# **TOSHIBA**

## **Surface Mount LED**

## **TLRE1005B**

#### **Features**

3.2 (L) x 2.4 (W) x 2.4 (H) mm 2 mm lens top type InGaAIP LED Reflow soldering is possible Standard embossed taping 4 mm pitch : T03 (1000 pcs/reel)

### **Applications**

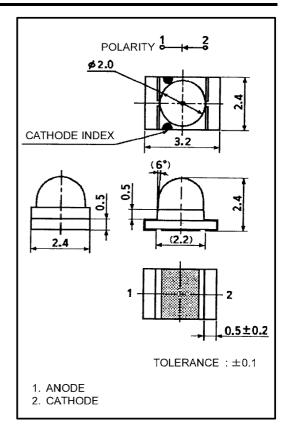
High-output backlighting source Battery-powered equipment Message boards Portable devices Computer peripherals

Maximum Ratings (Ta=25°C)

Characteristic	Symbol	Max.	Unit	
Forward Current	lf	25	mA	
Reverse Voltage	VR	4.00	V	
Power Dissipation	PD	60.00	mW	
Operating Temperature	Topr	-40 ~ 85	°C	
Storage Temperature	Tstg	<b>−40 ~ 100</b>	°C	
Soldering Temperature	Tsol	260	°C	
Soldering Time	-	for 3 sec. max	-	

Opto-Electrical Characteristics (Ta=25°C)

Characteristic	Symbol	<b>Test Condition</b>	Min	Тур	Max	Unit
Forward Voltage	VF	I=20mA	-	1.90	2.40	٧
Reverse Current	lr	V <sub>R</sub> =4V	-	-	50	μΑ
Luminous Intensity	lv	I=20mA	153.00	450.00	-	mcd
Viewing Angle	$2\theta^{1/2}$	-	-	45°	-	deg.
Peak Wavelength	λр	I=20mA	-	644	-	nm
Dominant Wavelength	λd	I=20mA	-	630	-	nm
Spectral Line Half Width	Δλ	I=20mA	_	18	-	nm

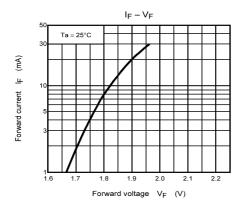


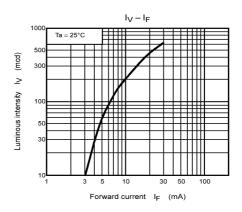
3 Northway Lane North Latham, New York 12110 Toll Free: 800.984.5337 Fax: 518.785.4725

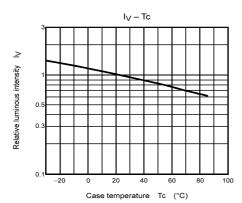


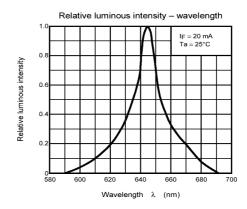
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### **TLRE1005B Graphs**



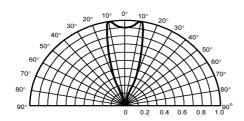


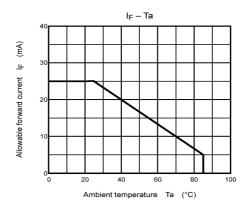




Radiation pattern

 $Ta = 25^{\circ}C$ 





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California Sales Office: 950 South Coast Drive, Suite 265



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- In developing your designs, please ensure that TOSHIBA products are used within specified operating ranges as set forth in the most recent TOSHIBA products specifications. Also, please keep in mind the precautions and conditions set forth in the "Handling Guide for Semiconductor Devices," or "TOSHIBA Semiconductor Reliability Handbook" etc..
- The TOSHIBA products listed in this document are intended for usage in general electronics applications (computer, personal equipment, office equipment, measuring equipment, industrial robotics, domestic appliances, etc.). These TOSHIBA products are neither intended nor warranted for usage in equipment that requires extraordinarily high quality and/or reliability or a malfunction or failure of which may cause loss of human life or bodily injury ("Unintended Usage"). Unintended Usage include atomic energy control instruments, airplane or spaceship instruments, transportation instruments, traffic signal instruments, combustion control instruments, medical instruments, all types of safety devices, etc.. Unintended Usage of TOSHIBA products listed in this document shall be made at the customer's own risk.
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