

Absolute Maximum Ratings (Ta = 25°C)

Characteristic		Symbol	Rating	Unit
LED	Forward current	I_F	50	mA
	Forward current derating	$\Delta I_F / ^\circ\text{C}$	-1.4 (Ta $\geq 89^\circ\text{C}$)	mA / $^\circ\text{C}$
	Pulse forward current (100 μs pulse, 100pps)	I_{FP}	1	A
	Reverse voltage	V_R	5	V
	Junction temperature	T_j	125	$^\circ\text{C}$
Detector	Collector-emitter voltage	V_{CEO}	80	V
	Emitter-collector voltage	V_{ECO}	7	V
	Collector current	I_C	50	mA
	Collector power dissipation (1 Circuit)	P_C	150	mW
	Collector power dissipation derating (1 Circuit Ta $\geq 25^\circ\text{C}$)	$\Delta P_C / ^\circ\text{C}$	-1.5	mW / $^\circ\text{C}$
	Junction temperature	T_j	125	$^\circ\text{C}$
Storage temperature range		T_{stg}	-55 to 125	$^\circ\text{C}$
Operating temperature range		T_{opr}	-55 to 110	$^\circ\text{C}$
Lead soldering temperature		T_{sol}	260 (10s)	$^\circ\text{C}$
Total package power dissipation		P_T	200	mW
Total package power dissipation derating (Ta $\geq 25^\circ\text{C}$)		$\Delta P_T / ^\circ\text{C}$	-2.0	mW / $^\circ\text{C}$
Isolation voltage (AC, 1min., R.H. $\leq 60\%$) (Note 1)		BVS	3750	V_{rms}

* Maximum Voltage

* Maximum Current

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: Pin1, 3 shorted together and pins 4, 6 shorted together

Recommended Operating Conditions

Characteristic	Symbol	Min	Typ.	Max	Unit
Supply voltage	V_{CC}	—	5	48	V
Forward current	I_F	—	16	20	mA
Collector current	I_C	—	1	10	mA

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.