



TLR312, TLR313, TLR314, TLR315

RED COLOR 1 DIGIT LED DISPLAY

- 8.3mm Character Height Red Color Numerical and with Polarity Display.
- High Efficiency Electro Luminescence from GaP Diodes, Which Emit Red Light in All Directions Provides High Luminance and Low Power Requirements.
- Luminous Intensity Ranking Performed Uniform Display at the Multi-Digit Drive.
- Operates with Standard TTL, DTL-IC by Same Power Supply.
- Fast Response-Suitable for Time-Shared Operation.

TYPE NO. vs FULLY DISPLAYED FONT

COMMON CATHODE	COMMON ANODE	FULLY DISPLAY FONT
TLR312	TLR313	
TLR315	TLR314	

Refer to page 208 for the figure.

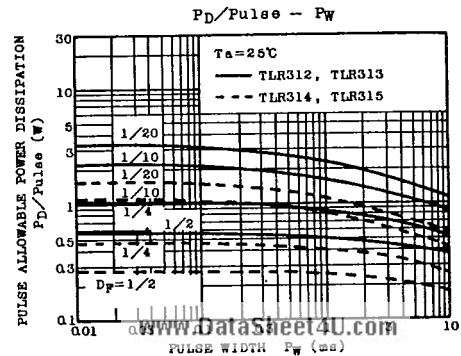
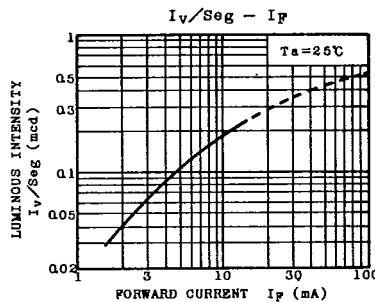
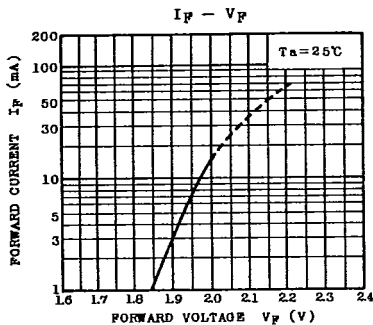
MAXIMUM RATINGS (Ta = 25°C)

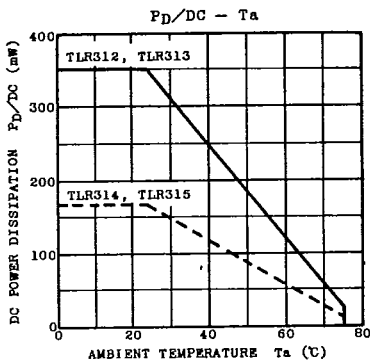
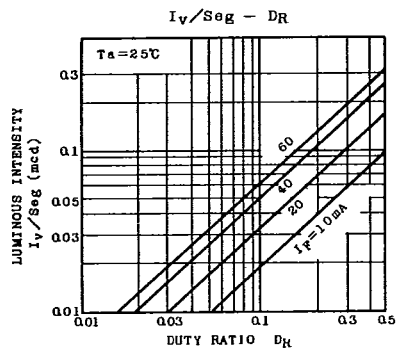
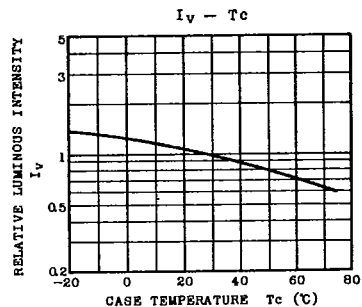
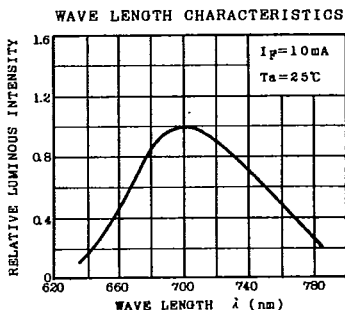
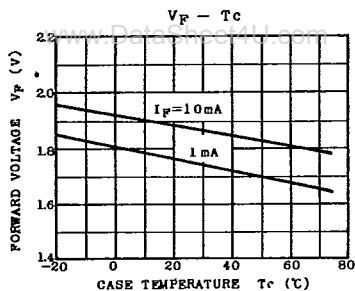
CHARACTERISTIC	SYMBOL	RATING	UNIT
DC Forward Current/Segment	$I_F(DC)/Seg$	15	mA
Pulse Forward Current/Seg. (Note)	$I_F(Pulse)/Seg$	80	mA
Reverse Voltage	V_R	3	V
Power Dissipation	TLR312, TLR313 TLR314, TLR315	P_D	350
			170
Operating Temperature Range	T_{opr}	-20 ~ 75	°C
Storage Temperature Range	T_{stg}	-30 ~ 80	°C

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

ELECTRICAL-OPTICAL CHARACTERISTICS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	V_F	$I_F=15mA$	1.8	2.0	2.4	V
Reverse Current	I_R	$V_R=3V$	-	-	5.0	μA
Luminous Intensity/Segment	I_v/Seg	$I_F=5mA$	0.04	0.11	-	mcd
Peak Emission Wave Length	λ_p	$I_F=10mA$	-	700	-	nm
Spectral Half Line Width	$\Delta\lambda$	$I_F=10mA$	-	100	-	nm
Terminal Between Capacitance	C_T	$V_R=0, f=1MHz$	-	100	-	pF

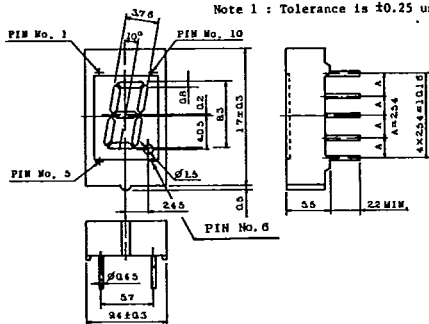




OUTLINE DIMENSIONS

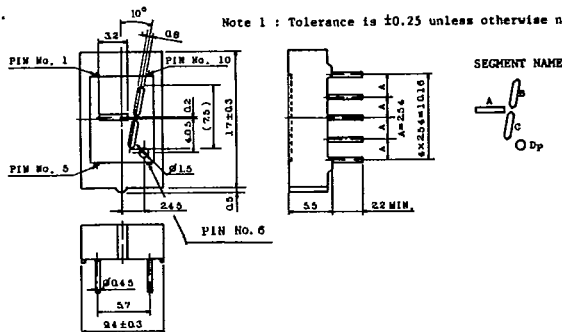
Unit in mm

Note 1 : Tolerance is ± 0.25 unless otherwise noted.



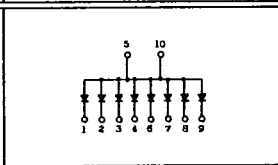
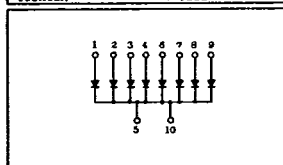
OUTLINE DIMENSIONS

Note 1 : Tolerance is ± 0.25 unless otherwise noted.



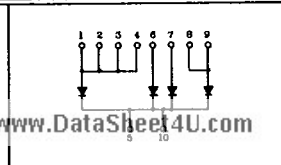
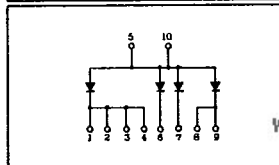
PIN CONNECTION

TLR 312		TLR 313	
PIN No.		PIN No.	
1. ANODE A		1. CATHODE A	
2. ANODE F		2. CATHODE F	
3. ANODE E		3. CATHODE E	
4. ANODE D		4. CATHODE D	
5. COMMON CATHODE		5. COMMON ANODE	
6. ANODE C		6. CATHODE C	
7. ANODE D _p		7. CATHODE D _p	
8. ANODE G		8. CATHODE G	
9. ANODE B		9. CATHODE B	
10. COMMON CATHODE		10. COMMON ANODE	
EIAJ	-	EIAJ	-
TOSHIBA	4-981B	TOSHIBA	4-981A



PIN CONNECTION

TLR 314		TLR 315	
PIN No.		PIN No.	
1. CATHODE A		1. ANODE A	
2. CATHODE A		2. ANODE A	
3. CATHODE A		3. ANODE A	
4. CATHODE A		4. ANODE A	
5. COMMON ANODE		5. COMMON CATHODE	
6. CATHODE D _p		6. ANODE D _p	
7. CATHODE C		7. ANODE C	
8. CATHODE B		8. ANODE B	
9. CATHODE B		9. ANODE B	
10. COMMON ANODE		10. COMMON CATHODE	
EIAJ	-	EIAJ	-
TOSHIBA	4-981C	TOSHIBA	4-981D



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