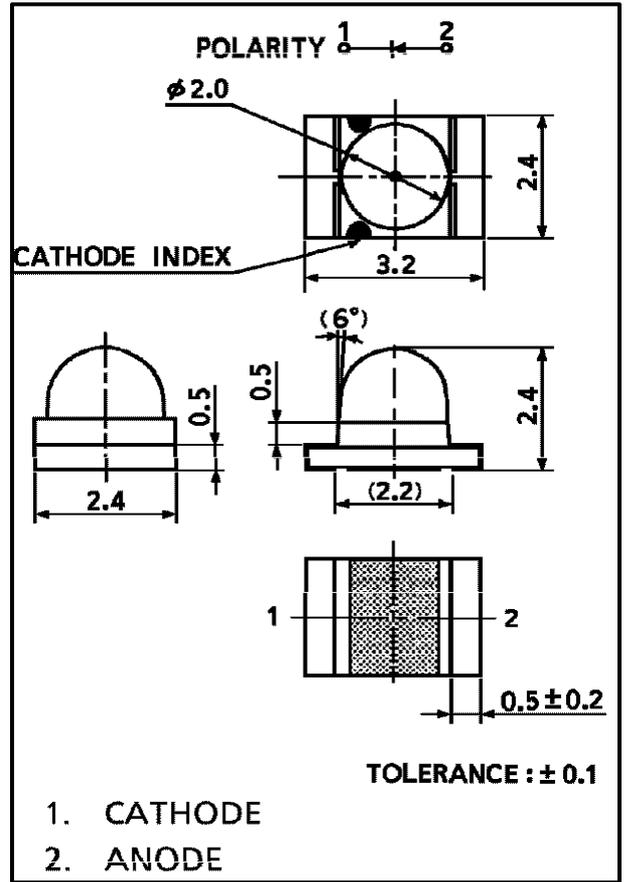


### Features

3.2 (L) x 2.4 (W) x 2.4 (H) mm  
 2 mm Lens-top type  
 Reflow Soldering is possible  
 Standard Embossed Taping 4 mm Pitch : T03 (1000 pcs/reel)

### Applications

Portable Equipment  
 Message Signboards  
 High Intensity Backlight  
 Battery-Driven Equipment



### Series Line-Up

Part Number	Color	Material
TLOE1005A	Ultra Bright Orange	InGaAlP
TLRE1005A	Ultra Bright Red	InGaAlP
TLYE1005A	Ultra Bright Yellow	InGaAlP

### Maximum Ratings (Ta=25°C)

Part Number	Forward Current I <sub>F</sub>	Reverse Voltage V <sub>R</sub>	Power Dissipation P <sub>D</sub>	Operating Temperature T <sub>opr</sub>	Storage Temperature T <sub>stg</sub>
TLOE1005A	25	4	60.00	-25 ~ +80	-30 ~ 85
TLRE1005A	25	4	60.00	-25 ~ +80	-30 ~ 85
TLYE1005A	25	4	62.00	-25 ~ +80	-30 ~ 85
Unit	mA	V	mW	°C	°C

**Company Headquarters**  
 3 Norway Lane North  
 Latham, New York 12110  
 Toll Free: 800.984.5337  
 Fax: 518.785.4725



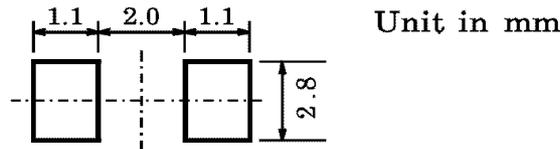
Web: [www.marktechopto.com](http://www.marktechopto.com) | Email: [info@marktechopto.com](mailto:info@marktechopto.com)

**West Coast Sales Office**  
 950 South Coast Drive, Suite 265  
 Costa Mesa, California 92626  
 Toll Free: 800.984.5337  
 Fax: 714.850.9314

### Electrical and Optical Characteristics (Ta=25°C)

Part Number	PWL nm λP	Material	View Angle 2θ <sub>1/2</sub>	Luminous Intensity I <sub>v</sub>				Forward Voltage V <sub>F</sub>				Rev Current I <sub>R</sub>	
				min.	typ.	max.	IF@	min.	typ.	max.	IF@	max.	VR@
TLOE1005A	612	InGaAlP	44°	153.00	400.00	-	20mA	-	1.95	2.40	20mA	50	4V
TLRE1005A	644	InGaAlP	44°	153.00	450.00	-	20mA	-	1.85	2.40	20mA	50	4V
TLYE1005A	590	InGaAlP	44°	85.00	300.00	-	20mA	-	2.10	2.50	20mA	50	4V
-	nm	-	deg	mcd				-	V		-	μA	-

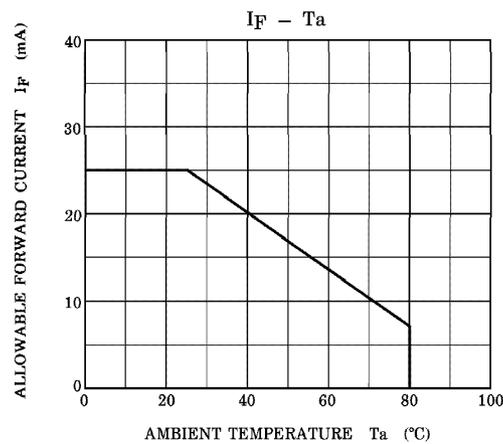
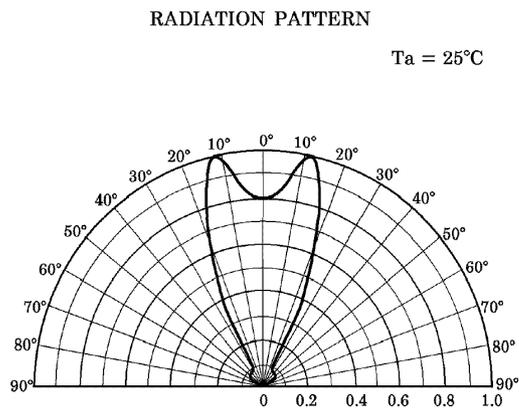
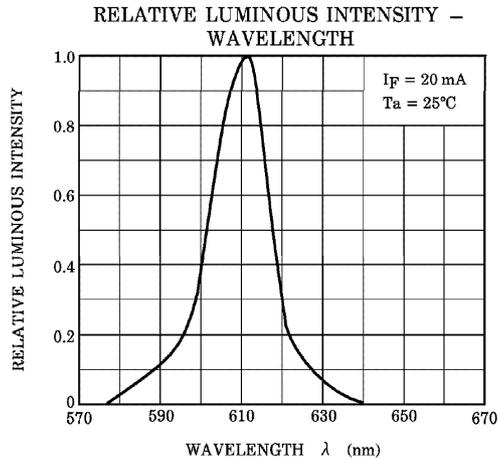
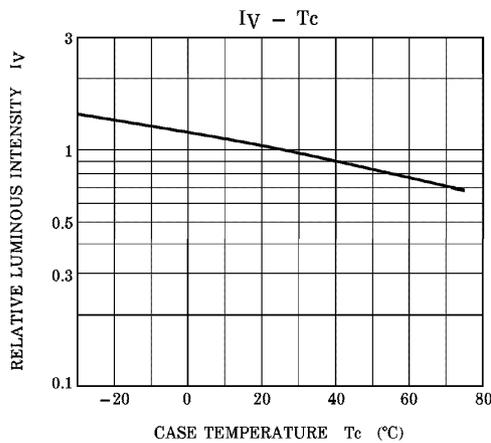
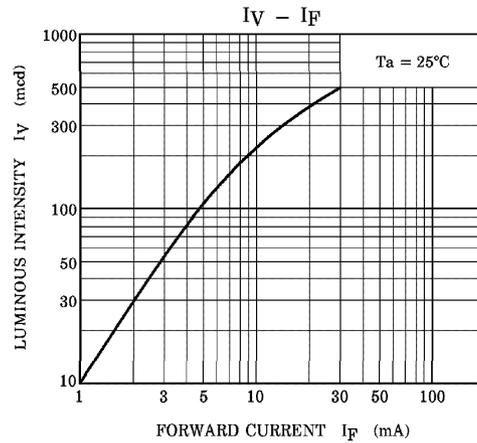
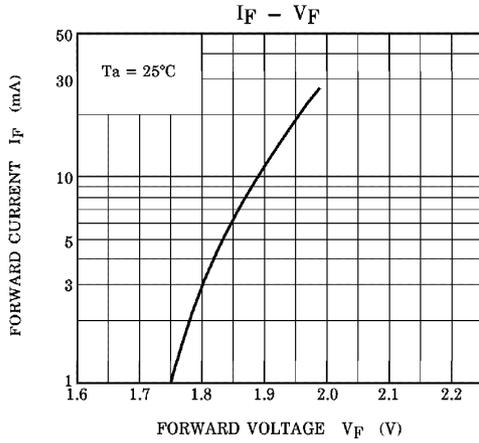
### ● Recommended soldering pattern



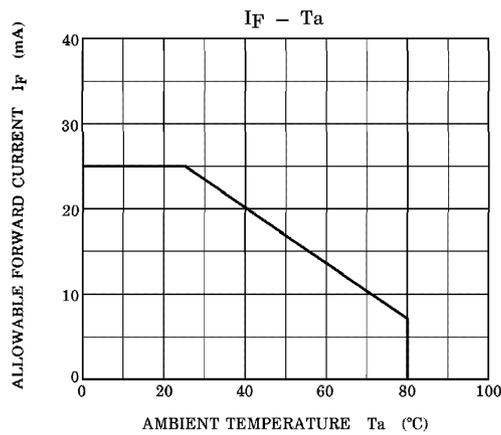
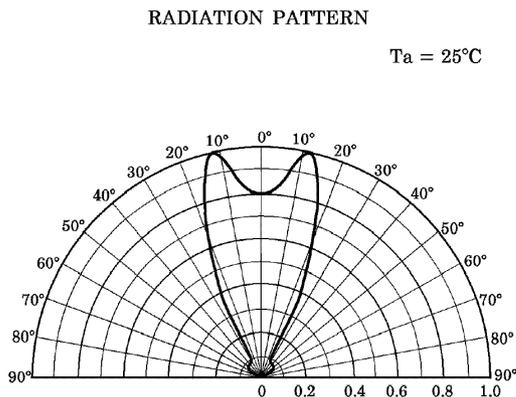
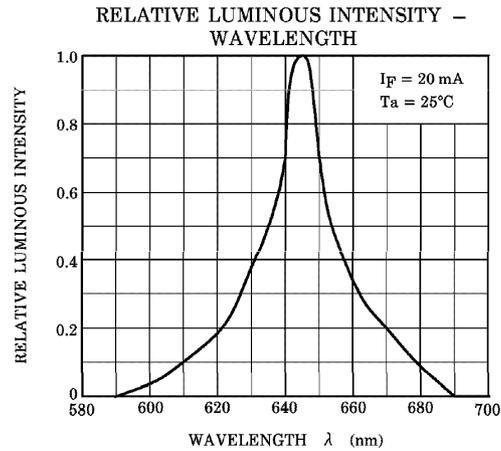
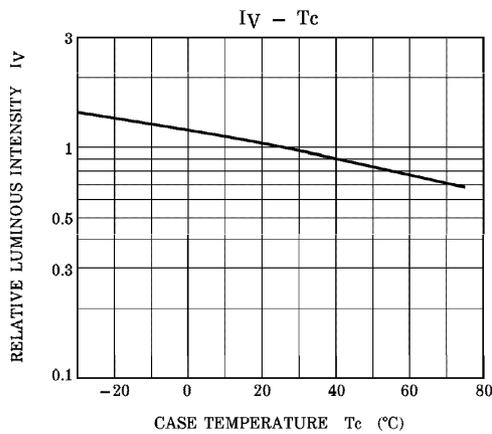
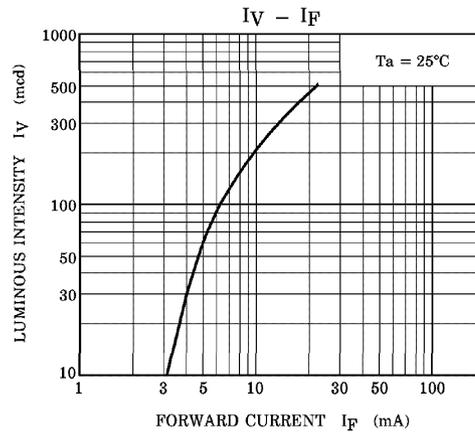
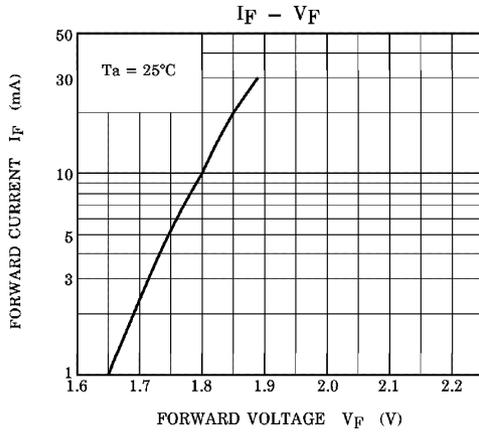
### NOTICE:

- TOSHIBA is continually working to improve the quality and reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to comply with the standards of safety in making a safe design for the entire system, and to avoid situations in which a malfunction or failure of such TOSHIBA products could cause loss of human life, bodily injury or damage to property.
- 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.
- Gallium arsenide (GaAs) is a substance used in the products described in this document. GaAs dust and fumes are toxic. Do not break, cut or pulverize the product, or use chemicals to dissolve them. When disposing of the products, follow the appropriate regulations. Do not dispose of the products with other industrial waste or with domestic garbage.
- The information contained herein is presented only as a guide for the applications of our products. No responsibility is assumed by TOSHIBA CORPORATION for any infringements of intellectual property or other rights of the third parties which may result from its use. No license is granted by implication or otherwise under any intellectual property or other rights of TOSHIBA CORPORATION or others.
- The information contained herein is subject to change without notice.

### TLOE1005A Graphs



### TLRE1005A Graphs



### TLYE1005A Graphs

