

TOSHIBA LED DISPLAY

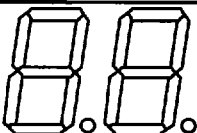
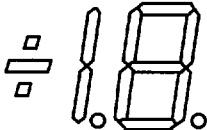
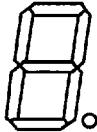
TLG324, TLG325, TLG326, TLG327, TLG352, TLG353
TLR324, TLR325, TLR326, TLR327, TLR352, TLR353

- 12.7mm Character Height Numerical and with Polarity Display.
- Application : Numerical Readout for Instrument and Consumer Product.
- Luminous Intensity Ranking Performed Uniform Display.

PRODUCT LINE UP

TLG324 / TLG325 / TLG326 / TLG327 / TLG352 / TLG353	GaP GREEN
TLR324 / TLR325 / TLR326 / TLR327 / TLR352 / TLR353	GaP RED

TYPE No. vs FULLY DISPLAY FONT

COMMON CATHODE	COMMON ANODE	FULLY DISPLAY FONT
TLG324 TLR324	TLG325 TLR325	
TLG326 TLR326	TLG327 TLR327	
TLG352 TLR352	TLG353 TLR353	

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING		UNIT
		TLGxxxA	TLRxxx	
DC Forward Current / seg.	I _F (DC) / seg	20	20	mA
Pulse Forward Current / seg. (Note)	I _{FP} / seg	150	80	mA
Reverse Voltage / seg.	V _R	6	3	V
Operating Temperature Range	T _{opr}	-30~75	-30~75	°C
Storage Temperature Range	T _{stg}	-30~90	-30~90	°C

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

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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.

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}	
	λ _p	Δλ	I _F /seg	Min.	Typ.	I _F /seg	Min.	Typ.	Max.	I _F /seg	Max.	V _R /seg	Max.	I _F /seg
TLG Series	565	30	10	0.15	0.30	10	1.8	2.0	2.5	10	5	6	2.3	5
TLR Series	700	100		0.13	0.25	5	1.8	2.1	2.5	15		3	2.5	5
UNIT	nm		mA	mcd		mA	V			mA	μA	V	—	mA

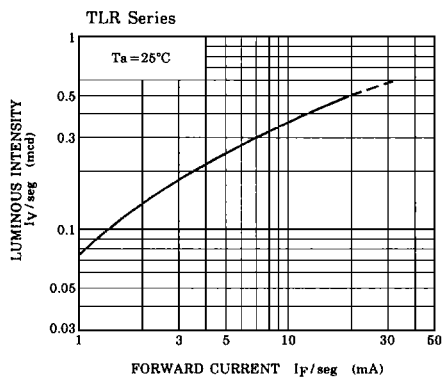
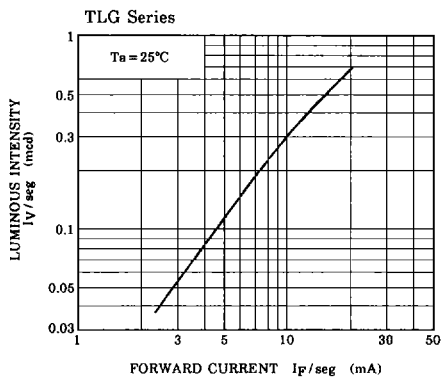
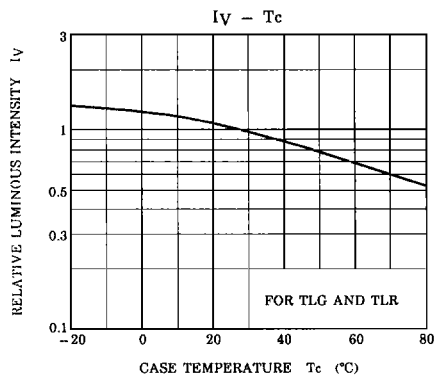
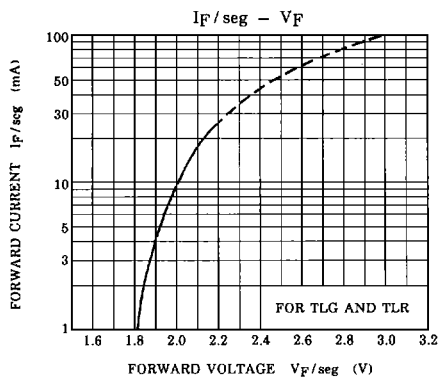
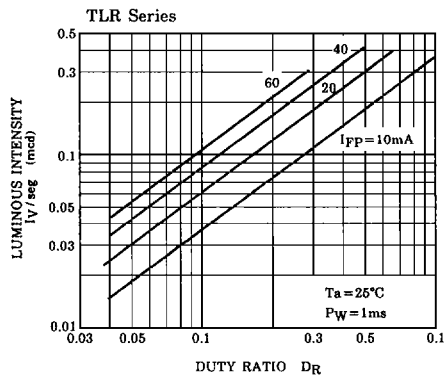
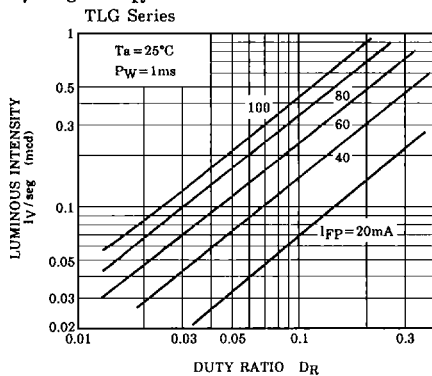
PRECAUTION

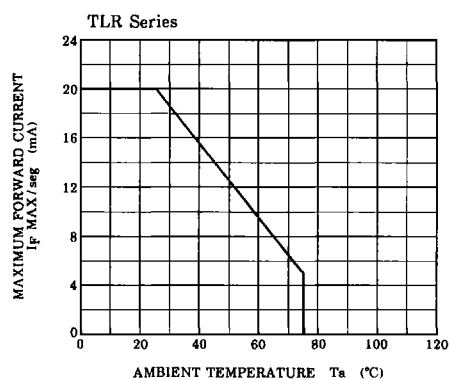
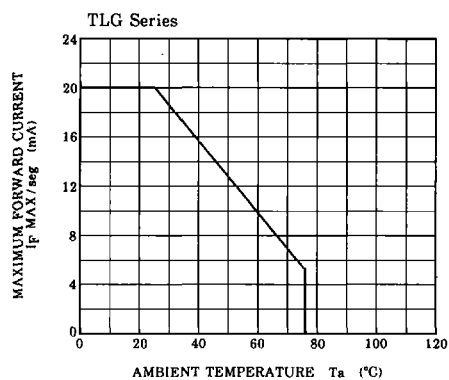
Please be careful of the following.

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

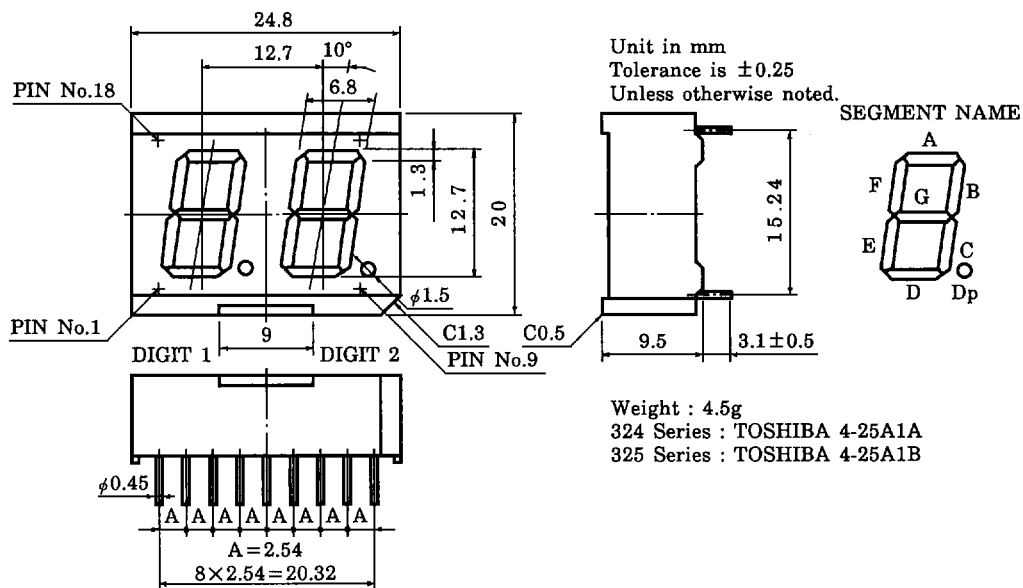
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- The information contained herein is subject to change without notice.

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

I_F (DC) MAX/seg - T_a 

OUTLINE DIMENSIONS



PIN CONNECTION

324 Series		325 Series	
PIN No.	CONNECTION	PIN No.	CONNECTION
1	Digit 1 Anode c	1	Digit 1 Cathode c
2	Digit 1 Anode e	2	Digit 1 Cathode e
3	Digit 1 Anode d	3	Digit 1 Cathode d
4	Digit 1 Common Cathode	4	Digit 1 Common Anode
5	Digit 2 Common Cathode	5	Digit 2 Common Anode
6	Digit 2 Anode d	6	Digit 2 Cathode d
7	Digit 2 Anode e	7	Digit 2 Cathode e
8	Digit 2 Anode c	8	Digit 2 Cathode c
9	Digit 2 Anode Dp	9	Digit 2 Cathode Dp
10	Digit 2 Anode g	10	Digit 2 Cathode g
11	Digit 2 Anode a	11	Digit 2 Cathode a
12	Digit 2 Anode f	12	Digit 2 Cathode f
13	Digit 2 Anode b	13	Digit 2 Cathode b
14	Digit 1 Anode b	14	Digit 1 Cathode b
15	Digit 1 Anode f	15	Digit 1 Cathode f
16	Digit 1 Anode a	16	Digit 1 Cathode a
17	Digit 1 Anode g	17	Digit 1 Cathode g
18	Digit 1 Anode Dp	18	Digit 1 Cathode Dp

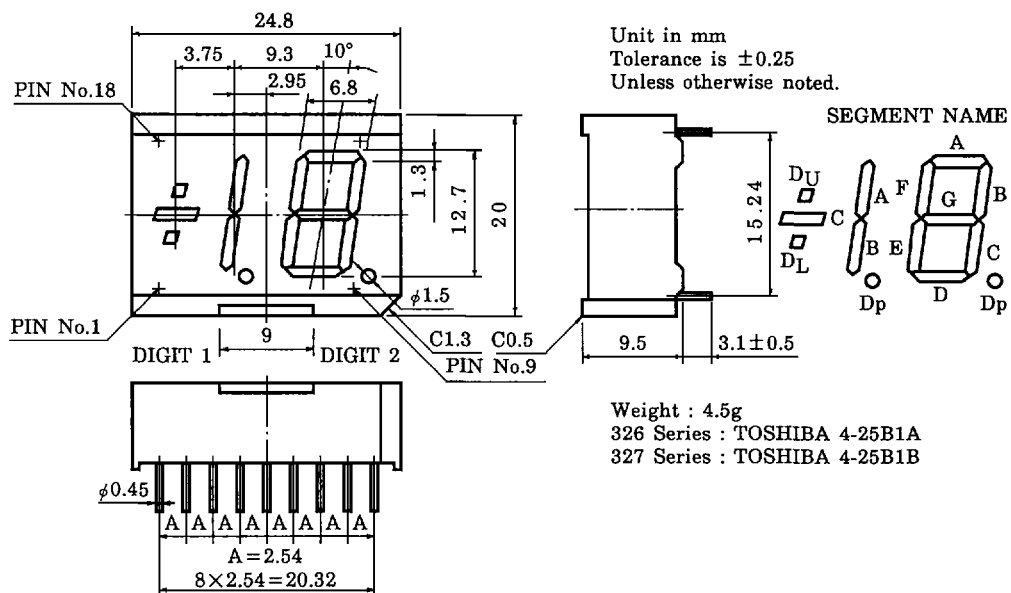
4
DIGIT 1

5
DIGIT 2

4
DIGIT 1

5
DIGIT 2

OUTLINE DIMENSIONS



PIN CONNECTION

326 Series		327 Series	
PIN No.	CONNECTION	PIN No.	CONNECTION
1	NC	1	NC
2	Digit 1 Anode Dp	2	Digit 1 Cathode Dp
3	Digit 1 Anode b	3	Digit 1 Cathode b
4	Digit 1 Common Cathode	4	Digit 1 Common Anode
5	Digit 2 Common Cathode	5	Digit 2 Common Anode
6	Digit 2 Anode d	6	Digit 2 Cathode d
7	Digit 2 Anode e	7	Digit 2 Cathode e
8	Digit 2 Anode c	8	Digit 2 Cathode c
9	Digit 2 Anode Dp	9	Digit 2 Cathode Dp
10	Digit 2 Anode g	10	Digit 2 Cathode g
11	Digit 2 Anode a	11	Digit 2 Cathode a
12	Digit 2 Anode f	12	Digit 2 Cathode f
13	Digit 2 Anode b	13	Digit 2 Cathode b
14	Digit 1 Anode a	14	Digit 1 Cathode a
15	Digit 1 Anode D _L	15	Digit 1 Cathode D _L
16	Digit 1 Anode c	16	Digit 1 Cathode c
17	Digit 1 Anode D _U	17	Digit 1 Cathode D _U
18	NC	18	NC

2 3 14 15 16 17 6 7 8 9 10 11 12 13

4 5

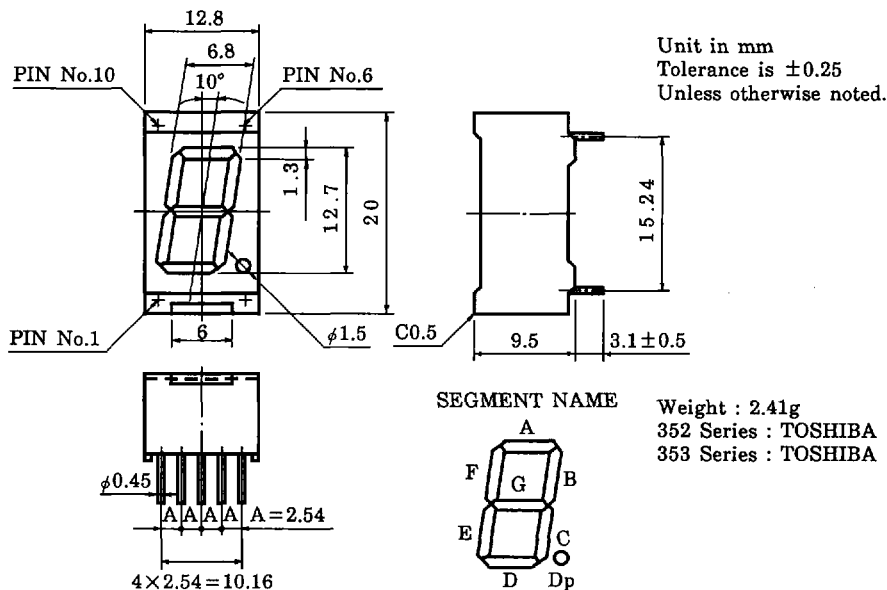
DIGIT 1 DIGIT 2

4 5

2 3 14 15 16 17 6 7 8 9 10 11 12 13

DIGIT 1 DIGIT 2

OUTLINE DIMENSIONS



PIN CONNECTION

352 Series		353 Series	
PIN No.	CONNECTION	PIN No.	CONNECTION
1	Anode e	1	Cathode e
2	Anode d	2	Cathode d
3	Anode c	3	Cathode c
4	Anode Dp	4	Cathode Dp
5	Common Cathode	5	Common Anode
6	Anode b	6	Cathode b
7	Anode a	7	Cathode a
8	Anode g	8	Cathode g
9	Anode f	9	Cathode f
10	Common Cathode	10	Common Anode

Diagram illustrating the connection for the 352 Series (Common Cathode). Pins 5 and 10 are connected together and serve as the common ground. The other pins (1, 2, 3, 4, 6, 7, 8, 9) are connected to the anodes of LEDs.

Diagram illustrating the connection for the 353 Series (Common Anode). Pins 5 and 10 are connected together and serve as the common positive supply. The other pins (1, 2, 3, 4, 6, 7, 8, 9) are connected to the cathodes of LEDs.