TOSHIBA InGaAlP LED

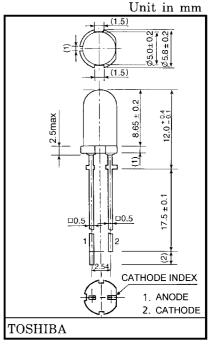
TLRMH20T, TLSH20T, TLOH20T, TLYH20T

Panel Circuit Indicator

- 5 mm package
- InGaAlP technology
- All plastic mold type
- Transparent lens
- Lineup: 3colors (red, orange, yellow)
- High intensity light emission
- Excellent low current light output
- Applications: Traffic signals, Safety equipment
- Straight leads type is also available TLRMH20TP, TLSH20TP, TLOH20TP, TLYH20TP

Line-Up

Product Name	Color	Material		
TLRMH20T	Red			
TLSH20T	Red	InGaAℓP		
TLOH20T	Orange	IIIGaAEF		
TLYH20T	Yellow			



Weight: 0.31 g

Maximum Ratings (Ta = 25°C)

Product Name	Forward Current I _F (mA)	Reverse Voltage V _R (V)	Power Dissipation P _D (mW)	Operating Temperature T _{opr} (°C)	Storage Temperature T _{stg} (°C)	
TLRMH20T				−40~100		
TLSH20T	50	4	120		–40∼120	
TLOH20T			120	-40~100	-40~120	
TLYH20T						

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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 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.

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Electrical and Optical Characteristics (Ta = 25°C)

Product Name	Typ. Emission Wavelength			Luminous Intensity I _V		Forward Voltage V _F		Reverse Current I _R				
	λ_{d}	λ _P	Δλ	I _F	Min	Тур.	I _F	Тур.	Max	IF	Max	V_{R}
TLRMH20T	626	(636)	13	20	2720	9000	20	1.9	2.4	20	50	4
TLSH20T	613	(623)	13	20	4760	11000	20	2.0	2.4	20	50	4
TLOH20T	605	(612)	13	20	4760	15000	20	2.0	2.4	20	50	4
TLYH20T	587	(590)	13	20	4760	13000	20	2.0	2.4	20	50	4
Unit		nm		mA	m	cd	mA	\	/	mA	μΑ	V

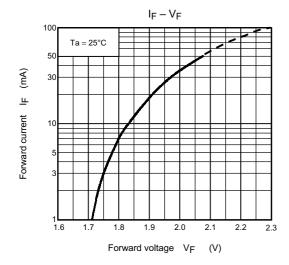
Precautions

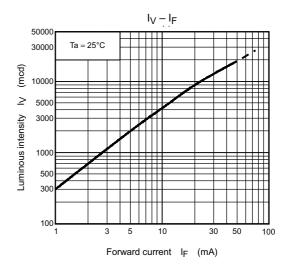
Please be careful of the following:

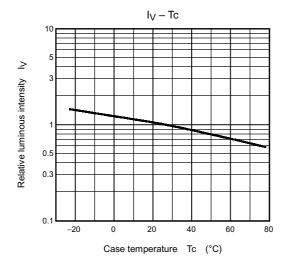
- Soldering temperature: 260°C max, soldering time: 3 s max (soldering portion of lead: below the lead stopper)
- If the lead is formed, the lead should be formed up to 5 mm from the body of the device without forming stress to the resin. Soldering should be performed after lead forming.
- This visible LED lamp also emits some IR light.

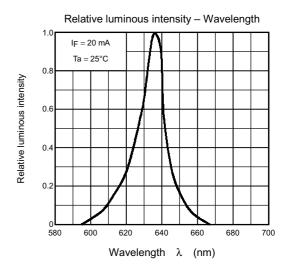
 If a photodetector is located near the LED lamp, please ensure that it will not be affected by this IR light.

TLRMH20T

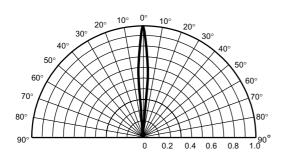


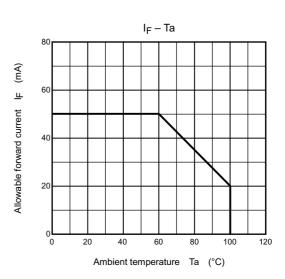




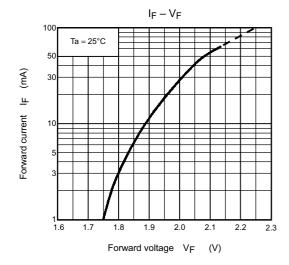


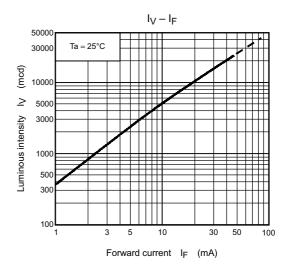


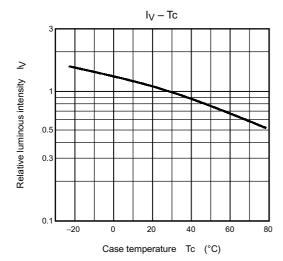


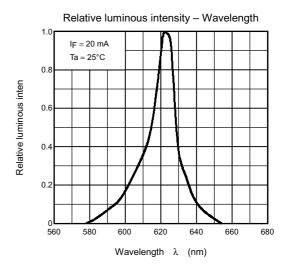


TLSH20T

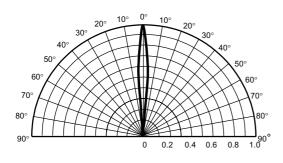


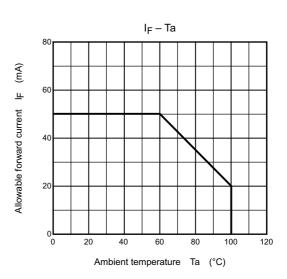




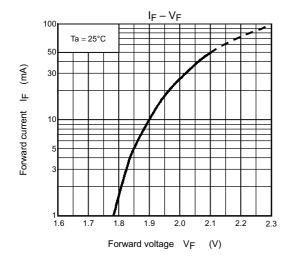


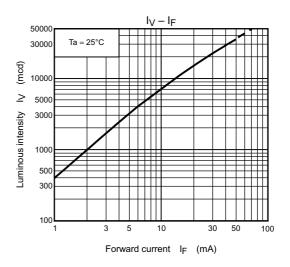
Radiation pattern

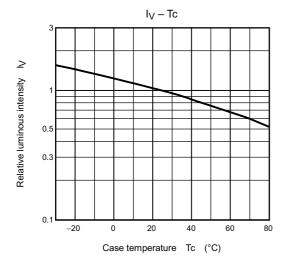


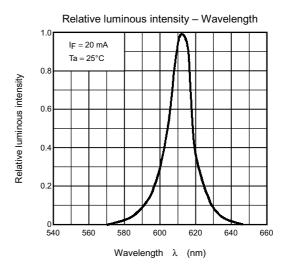


TLOH20T

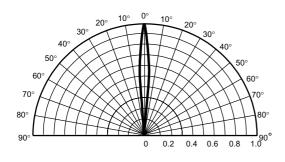


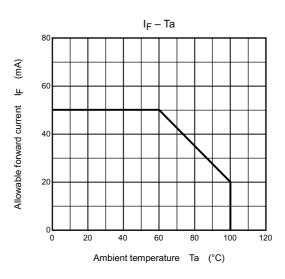




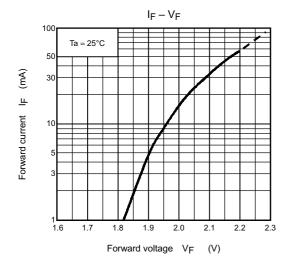


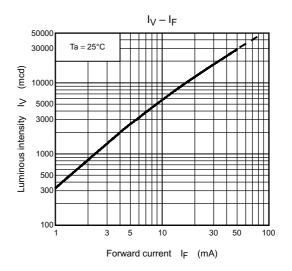
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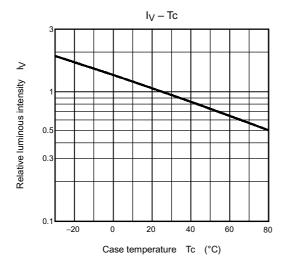


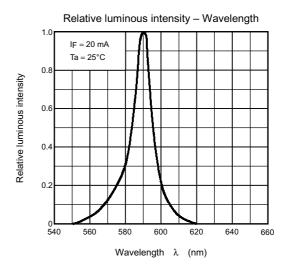


TLYH20T









Radiation pattern

