

### TOSHIBA LED DISPLAY

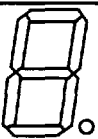

### TLG306, TLG307, TLG308, TLG309 TLR306, TLR307, TLR308, TLR309

- 15mm Character Height Numerical and Polarity Display.
- Application : Numerical Readout for Instrument and Consumer Product.
- Luminous Intensity Ranking Performed Uniform Display.

#### PRODUCT LINE UP

TLG306/TLG307/TLG308/TLG309	GaP GREEN
TLR306/TLR307/TLR308/TLR309	GaP RED

#### TYPE No. vs FULLY DISPLAY FONT

COMMON CATHODE	COMMON ANODE	FULLY DISPLAY FONT
TLG308 TLR308	TLG306 TLR306	
TLG309 TLR309	TLG307 TLR307	

#### MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING		UNIT
		TLGxxxA	TLRxxx	
DC Forward Current / seg.	$I_F$ (DC) / seg	20	35	mA
Pulse Forward Current / seg. (Note)	$I_{FP}$ / seg	90	90	mA
Reverse Voltage / seg.	$V_R$	6	3	V
Operating Temperature Range	$T_{opr}$	-30~75		°C
Storage Temperature Range	$T_{stg}$	-30~90		°C

Note : Pulse Width = 1ms, Duty Ratio = 1 / 10

#### ELECTRICAL-OPTICAL CHARACTERISTICS (Ta = 25°C)

TYPE NO	EMITTING WAVE LENGTH			LUMINOUS INTENSITY $I_V$ / seg			FORWARD VOLTAGE $V_F$ / seg				REVERSE CURRENT $I_R$ / seg		LUMINOUS INTENSITY MATCHING RATIO $I_V$ -M	
	$\lambda_p$	$\Delta\lambda$	$I_F$ / seg	Min.	Typ.	$I_F$ / seg	Min.	Typ.	Max.	$I_F$ / seg	Max.	$V_R$ / seg	Max.	$I_V$ -M
TLG Series	565	30	10	0.09	0.30	10	1.8	2.0	2.5	10	5	6	2.3	5
TLR Series	700	100		0.21	0.30		1.8	2.0	2.8			3	—	—
UNIT	nm		mA	mcd		mA	V			mA	$\mu$ A	V	—	mA

#### PRECAUTION

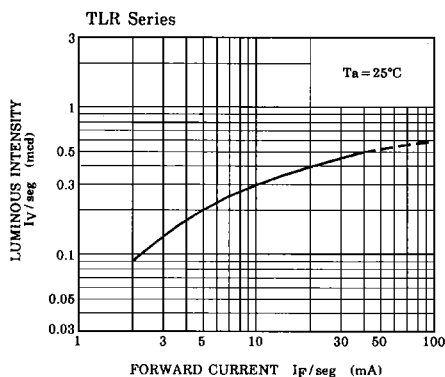
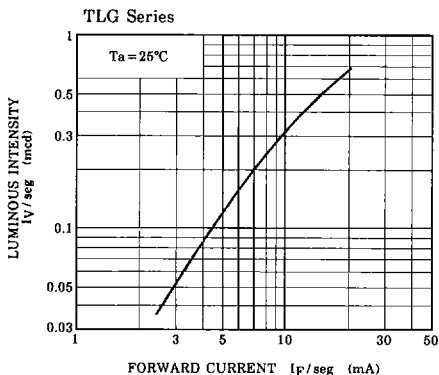
Please be careful of the following.

- Soldering temperature should be less than 260°C for 7s at 1.5mm from the seating plane.
- With the case-type LED display, cleaning all over may cause cracks in the case.

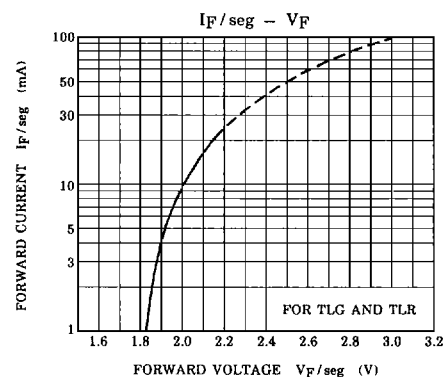
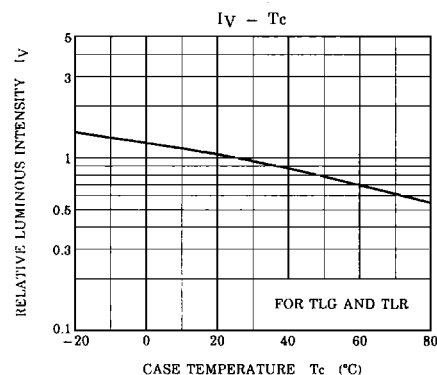
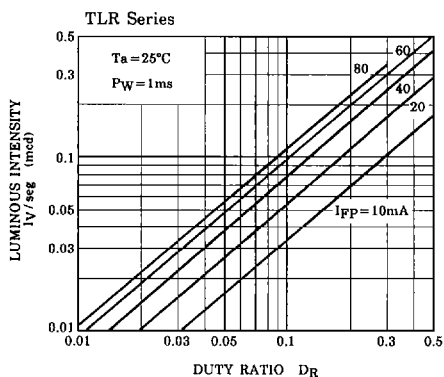
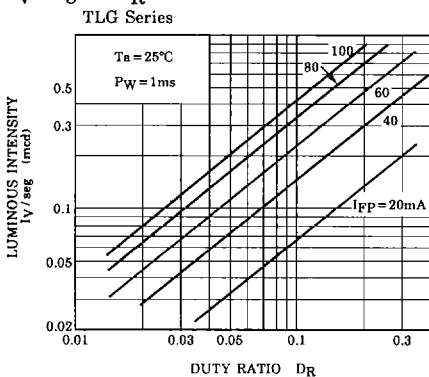
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● TOSHIBA is continually working to improve the quality and the reliability of its products. Nevertheless, semiconductor devices in general can malfunction or fail due to their inherent electrical sensitivity and vulnerability to physical stress. It 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.

### $I_V / \text{seg} - I_F / \text{seg}$

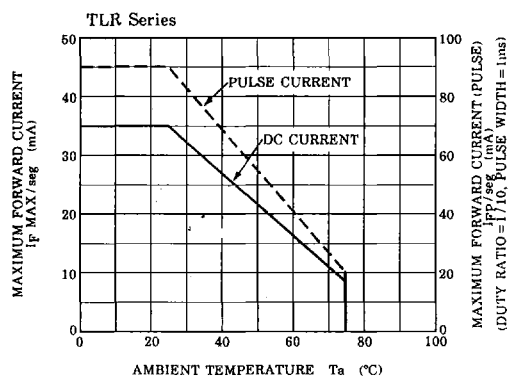
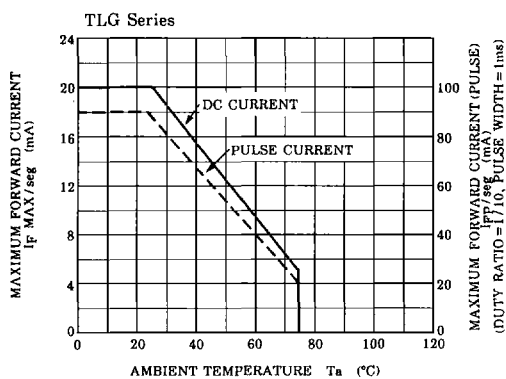


### $I_V / \text{seg} - D_R$

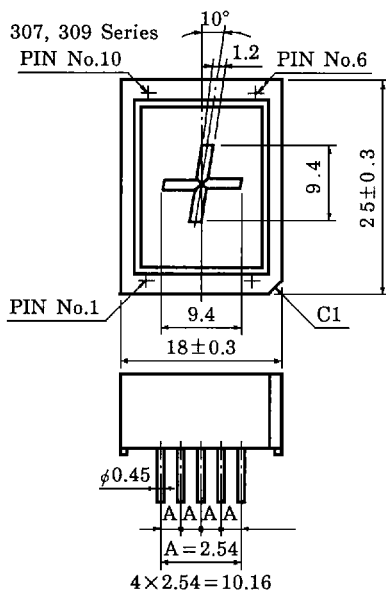


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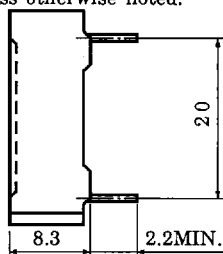
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$I_F$  MAX/seg -  $T_a$ 

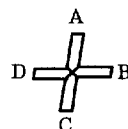
## OUTLINE DIMENSIONS



Unit in mm  
Tolerance is  $\pm 0.25$   
unless otherwise noted.



SEGMENT NAME

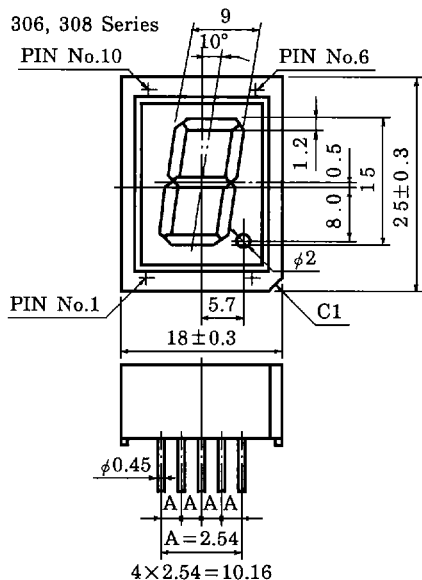


Weight : 4.2g  
307 Series : TOSHIBA 4-18A1C  
309 Series : TOSHIBA 4-18A1D

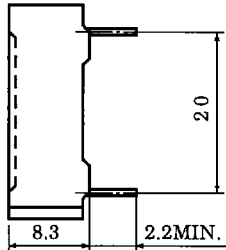
## PIN CONNECTION

307 Series		309 Series	
PIN No.	CONNECTION	PIN No.	CONNECTION
1	Cathode c	1	Anode c
2	Cathode c	2	Anode c
3	Cathode b	3	Anode b
4	Cathode b	4	Anode b
5	Common Anode	5	Common Cathode
6	Cathode a	6	Anode a
7	Cathode a	7	Anode a
8	Cathode d	8	Anode d
9	Cathode d	9	Anode d
10	Common Anode	10	Common Cathode

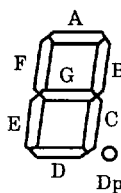
## OUTLINE DIMENSIONS



Unit in mm  
Tolerance is  $\pm 0.25$   
unless otherwise noted.



## SEGMENT NAME



Weight : 4.2g  
306 Series : TOSHIBA 4-18A1A  
308 Series : TOSHIBA 4-18A1B

## PIN CONNECTION

306 Series		308 Series	
PIN No.	CONNECTION	PIN No.	CONNECTION
1	Cathode e	1	Anode e
2	Cathode d	2	Anode d
3	Cathode c	3	Anode c
4	Cathode Dp	4	Anode Dp
5	Common Anode	5	Common Cathode
6	Cathode b	6	Anode b
7	Cathode a	7	Anode a
8	Cathode g	8	Anode g
9	Cathode f	9	Anode f
10	Common Anode	10	Common Cathode