

# TLR2157, TLR4152, TLR2187, TLR4182

## RED COLOR 4 DIGITS LED DISPLAY

- Clock display for multiplex drive operation and available both polarity common anode or common cathode.
- 23 mm (0.9") character height, each segment represents diffused and uniform display with milk white filter color.
- Practical brightness are obtained at about 60 mA with 1/6 of duty ratio.
- Arrow edge shape of each segment represents not mosaic but look like Arabic numerals.
- Selectable both type 12 or 24 hours display.

### TYPE NO. VS. DISPLAY FONT

COMMON ANODE	COMMON CATHODE	FULLY DISPLAY FONT
TLR2157	TLR2187	10:00.
TLR4152	TLR4182	00:00.

### MAXIMUM RATINGS (Ta = 25°C)

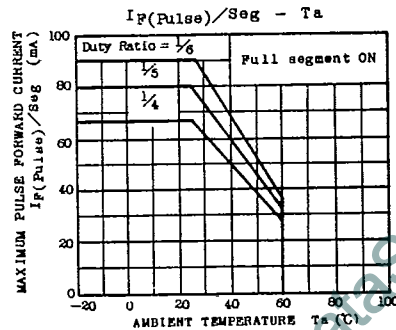
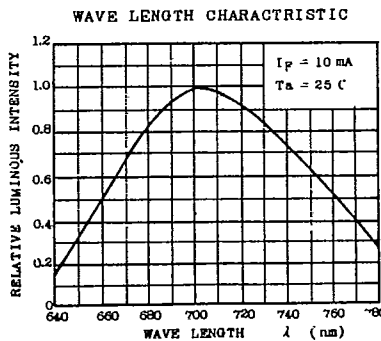
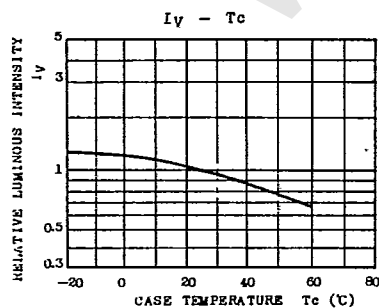
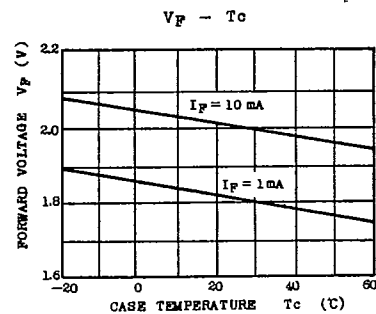
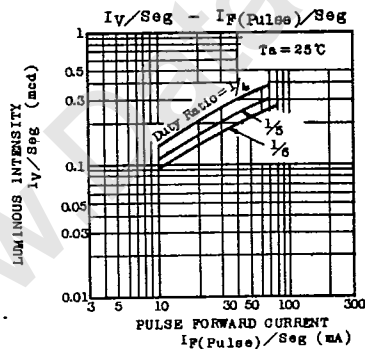
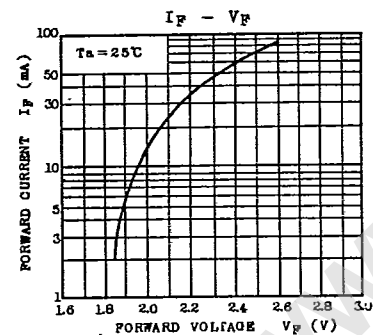
CHARACTERISTIC	SYMBOL	RATING	UNIT
Pulse Forward Current (Note 1)	$I_F(\text{Pulse})/\text{Seg}$	90	mA
Reverse Voltage	$V_R$	3	V
Storage Temperature Range	$T_{stg}$	-20~75	°C
Operating Temperature Range	$T_{opr}$	-20~60	°C
Soldering Temperature (Note 2)	$T_{solder}$	260	°C

Note 1: Duty ratio=1/6  
2: Within 3 second at 2 mm from the reflector edge

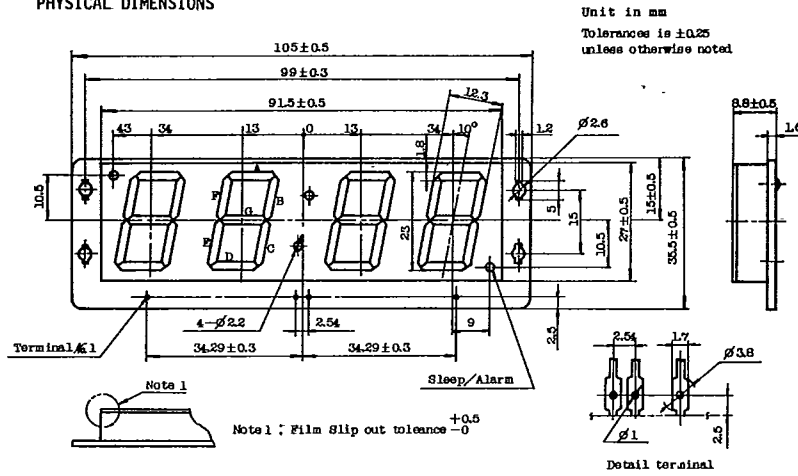
Refer to page 254 for the figure.

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

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Forward Voltage	$V_F$	$I_F=60\text{mA}$	1.9	2.4	3.6	V
Reverse Current	$I_R$	$V_R=3\text{V}$	-	-	5	$\mu\text{A}$
Luminous Intensity/seg.	$I_V/\text{Seg}$	Duty Ratio=1/6 $I_F=10\text{mA}$	0.14	0.25	-	med
Luminous Intensity Matching Ratio	$I_V-M$	Duty Ratio=1/6 $I_F=10\text{mA}$	-	-	2.5	-
Peak Emission Wave Length	$\lambda_P$	$I_F=10\text{mA}$	-	700	-	nm
Spectral Half Line Width	$\Delta\lambda$	$I_F=10\text{mA}$	-	100	-	nm



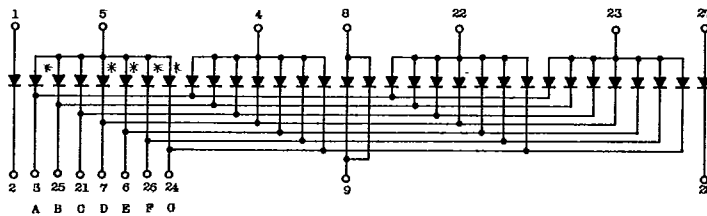
PHYSICAL DIMENSIONS



TERMINAL CONNECTION

TERMINAL №	CONNECTION	TERMINAL №	CONNECTION
1	AM/FM Common	10 ~ 20	N.C
2	AM/FM	21	C Segment
3	A Segment	22	10's Minute Common
4	Unit Hour Common	23	Unit Minute Common
5	10's Hour Common	24	G Segment
6	E Segment	25	B Segment
7	D Segment	26	F Segment
8	Colons Common	27	Sleep/Alarm Common
9	Colons	28	Sleep/Alarm

TLR2157, TLR4152 COMMON ANODE TYPE (TLR2157 \* Mark is no connection)



TLR2187, TLR4182 COMMON CATHODE TYPE (TLR2187 \* Mark is no connection)

