TOSHIBA

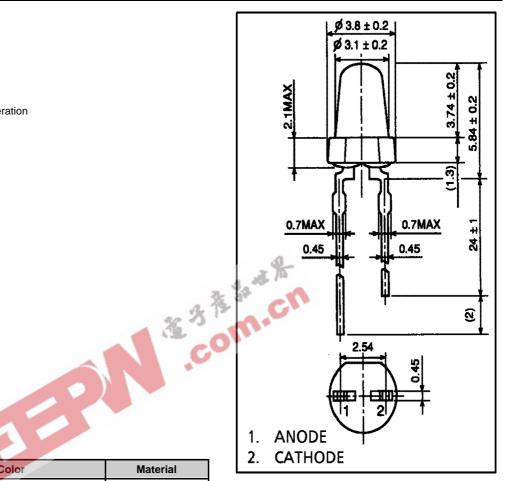
Toshiba TLxE160 Series LEDs

Features

3.1mm Package InGaAIP Technology All Plastic Mold Type Water Clear Lens Fast Response Time, Capable of Pulse Operation High Power Luminous Intensity

Applications

Suitable for Safety equipment Outdoor displays



Series Line-Up

Part Number	Color	Material		
TLGE160	Ultra Bright Yellow Green	InGaAIP		
TLOE160A	Ultra Bright Orange	InGaAIP		
TLPGE160	Ultra Pure Green	InGaAIP		
TLRE160A	Ultra Bright Red	InGaAIP		
TLYE160A	Ultra Bright Yellow	InGaAIP		

Part Number	Forward Current IF	•		Operating Temperature Topr	Storage Temperature Tstg
TLGE160	50	4	140.00	−30 ~ 85	− 40 ~ 120
TLOE160A	50	4	125.00	−30 ~ 85	− 40 ~ 120
TLPGE160	50	4	140.00	−30 ~ 85	− 40 ~ 120
TLRE160A	50	4	125.00	−30 ~ 85	−40 ~ 120
TLYE160A	50	4	125.00	−30 ~ 85	− 40 ~ 120
Unit	mA	V	mW	°C	°C

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



Fax: 714.850.9314

Web: www.marktechopto.com | Email: info@marktechopto.com



Toshiba TLxE160 Series LEDs

Electrical and Optical Characteristics (Ta=25°C)

Part Number	PWL nm λP	Material	View Angle	le l _v			Forward Voltage V _F				Rev Current		
			2θ 1/2	min.	typ.	max.	IF@	min.	typ.	max.	IF@	max.	VR@
TLGE160	574	InGaAIP	9°	850.00	2400.00	ı	20mA	-	2.27	2.80	20mA	50	4V
TLOE160A	612	InGaAIP	10°	476.00	1500.00	-	20mA	-	1.95	2.40	20mA	50	4V
TLPGE160	562	InGaAIP	9°	272.00	450.00	-	20mA	-	2.27	2.80	20mA	50	4V
TLRE160A	644	InGaAIP	10°	476.00	1200.00	ı	20mA	-	1.85	2.40	20mA	50	4V
TLYE160A	590	InGaAIP	10°	476.00	2300.00	ı	20mA	-	2.10	2.50	20mA	50	4V
-	nm	-	deg		mcd		-		٧		-	μ A	-
Precautions													

Precautions

- Soldering temperature: 260°C max, soldering time: 3 s max (soldering portion of lead: up to 2 mm from the body of the device).
- If the lead is formed, the lead should be formed up to 5 mm from the body of the device without forming stress to the resin. Soldering should be performed after lead forming.
- This visible LED lamp also emits some IR light. If a photodetector is located near the LED lamp, please ensure that it will not be affected by this IR light.

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.

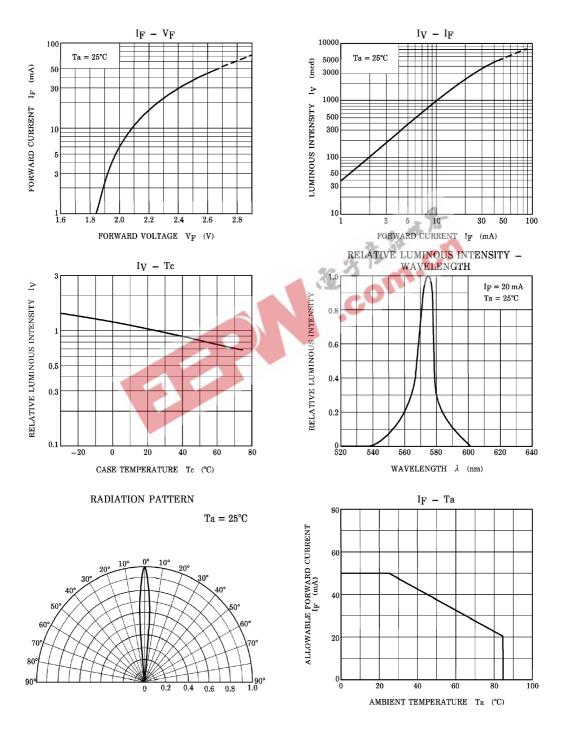


West Coast Sales Office 950 South Coast Drive. Suite 265

Costa Mesa, California 92626 Toll Free: 800.984.5337

Fax: 714.850.9314

TLGE160 Graphs



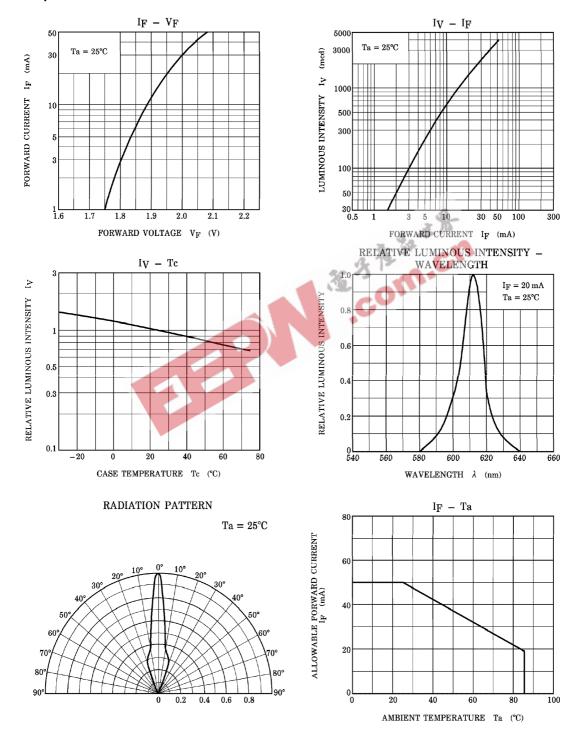
Company Headquarters 3 Norhway Lane North Latham, New York 12110 Toll Free: 800.984.5337 Fax: 518.785.4725



TOSHIBA

Toshiba TLxE160 Series LEDs

TLOE160A Graphs



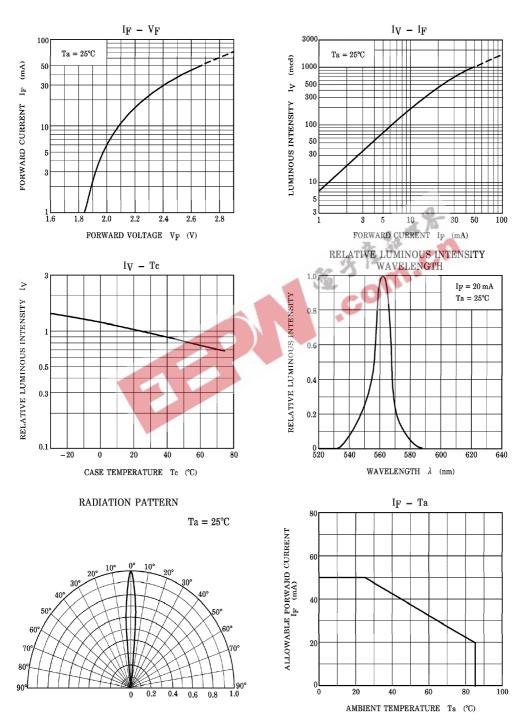
Company Headquarters 3 Norhway Lane North Latham, New York 12110 Toll Free: 800.984.5337 Fax: 518.785.4725



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

Fax: 714.850.9314

TLPGE160 Graphs



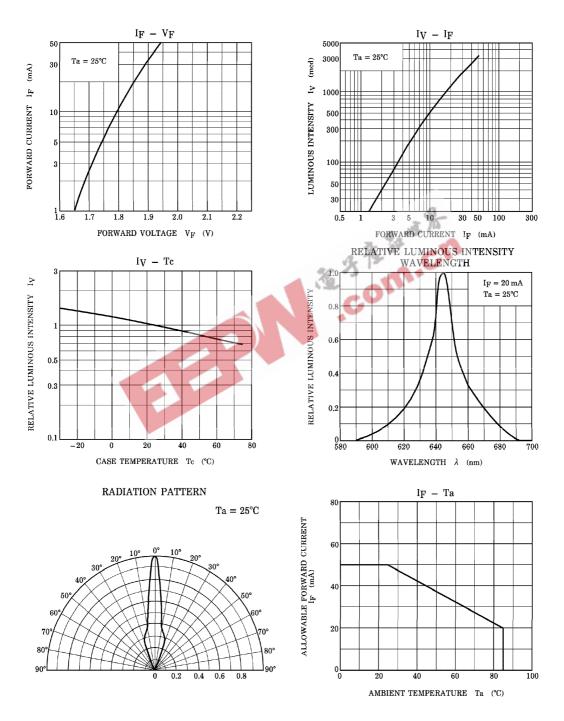
Company Headquarters 3 Norhway Lane North Latham, New York 12110 Toll Free: 800.984.5337 Fax: 518.785.4725



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

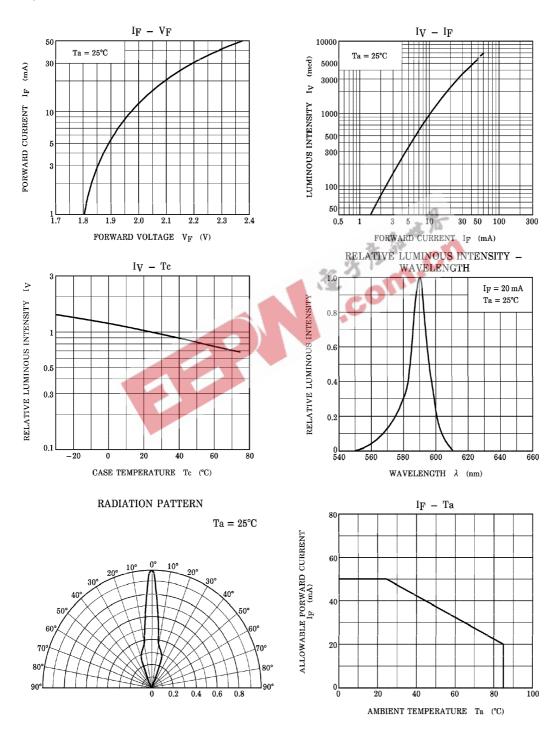
Web: www.marktechopto.com | Email: info@marktechopto.com

TLRE160A Graphs





TLYE160A Graphs



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

