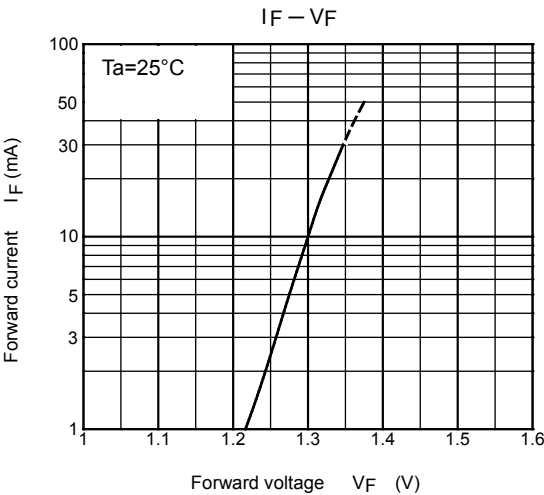
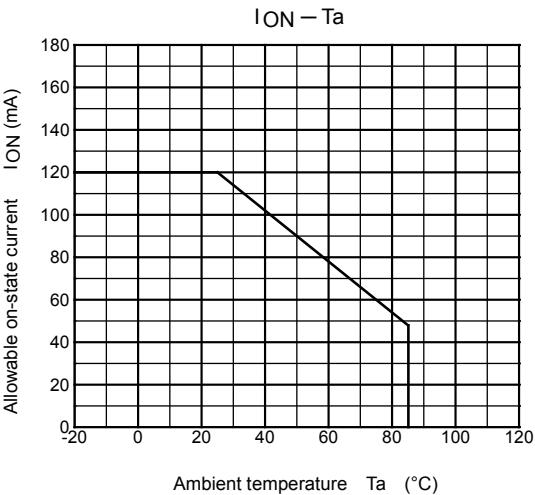
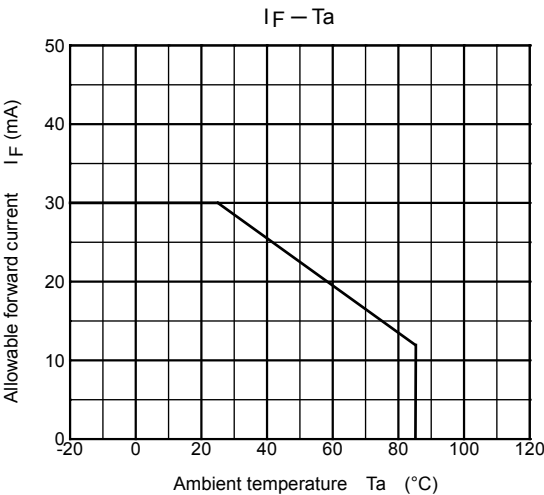
(Note 2): switching time test circuit



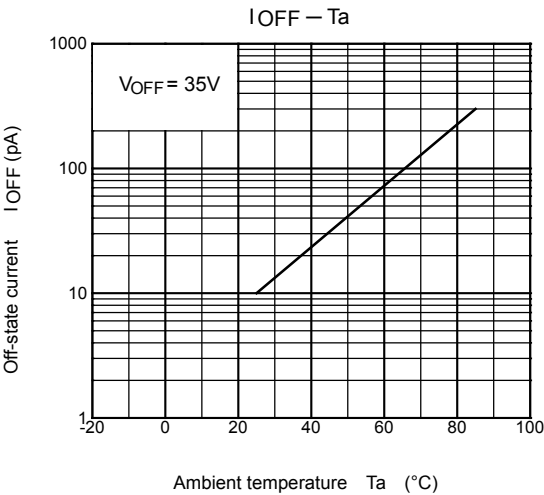
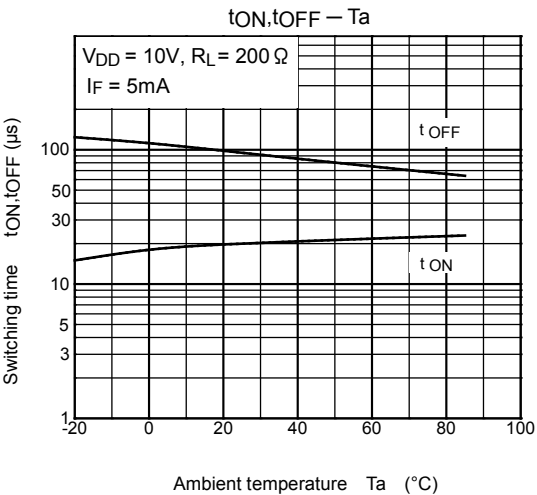
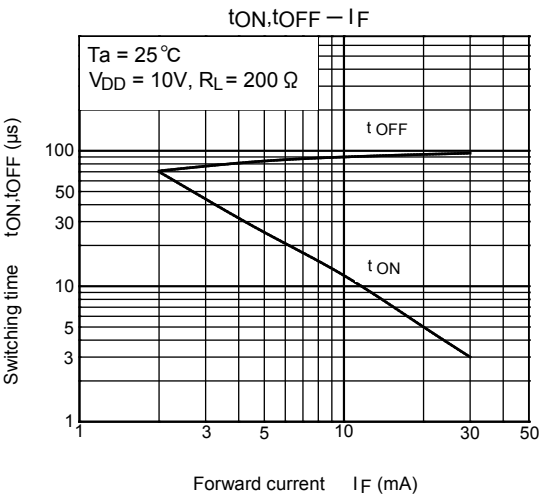
Package Dimensions

Unit: mm
Unspecified tolerance: ±0.1





NOTE: The above characteristics curves are presented for reference only and not guaranteed by production test, unless otherwise noted.



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