

# TOSHIBA

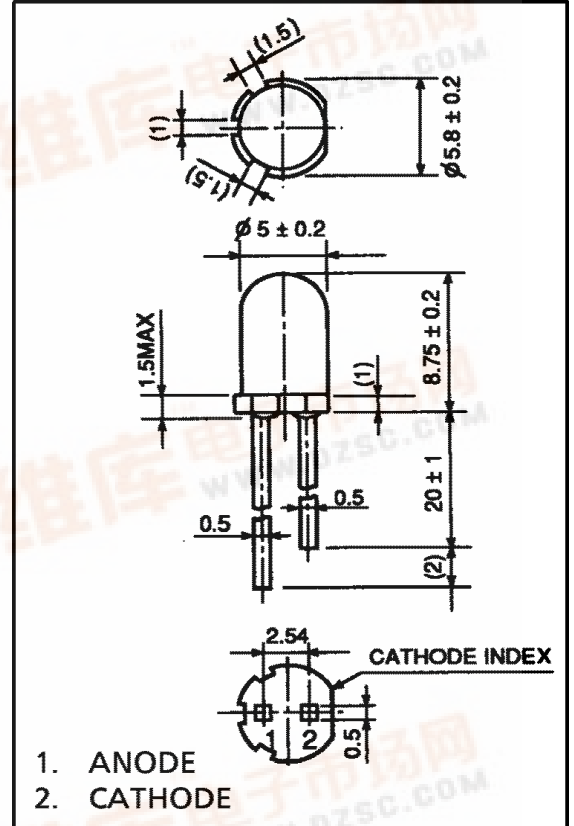
## Toshiba TLxH156 Series LEDs

### Features

5 mm Package  
InGaAlP Technology  
All Plastic Mold Type  
Fast Response Time, Capable of Pulse Operation  
High Power Luminous Intensity

### Applications

Outdoor Message Signboard  
Safety equipment  
Automotive



### Series Line-Up

Part Number	Color	Material
TLOH156P	Ultra Bright Orange	InGaAlP
TLRH156P	Ultra Bright Red	InGaAlP
TLRMH156P	Ultra High Efficiency Red	InGaAlP
TLSH156P	Ultra Bright High Efficiency Red	InGaAlP
TLYH156P	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>
TLOH156P	50	4	125.00	-30 ~ 85	-40 ~ 120
TLRH156P	50	4	125.00	-30 ~ 85	-40 ~ 120
TLRMH156P	50	4	125.00	-40 ~ 100	-40 ~ 120
TLSH156P	50	4	125.00	-30 ~ 85	-40 ~ 120
TLYH156P	50	4	125.00	-30 ~ 85	-40 ~ 120
Unit	mA	V	mW	°C	°C

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

Part Number	PWL nm $\lambda_P$	Material	View Angle $2\theta_{1/2}$	Luminous Intensity $I_v$				Forward Voltage $V_F$				Rev Current $I_R$	
				min.	typ.	max.	IF@	min.	typ.	max.	IF@	max.	VR@
TLOH156P	612	InGaAlP	30°	476.00	1500.00	–	20mA	–	2.10	2.50	20mA	50	4V
TLRH156P	644	InGaAlP	30°	272.00	800.00	–	20mA	–	1.90	2.50	20mA	50	4V
TLRMH156P	636	InGaAlP	25°	476.00	900.00	–	20mA	–	2.05	2.50	20mA	50	4V
TLSH156P	623	InGaAlP	30°	476.00	1400.00	–	20mA	–	2.10	2.50	20mA	50	4V
TLYH156P	590	InGaAlP	30°	476.00	1400.00	–	20mA	–	2.10	2.50	20mA	50	4V
–	nm	–	deg	mcd				V				$\mu A$	–

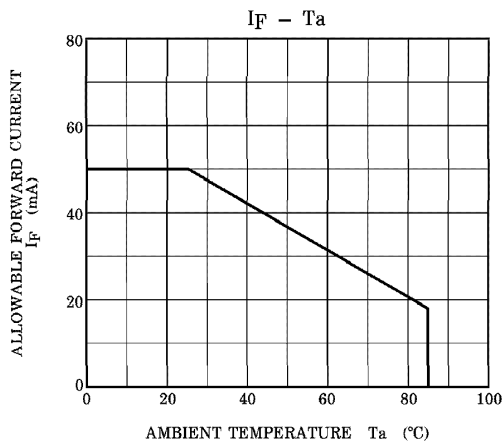
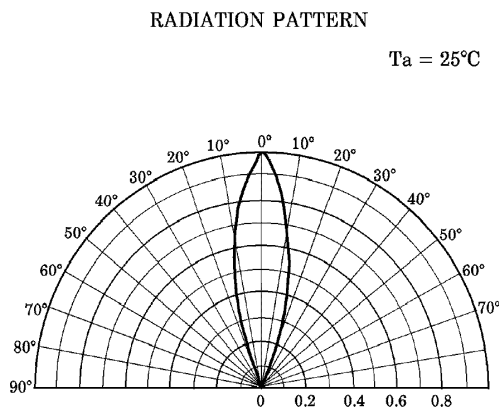
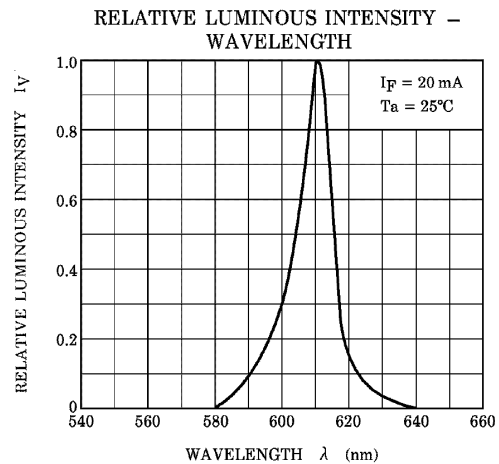
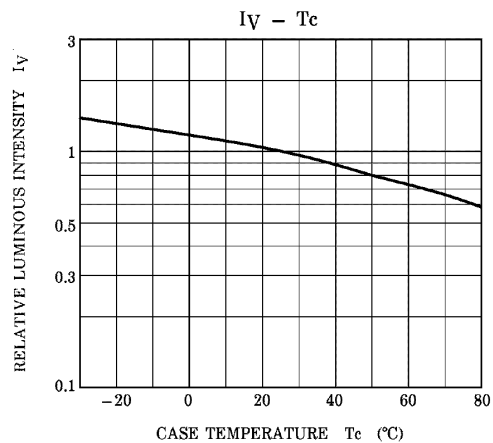
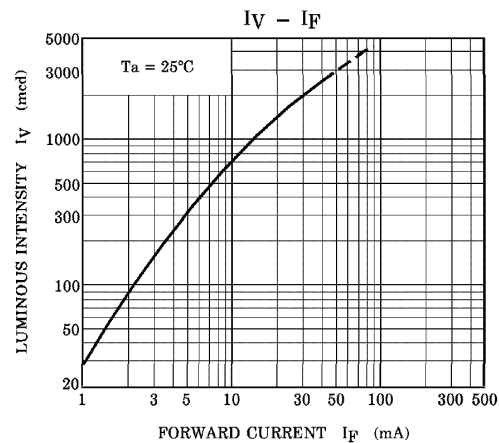
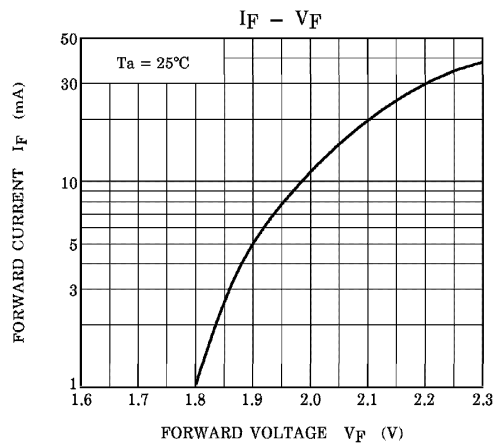
### Precautions

- 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.

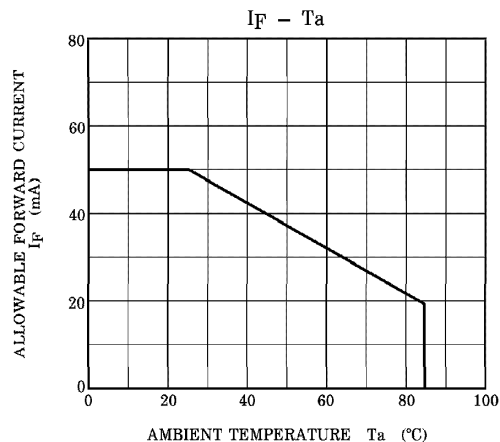
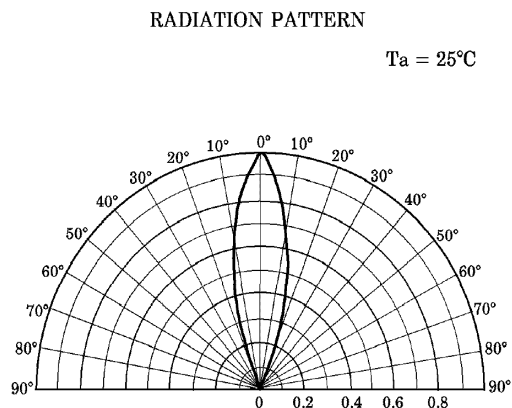
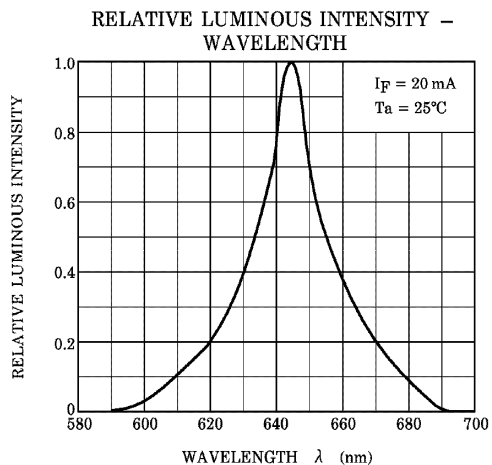
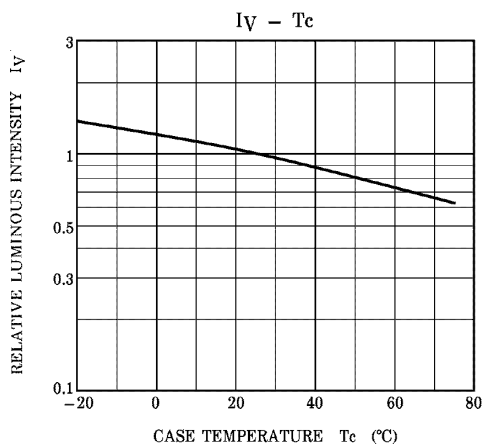
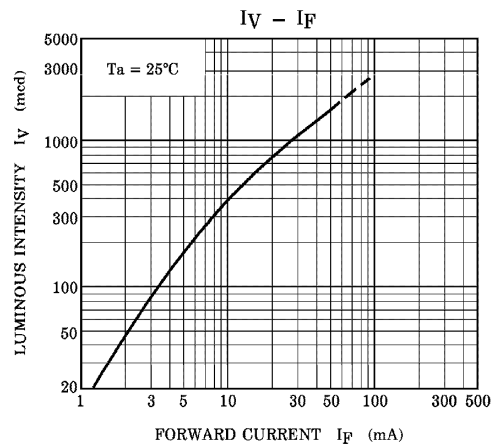
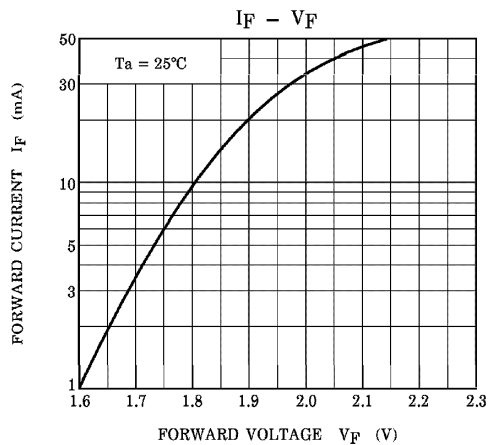
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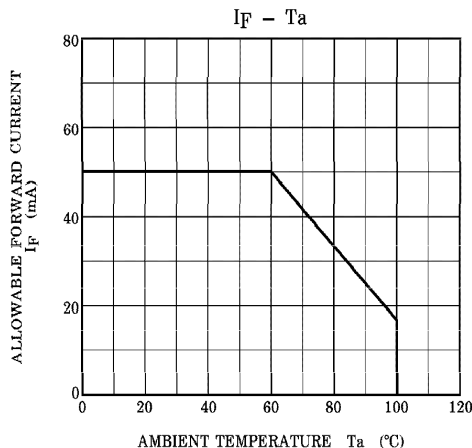
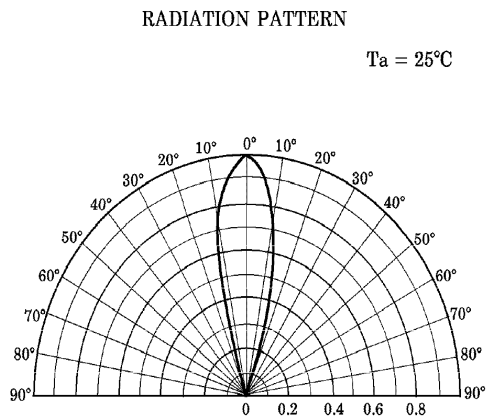
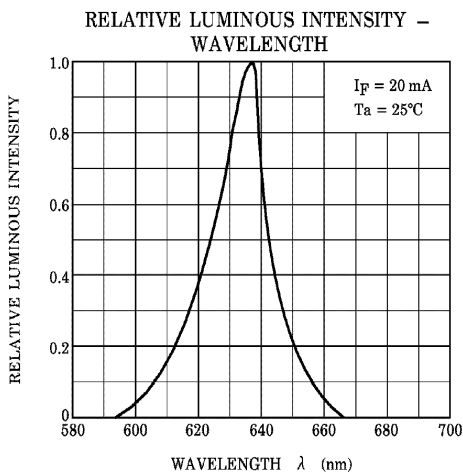
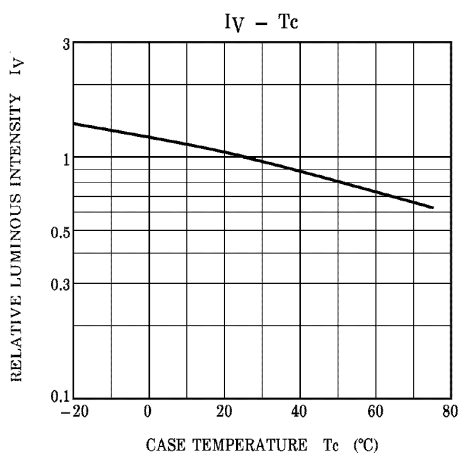
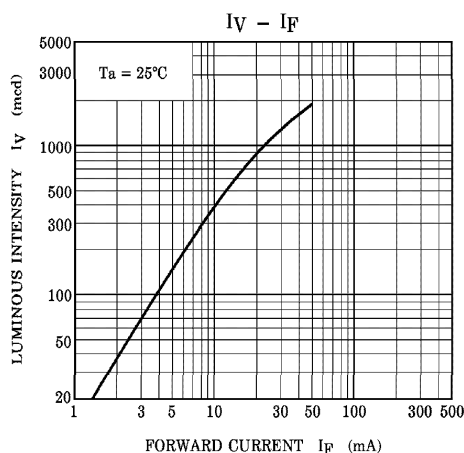
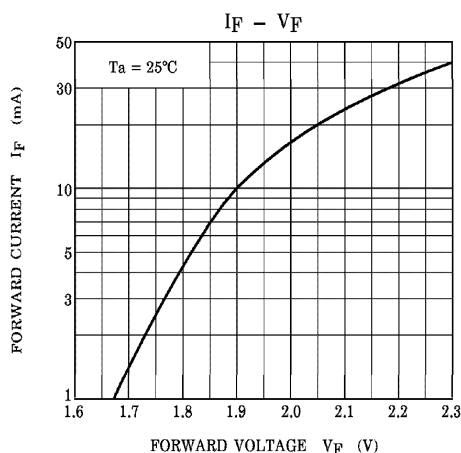
### TLOH156P Graphs



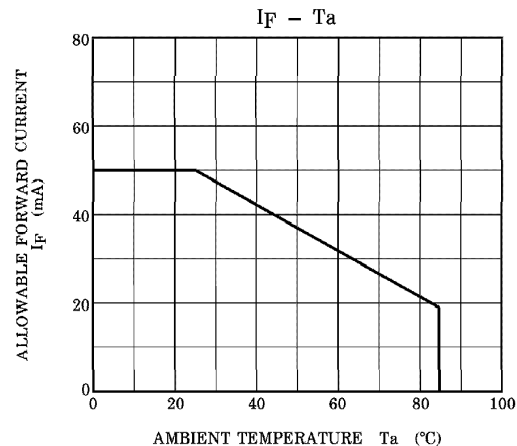
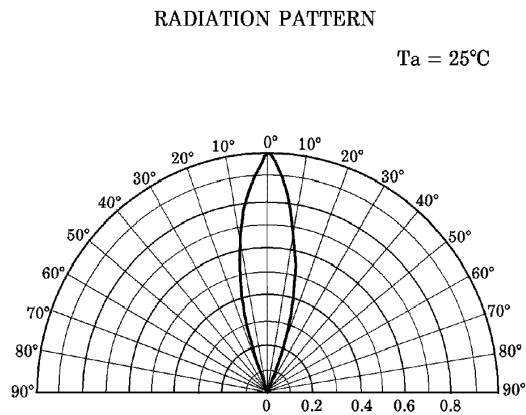
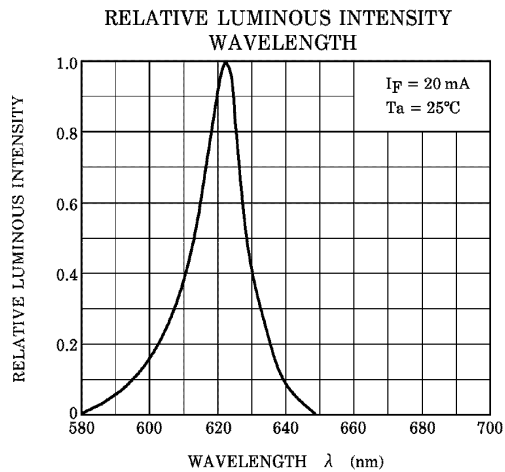
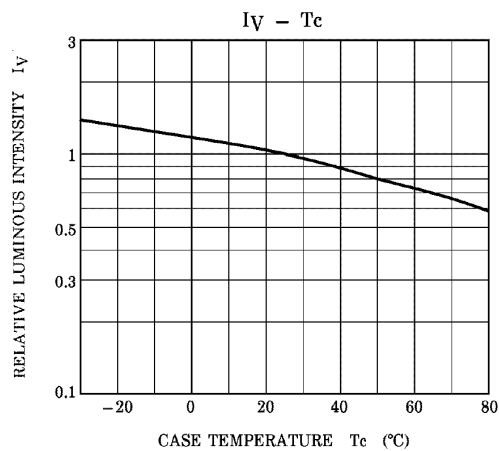
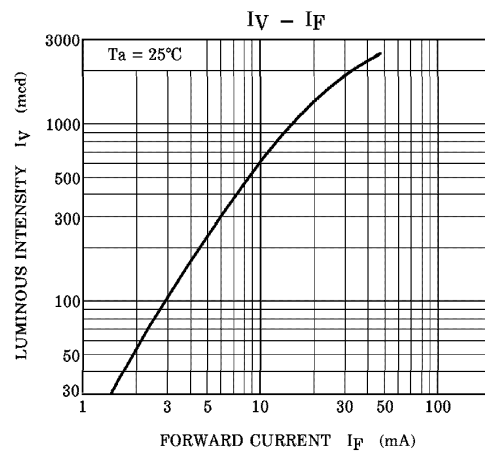
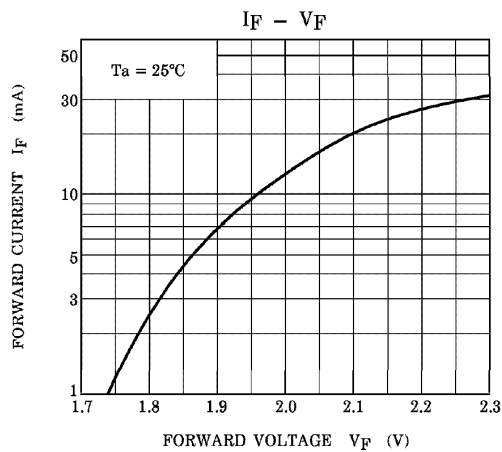
### TLRH156P Graphs



### TLRMH156P Graphs



### TLSH156P Graphs



### TLYH156P Graphs

