TOSHIBA LED LAMP

TLG209, TLPG209, TLR209, TLY209

PANEL CIRCUIT INDICATOR

Unit in mm

All Plastic Mold Type

Rectangular Type (Surface Size 3×3mm)

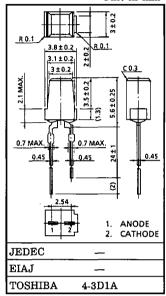
Low Drive Current, High Intensity Light Emission.

Recommended Forward Current: IF=10~15mA (DC)

Fast Response Time, Capable of Pulse Operation.

MATERIALS

PRODUCT NAME	ITEM	MATERIALS	LIGHT EMITTING COLOR
TLPG209	-	GaP	Pure Green
TLG209		GaP	Green
TLY209		GaAsP	Yellow
TLR209		GaP	Red



Weight: 0.13g

MAXIMUM RATINGS (Ta = 25°C)

PRODUCT NAME	FORWARD CURRENT IF (mA)	REVERSE VOLTAGE V _R (V)	POWER DISSIPA- TION PD (mW)	OPERATING TEMPERA- TURE RANGE T _{opr} (°C)	STORAGE TEMPERA- TURE RANGE T _{stg} (°C)
TLPG209	25	4	70	-20~75	-30~100
TLG209	25	4	70	-20~75	-30~100
TLY209	25	4	70	-20~75	-30~100
TLR209	20	4	56	-20~75	-30~100

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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The information contained herein is subject to change without notice.

TOSHIBA is continually working to improve the quality and the reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerathility to physical stress. It is the responsibility of the buyer, when utilizing TOSHIBA products, to observe standards of safety, and to avoid situations in which a malfunction or failure of a TOSHIBA product 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 products specifications. Also, please keep in mind the precautions and conditions set forth in the TOSHIBA Semiconductor Reliability Handbook.

ELECTRO-OPTICAL CHARACTERISTICS (Ta = 25°C)

PRODUCT NAME	EMISSION SPECTRUM		LUMINOUS INTENSITY I _V			$\begin{array}{c} \text{FORWARD} \\ \text{VOLTAGE} \\ \text{V}_{\text{F}} \end{array}$			REVERSE CURRENT I _R		
	$\lambda_{\mathbf{p}}$	Δλ	$I_{\mathbf{F}}$	MIN.	TYP.	$I_{\mathbf{F}}$	TYP.	MAX.	$I_{\mathbf{F}}$	MAX.	v_{R}
TLPG209	555	25	10	0.4	1.0	10	2.15	2.8	20	1	4
TLG209	565	25	10	0.8	1.5	10	2.15	2.8	20	5	4
TLY209	585	32	10	0.5	1.3	10	2.05	2.8	20	100	4
TLR209	700	100	10	0.4	0.8	10	2.15	2.8	20	5	4
Unit	n	m	mA	m	cd	mA	7	V	mA	μA	V

PRECAUTION

Please be careful of the followings.

- Soldering temperature: 260°C MAX. Soldering time: 3s MAX.
 (Soldering portion of lead: up to 2mm from the body of the device)
- If the lead is formed, the lead should be formed up to 5mm from the body of the device without forming stress to the resin. Soldering should be performed after lead forming.

