TOSHIBA InGaAlP LED

TLPGE18TP(F),TLFGE18TP(F),TLGE18TP(F),TLPYE18TP(F)

Panel Circuit Indicator

- Lead(Pb)-free products (lead: Sn-Ag-Cu)
- 5mm package
- InGaAlP technology
- All plastic mold type
- Transparent lens
- Lineup: 3 colors (pure green, green, pure yellow)
- High intensity light emission
- Excellent low current light output
- Stopper lead type is also available TLPGE18T(F), TLFGE18T(F), TLGE18T(F), TLPYE18T(F)
- Applications: outdoor message signboards, safety equipment, backlight, etc.

Lineup

Product Name	Color	Material			
TLPGE18TP(F)	Pure Green				
TLFGE18TP(F)	Green	InGaAℓP			
TLGE18TP(F)	Green				
TLPYE18TP(F)	Pure Yellow				



Weight: 0.31 g(Typ.)

Absolute 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)		
TLPGE18TP(F)	50	4	120				
TLFGE18TP(F)	50	4	120	40~100	-40~120		
TLGE18TP(F)	50	4	120	-40**100			
TLPYE18TP(F)	50	4	120				

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).

Unit: mm

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
TLPGE18TP(F)	558	(562)	14	20	85	200	20	2.1	2.4	20	50	4
TLFGE18TP(F)	565	(568)	15	20	85	300	20	2.0	2.4	20	50	4
TLGE18TP(F)	571	(574)	17	20	272	700	20	2.0	2.4	20	50	4
TLPYE18TP(F)	580	(583)	14	20	272	750	20	2.0	2.4	20	50	4
Unit		nm		mA	m	cd	mA	Ň	/	mA	μA	V

Electrical and Optical Characteristics (Ta = 25°C)

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.

TLPGE18TP(F)









Radiation pattern

Ta = 25°C





TLFGE18TP(F)









Radiation pattern

Ta = 25°C





TLGE18TP(F)









Radiation pattern







TLPYE18TP(F)









Radiation pattern

Ta = 25°C





RESTRICTIONS ON PRODUCT USE

20070701-EN

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- 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.
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