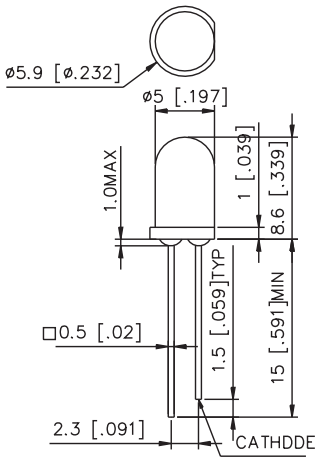
503IRBT



- **Chip Material: GaAlAs**
- **Construction: Gas Phase Epitaxial**
- **Application: Infrared Remote Controller, Optoelectronic Switch**
- **Lens Color: Blue Transparent**
- **Absolute Maximum Ranges (Ta=25±3℃)**

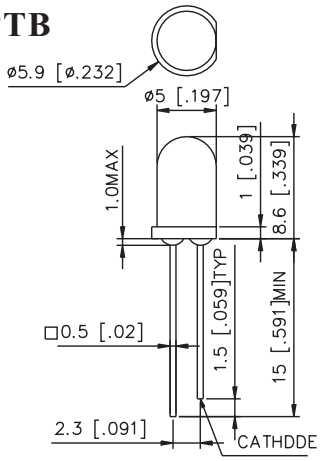
Power Dissipation	P_D	100mW	
DC Forward Current	I_F	60mA	
Pulsed Forward Current	I_{FP}	160mA	*1
Reverse Voltage	V_R	5V	
Operating Temperature	Topr	-30~+85℃	
Storage Temperature	Tstg	-40~+85℃	
Lead soldering Temperature	Tsol	260℃ for 5 sec	

● **Electrical and Optical Characteristics (If=20mA, Ta=25±3℃)**

Parameter	Symbol	Min.	Typ.	Max.	Test Condition
Radiant Intensity (mW/sr)	Ee	11	13		If=20mA
Peak Wavelength (nm)	λp			950	
Dominant Wavelength (nm)	λd		930		If=20mA
Spectral Bandwidth (nm)	△λ		50		
Forward Voltage (V)	Vf	1.2	1.35	1.5	
Reverse Current (uA)	I_R			10	V_R=5V

(*1) Duty 1/10 Pulse Width 10ms.

503PTB



- **Chip Material: Silicon**
- **Construction: Gas Phase Epitaxial**
- **Application: Infrared Remote Controller**

  The device is spectrally matched to infrared emitting diode, e.g. 503IRBT.
- **Lens Color: Black Transparent (to filter day light)**
- **Absolute Maximum Ranges (Ta=25±3℃)**

Collector-to-Emitter Breakdown Voltage		30V
Emitter-to-Collector Breakdown Voltage		5V
Power Dissipation	P_D	45mW
Operating Temperature	Topr	-30~+85℃
Storage Temperature	Tstg	-40~+85℃
Lead soldering Temperature	Tsol	260℃ for 5 sec

● **Electrical and Optical Characteristics (Ta=25±3℃)**

Parameter	Symbol	Min.	Typ.	Max.	Test Condition
Supply Voltage (V)	Vcc	4	4.5	5	DC Voltage
Supply Current (mA)	Icc			3	
BPF Center Frequency (kHz)	fo		38		
Peak Wavelength (nm)	λp		940		
Reception Distance (m)			8		
Reception Distance (m)			14		At the ray axis
High Level Pulse Width (μs)	Th	400		800	
Low Level Pulse Width (μs)	Tl	400		800	
High Level Output Voltage (V)	Vh	4.5			
Low Level Output Voltage (V)	Vl		0.2	0.5	

Notes:
The ray receiving surface at a vertex and relation to the ray axis in the range of 45° and 0°.