

LED DISPLAY

LTA-10102M-01

DATA SHEET

Rev	Description	By
-	Original Spec	<u>Phanomkorn J.</u>

SPEC. NO.: RDR-20040163

D A T E : 10/May /'07

REV. NO.: -

FEATURES

- * RECTANGULAR LIGHT BAR
- * LARGE, BRIGHT, UNIFORM LIGHT EMITTING AREAS
- * LOW POWER REQUIREMENT
- * HIGH BRIGHTNESS & HIGH CONTRAST
- * SOLID STATE RELIABILITY
- * CATEGORIZED FOR LUMINOUS INTENSITY
- * **LEAD-FREE PACKAGE**(ACCORDING TO ROHS)

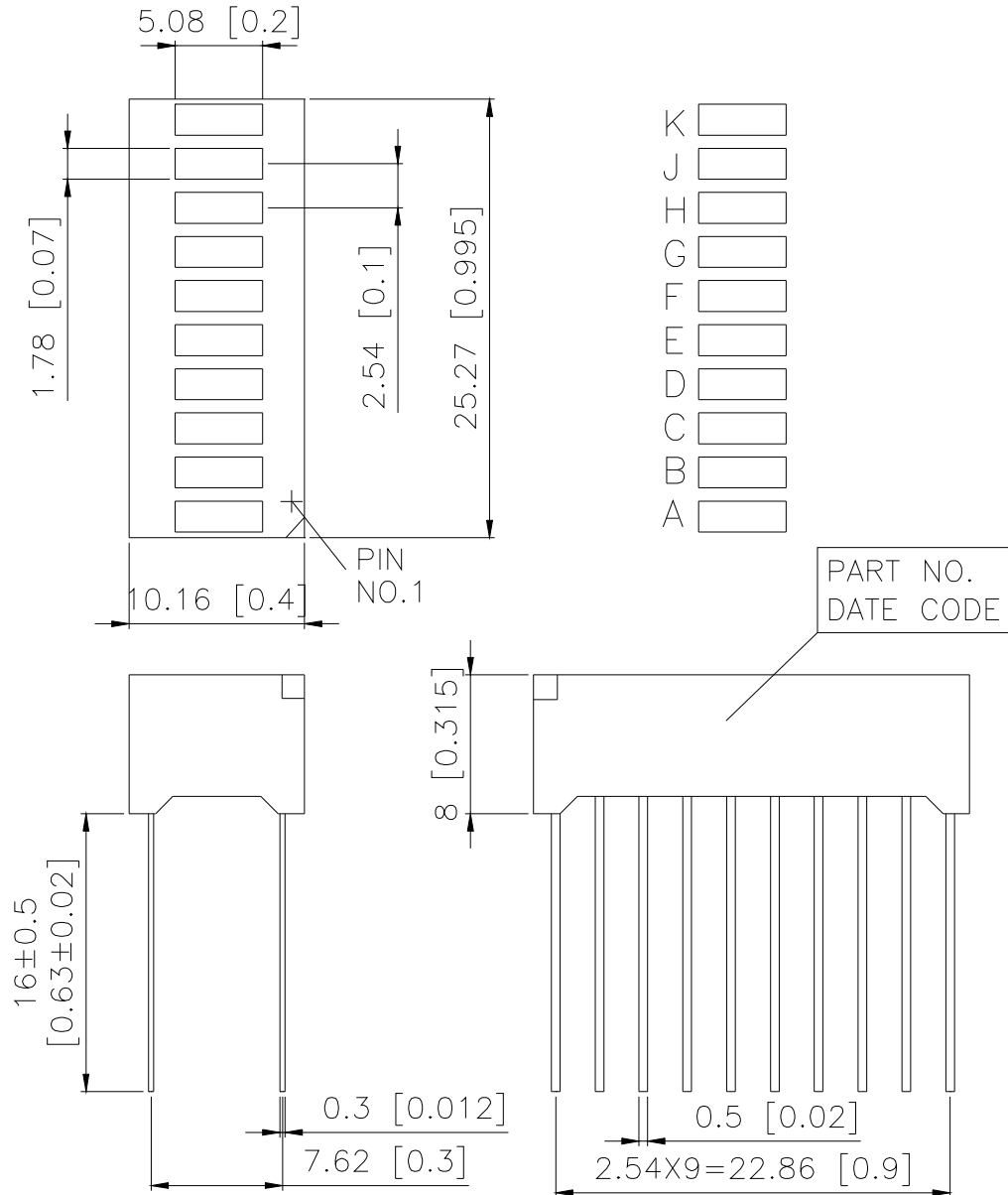
DESCRIPTION

The LTA-10102M-01 is a ten rectangular light sources array display designed for a variety of applications where a continuously large, bright source of light is required. This device uses GREEN LED chips (GaP epi on GaP substrate) and RED ORANGE LED chips (GaAsP epi on GaP substrate). The display has a black face and white segments.

DEVICE

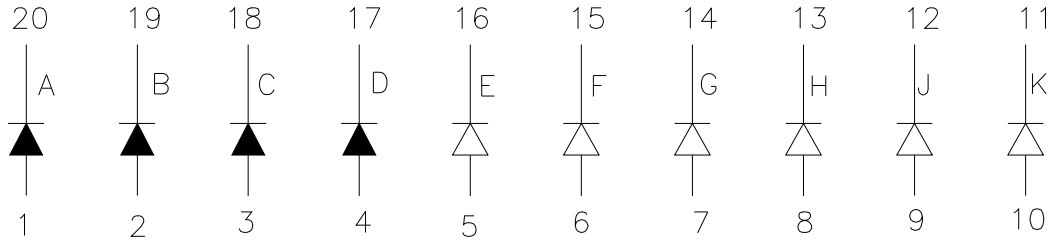
PART NO.	DESCRIPTION
GREEN & RED ORANGE	Universal
LTA-10102M-01	Ten Rectangular Bar

PACKAGE DIMENSIONS



- NOTES: 1. All dimensions are in millimeters. Tolerances are ± 0.25 mm unless otherwise note.
 2. Pin tip's shift tolerance is ± 0.4 mm.

INTERNAL CIRCUIT DIAGRAM



PIN CONNECTION

No.	CONNECTION
1	Anode A
2	Anode B
3	Anode C
4	Anode D
5	Anode E
6	Anode F
7	Anode G
8	Anode H
9	Anode J
10	Anode K
11	Cathode K
12	Cathode J
13	Cathode H
14	Cathode G
15	Cathode F
16	Cathode E
17	Cathode D
18	Cathode C
19	Cathode B
20	Cathode A

ABSOLUTE MAXIMUM RATING

PARAMETER	GREEN	RED ORANGE	UNIT
Power Dissipation Per Segment	75	75	mW
Peak Forward Current Per Segment (Frequency 1Khz, 10% duty cycle)	100*	100*	mA
Continuous Forward Current Per Segment	25	25	mA
Forward Current Derating from 25 ⁰ C	0.33	0.33	mA/ ⁰ C
Reverse Voltage Per Segment	5		V
Operating Temperature Range	-35 ⁰ C to +105 ⁰ C		
Storage Temperature Range	-35 ⁰ C to +105 ⁰ C		
Soldering Conditions: 1/16 inch below seating plane for 3 seconds at 260 ⁰ C or of temperature unit (during assembly) not over max. temperature rating above.			

* see figure 5 to establish pulsed condition

ELECTRICAL / OPTICAL CHARACTERISTICS AT Ta=25°C**GREEN**

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITION
Average Luminous Intensity Per Segment	I _v	540	2000		μcd	I _F = 10mA
Peak Emission Wavelength	λ _p		565		nm	I _F = 20mA
Spectral Line Half-Width	Δλ		30		nm	I _F = 20mA
Dominant Wavelength	λ _d		569		nm	I _F = 20mA
Forward Voltage Per Segment	V _F		2.0	2.6	V	I _F = 20mA
Reverse Current Per Segment	I _R			100	μA	V _R = 5V
Luminous Intensity Matching Ratio (Similar Light Area)	I _{v-m}			2 : 1		I _F = 10mA

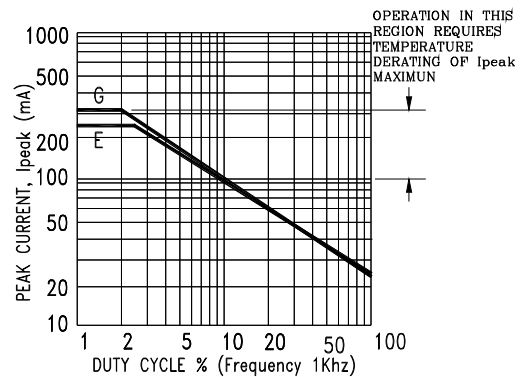
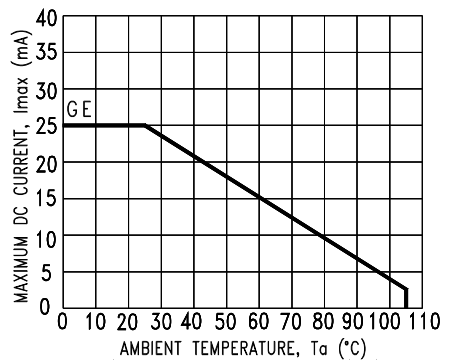
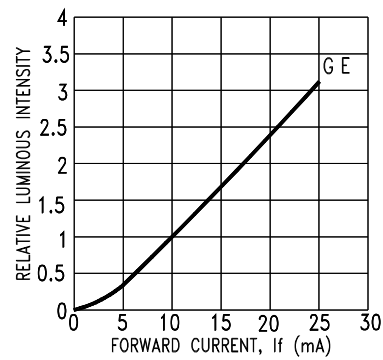
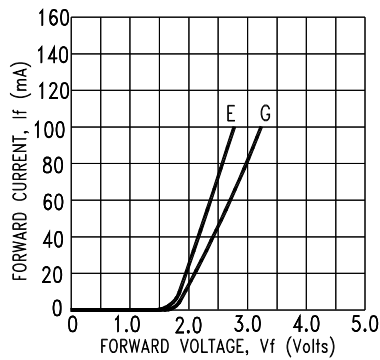
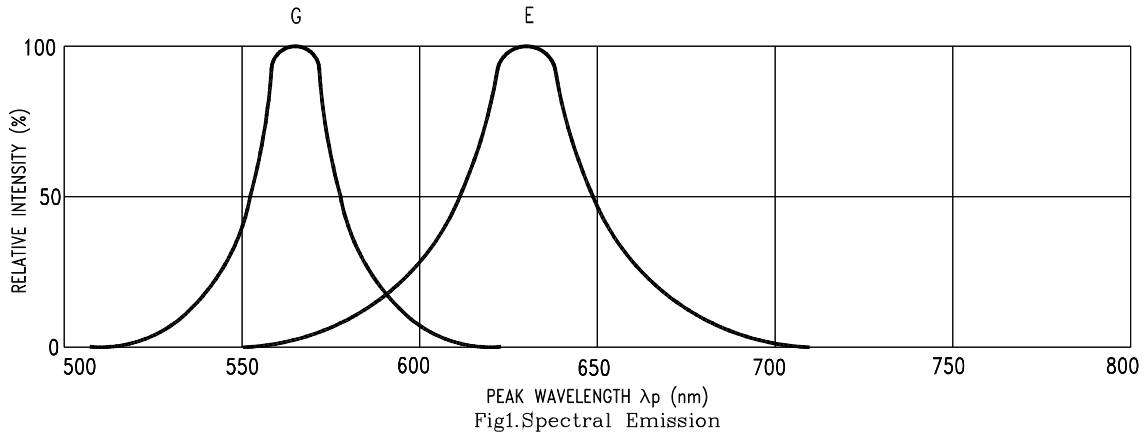
RED ORANGE

PARAMETER	SYMBOL	MIN	TYP	MAX	UNIT	TEST CONDITION
Average Luminous Intensity Per Segment	I _v	540	2000		μcd	I _F = 10mA
Peak Emission Wavelength	λ _p		630		nm	I _F = 20mA
Spectral Line Half-Width	Δλ		40		nm	I _F = 20mA
Dominant Wavelength	λ _d		621		nm	I _F = 20mA
Forward Voltage Per Segment	V _F		2.0	2.6	V	I _F = 20mA
Reverse Current Per Segment	I _R			100	μA	V _R = 5V
Luminous Intensity Matching Ratio (Similar Light Area)	I _{v-m}			2 : 1		I _F = 10mA

Note: Luminous Intensity is measured with a light sensor and filter combination that approximates the CIE (Commision Internationale De L'Eclairage) eye-response curve.

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)



NOTE: G=GREEN.
E=RED ORANGE