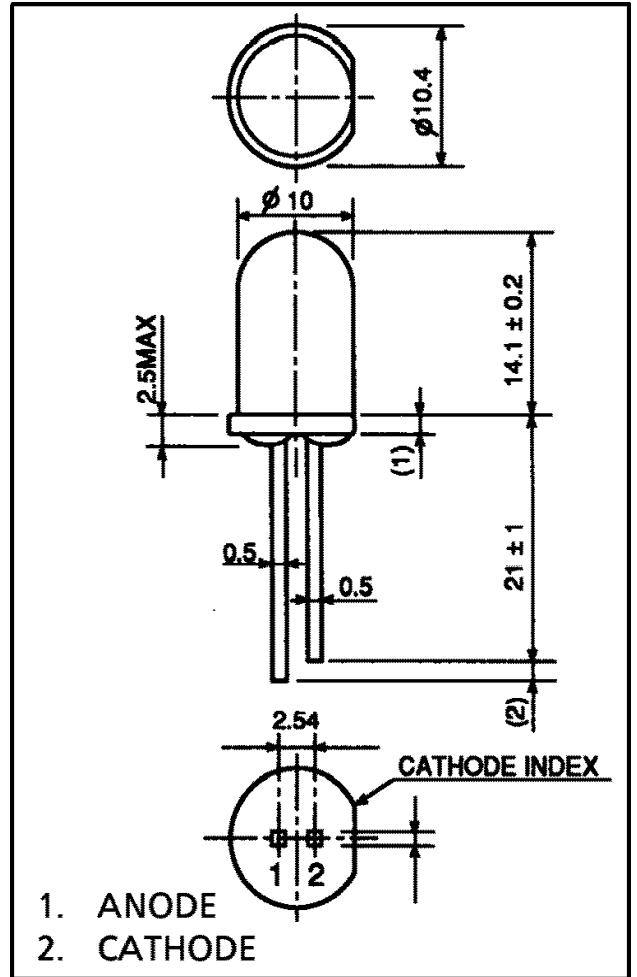


### Features

10mm Package  
 InGaAlP Technology  
 All Plastic Mold Type  
 Water Clear Lens  
 Fast Response Time, Capable of Pulse Operation  
 High Power Luminous Intensity

### Applications

Outdoor Message Signboard  
 Safety equipment



### Series Line-Up

Part Number	Color	Material
TLOH190P	Ultra Bright Orange	InGaAlP
TLRH190P	Ultra Bright Red	InGaAlP
TLYH190P	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>
TLOH190P	50	4	125.00	-30 ~ 85	-40 ~ 120
TLRH190P	50	4	125.00	-30 ~ 85	-40 ~ 120
TLYH190P	50	4	125.00	-30 ~ 85	-40 ~ 120
Unit	mA	V	mW	°C	°C

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 Toll Free: 800.984.5337  
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**West Coast Sales Office**  
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 Costa Mesa, California 92626  
 Toll Free: 800.984.5337  
 Fax: 714.850.9314

### 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@
TLOH190P	612	InGaAIP	4°	8500.00	33000.00	–	20mA	–	2.10	2.50	20mA	50	4V
TLRH190P	644	InGaAIP	4°	4760.00	19000.00	–	20mA	–	1.90	2.50	20mA	50	4V
TLYH190P	590	InGaAIP	4°	8500.00	30000.00	–	20mA	–	2.10	2.50	20mA	50	4V
–	nm	–	deg	mcd				–	V		–	$\mu A$	–

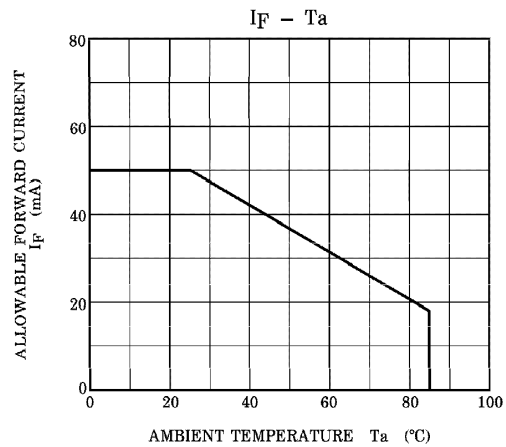
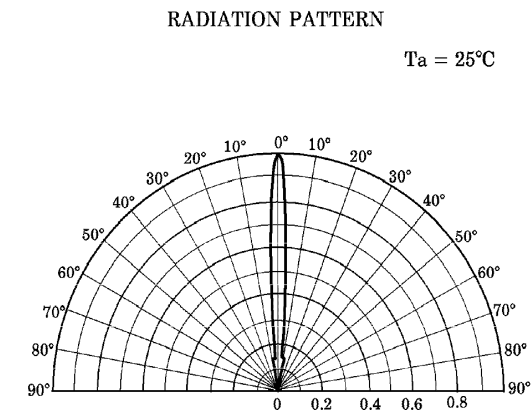
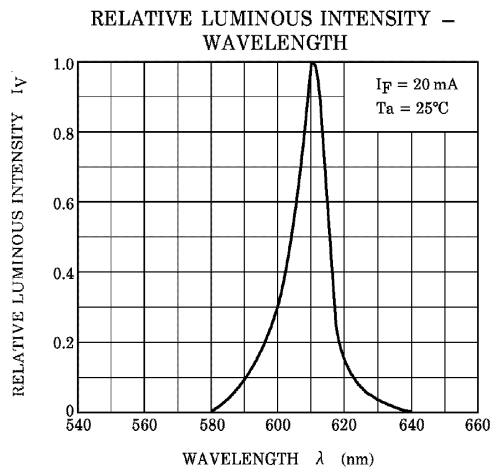
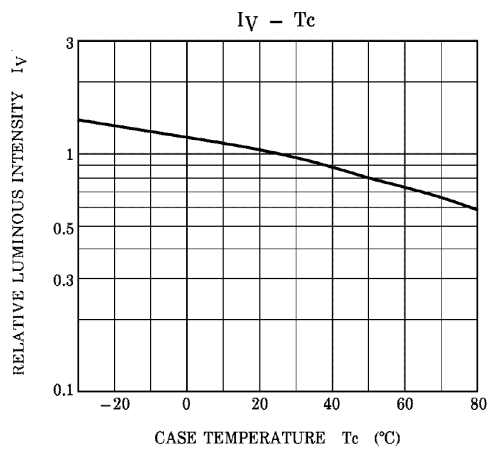
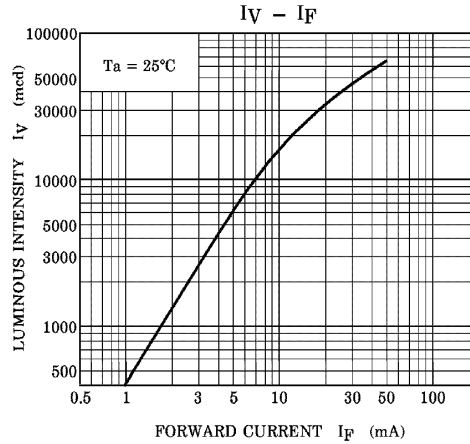
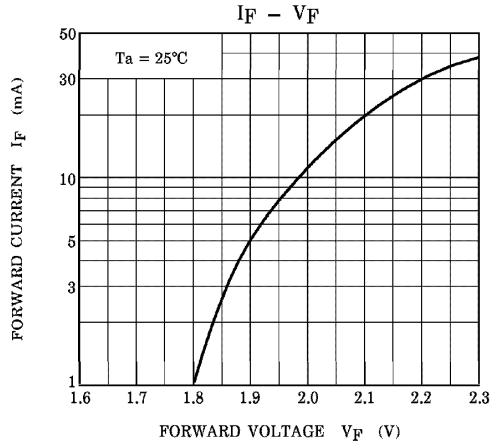
### Precautions

- 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.

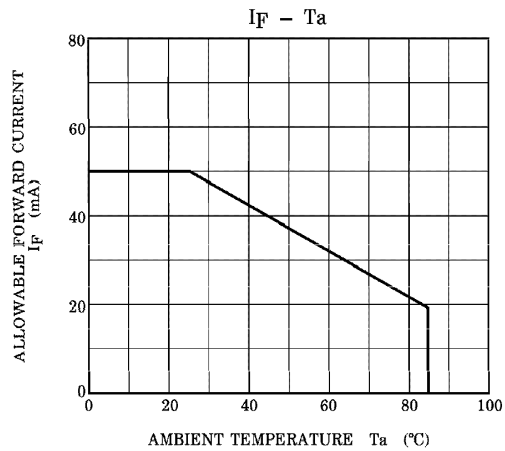
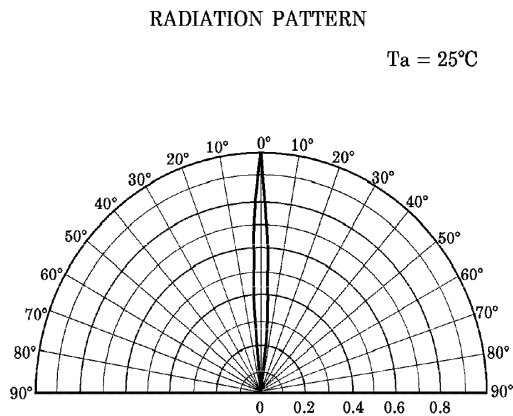
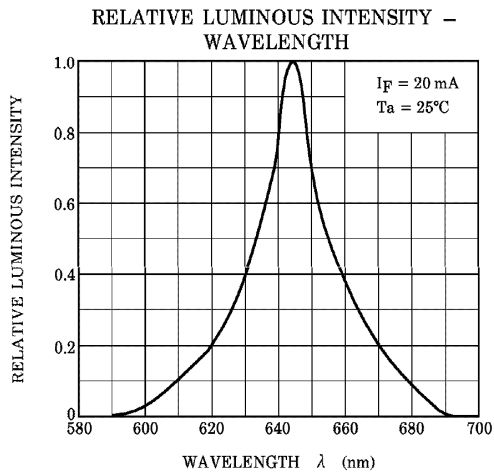
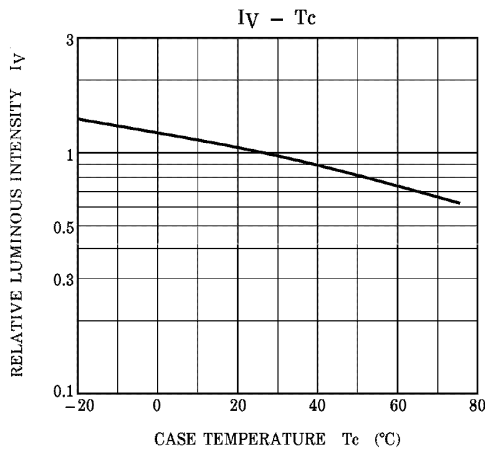
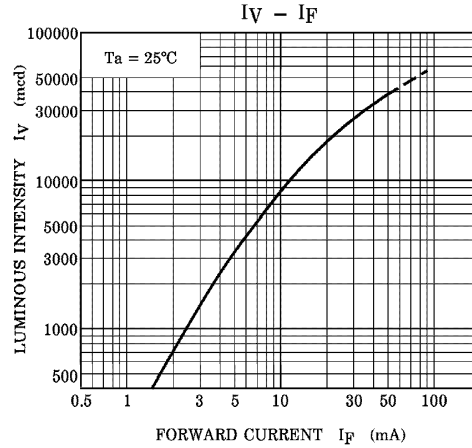
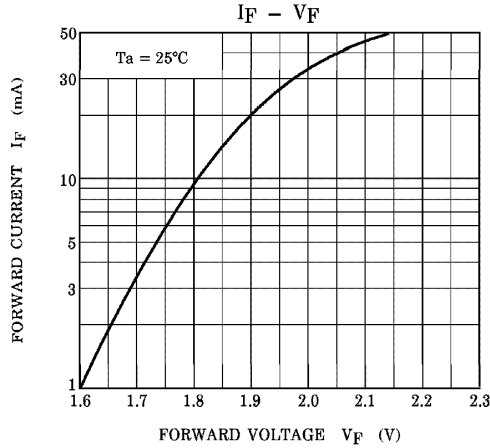
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### TLOH190P Graphs



### TLRH190P Graphs



### TLYH190P Graphs

