<u>TOSHIBA</u>

TOSHIBA InGaA{P LED

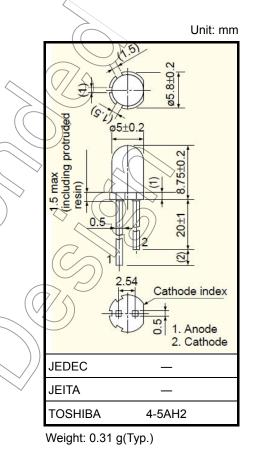
TLRMH16TP(F),TLSH16TP(F), TLOH16TP(F),TLYH16TP(F)

Panel Circuit Indicator

- 5mm 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, Backlight
- Stopper lead type is also available. TLRMH16T(F), TLSH16T(F), TLOH16T(F), TLYH16T(F)

Lineup

Product Name	Color	Materia
TLRMH16TP(F)	Red	
TLSH16TP(F)	Red	
TLOH16TP(F)	Orange	
TLYH16TP(F)	Yellow	$(\bigcirc \bigcirc)$



Absolute Maximum Ratings (Ta = 25°C)

Product Name	Forward Current	Reverse Voltage V _R (V)	Power Dissipation P _D (mW)	Operating Temperature T _{opr} (°C)	Storage Temperature T _{stg} (°C)
TLRMH16TP(F)			\geq		
TLSH16TP(F)	50	4	120	-40~100	-40~120
TLOH16TP(F)	50		120	-40 100	-40 120
TLYH16TP(F)		$\langle \langle \langle \rangle \rangle$			

Note: Using continuously under heavy loads (e.g. the application of high temperature/current/voltage and the significant change in temperature, etc.) may cause this product to decrease in the reliability significantly even if the operating conditions (i.e. operating temperature/current/voltage, etc.) are within the absolute maximum ratings.

Please design the appropriate reliability upon reviewing the Toshiba Semiconductor Reliability Handbook ("Handling Precautions"/"Derating Concept and Methods") and individual reliability data (i.e. reliability test report and estimated failure rate, etc).

Electrical and Optical Characteristics (Ta = 25°C)

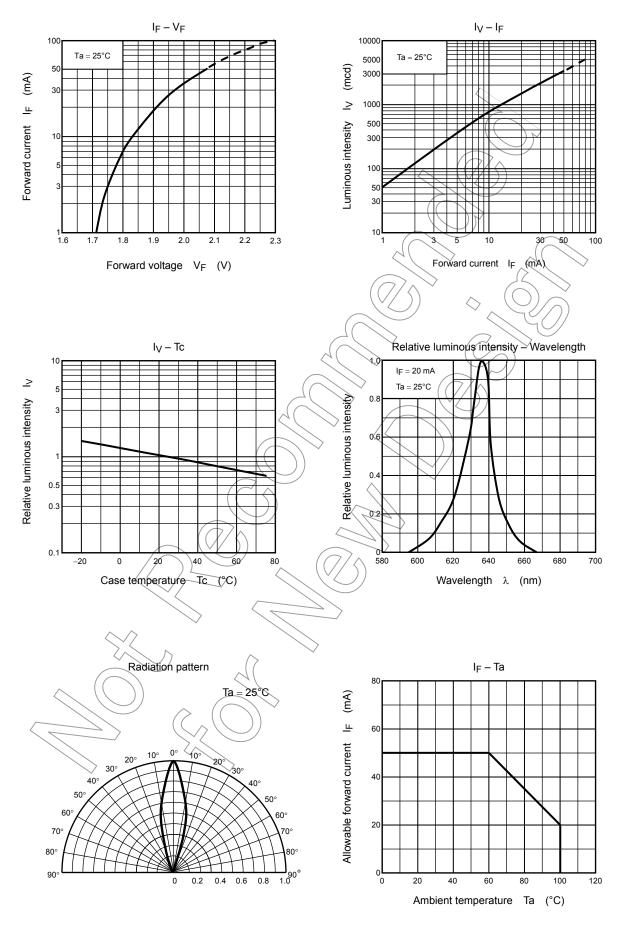
Product Name	Typ. Emission Wavelength			Luminous Intensity I _V		Forward Voltage V _F			Reverse Current I _R			
	λ_{d}	λp	Δλ	١ _F	Min	Тур.	١ _F	Тур.	Max	١ _F	Max	VR
TLRMH16TP(F)	626	(636)	13	20	476	1500	20	1.9	2.4	20	50	4
TLSH16TP(F)	613	(623)	13	20	850	1900	20	2.0	2.4	20	50	4
TLOH16TP(F)	605	(612)	13	20	850	2300	20	2.0	2,4	20	50	4
TLYH16TP(F)	587	(590)	13	20	850	2200	20	2.0	2.4) 20	50	4
Unit		nm		mA	m	cd	mA	(\mathcal{X})	$\frac{1}{2}$	mA	μA	V

Precautions

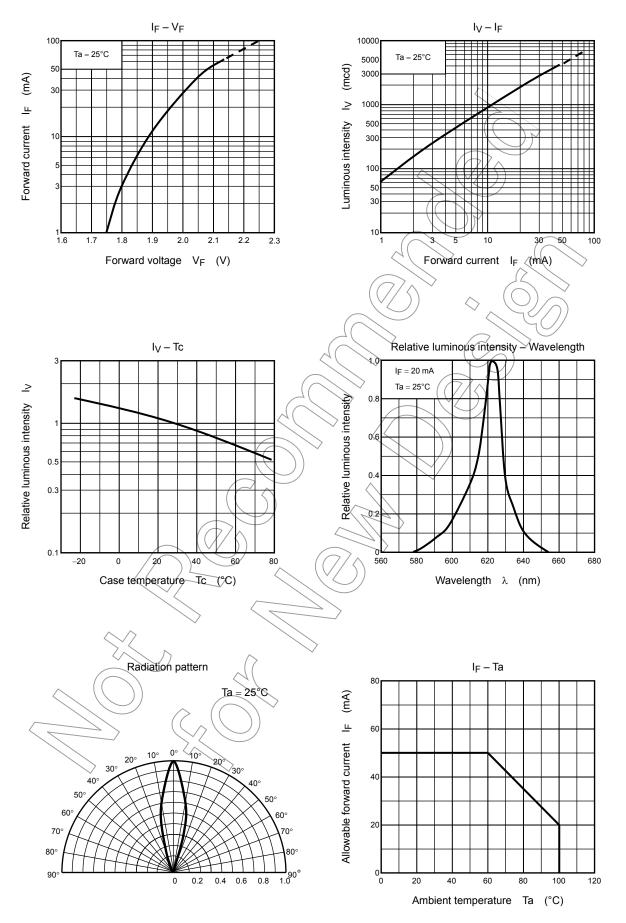
Please be careful of the following:

- Soldering temperature: 260°C max, soldering time: 3 s max (soldering portion of lead: up to 1.6 mm from the body of the device)
- If the lead is formed, the lead should be formed up to 1.6 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.

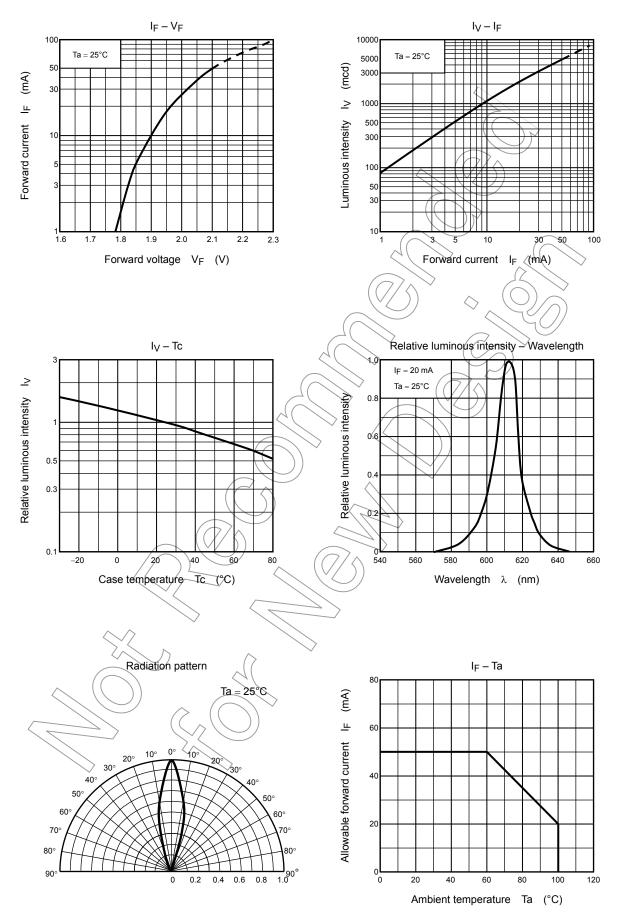
TLRMH16TP(F)



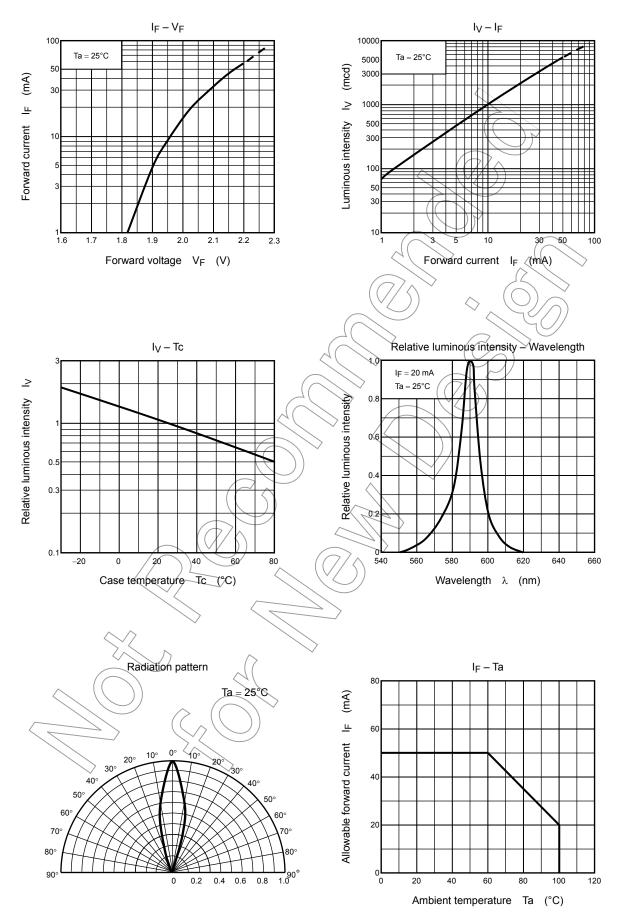
TLSH16TP(F)



TLOH16TP(F)



TLYH16TP(F)



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