LITEON®
OPTOELECTRONICS

LED Display

Product Data Sheet

LTG-0122M

Spec No.: DS30-2001-166

Effective Date: 10/04/2002

Revision: A

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

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FEATURES

∗0.24 inch (6 mm) DIGIT HEIGHT
∗CONTINUOUS UNIFORM SEGMENTS
∗LOW POWER REQUIREMENT
∗EXCELLENT CHARACTERS APPEARANCE
∗HIGH BRIGHTNESS & HIGH CONTRAST
∗WIDE VIEWING ANGLE
∗SOLID STATE RELIABILITY

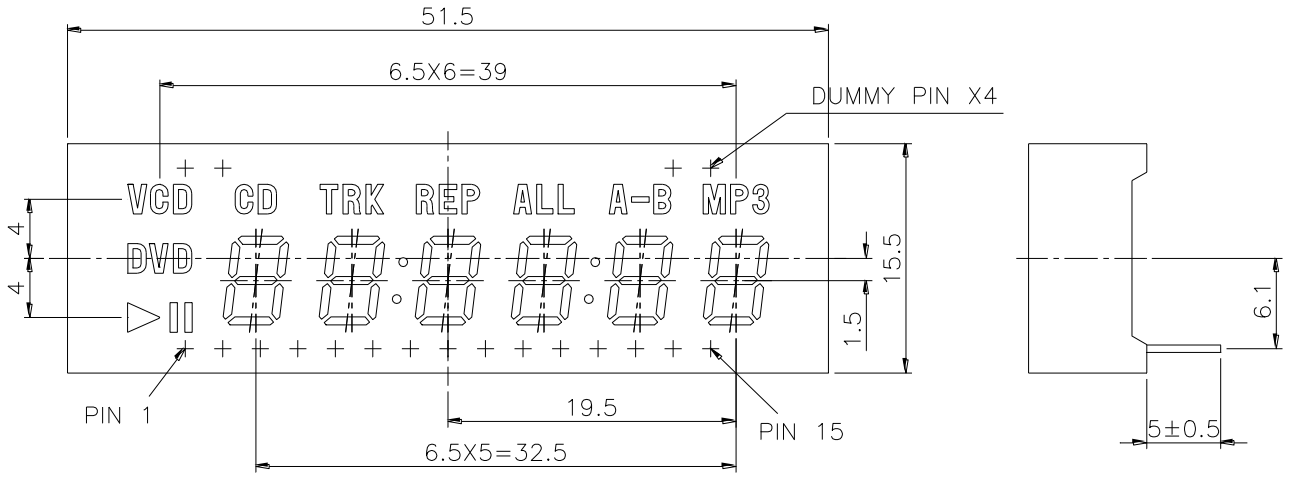
DESCRIPTION

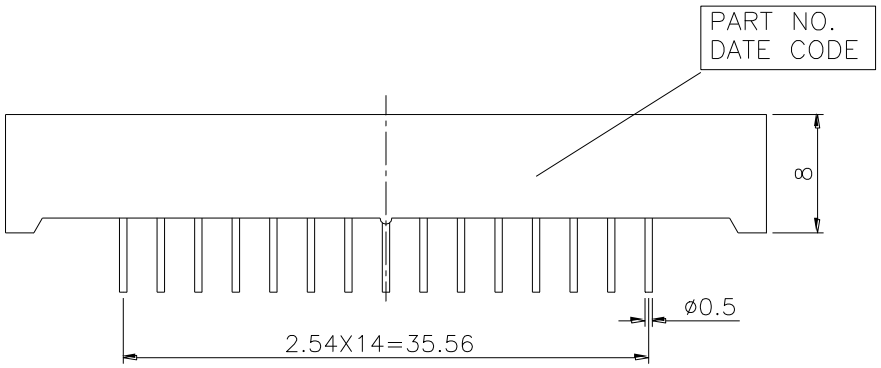
The LTG-0122M is a 0.24 inch (6 mm) digit height 6 digit seven-segment display. The device is multi-color applicable display. The GREEN LED chips, which are made from GaP on GaP substrate and RED ORANGE LED chips, which are made from GaAsP on GaP. The device has a black face and white segments.

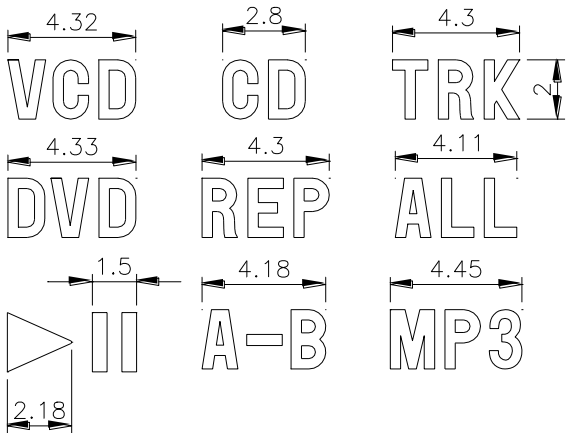
DEVICE

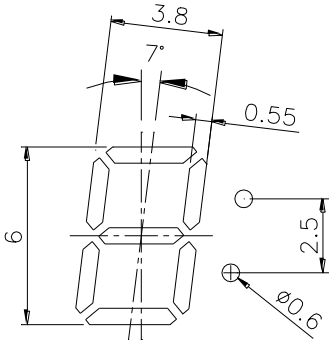
PART NO.	DESCRIPTION
GREEN & RED ORANGE LTG-0122M	Multiplex Common Anode

PACKAGE DIMENSIONS







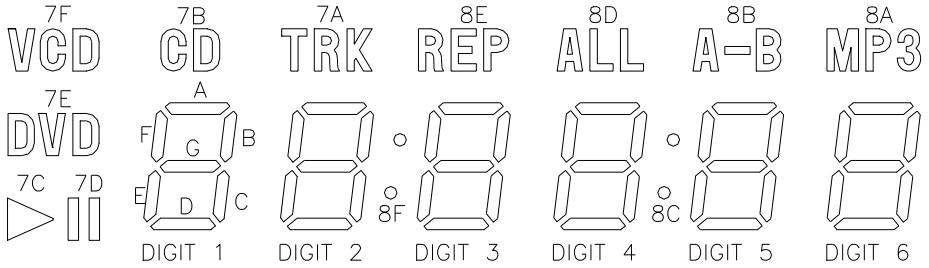


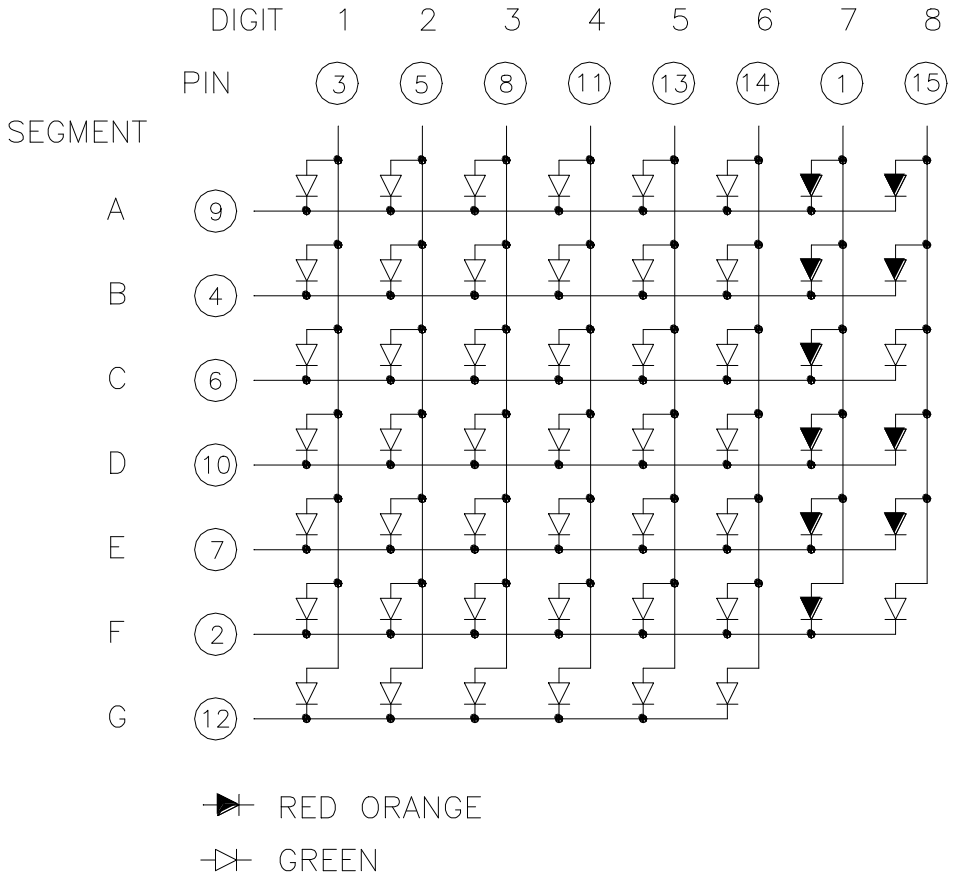
JAPAN PATENT:3075028

KOREA PATENT:0209198

NOTES: All dimensions are in millimeters. Tolerances are ± 0.25 mm unless otherwise noted.

INTERNAL CIRCUIT DIAGRAM





PIN CONNECTION

NO	CONNECTION
1	COMMON ANODE 7A~7F
2	CATHODE F
3	COMMON ANODE (DIGIT 1)
4	CATHODE B
5	COMMON ANODE (DIGIT 2)
6	CATHODE C
7	CATHODE E
8	COMMON ANODE (DIGIT 3)
9	CATHODE A
10	CATHODE D
11	COMMON ANODE (DIGIT 4)
12	CATHODE G
13	COMMON ANODE (DIGIT 5)
14	COMMON ANODE (DIGIT 6)
15	COMMON ANODE 8A~8F

ABSOLUTE MAXIMUM RATING

PARAMETER	GREEN	RED ORANGE	UNIT
Power Dissipation Per Chip	75	75	mW
Peak Forward Current Per Chip (Frequency 1Khz, 10% duty cycle)	100*	100*	mA
Continuous Forward Current Per Chip Derating Linear From 25℃ Per Chip	25 0.33	25 0.33	mA mA/℃
Reverse Voltage Per Chip	5	5	V
Operating Temperature Range	-35℃ to +85℃		
Storage Temperature Range	-35℃ to +85℃		
Solder Temperature: max 260℃ for max 3sec at 1.6mm below seating plane			

** 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	500	1600		μcd	I_F = 10mA
Peak Emission Wavelength	λp		565		nm	I_F = 20mA
Spectral Line Half-Width	Δλ		30		nm	I_F = 20mA
Dominant Wavelength	λd		569		nm	I_F = 20mA
Forward Voltage Per Chip	V_F		2.1	2.6	V	I_F = 10mA
Reverse Current Per Chip	I_R			100	μA	V_R = 5V
Luminous Intensity Matching Ratio	I_V-m			2:1		I_F = 10mA

RED ORANGE

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Sterance	I_V	500	1600		μcd	I_F = 10mA
Peak Emission Wavelength	λp		630		nm	I_F = 20mA
Spectral Line Half-Width	Δλ		40		nm	I_F = 20mA
Dominant Wavelength	λd		621		nm	I_F = 20mA
Forward Voltage Per Chip	V_F		2	2.6	V	I_F = 10mA
Reverse Current Per Chip	I_R			100	μA	V_R = 5V
Luminous Intensity Matching Ratio	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)

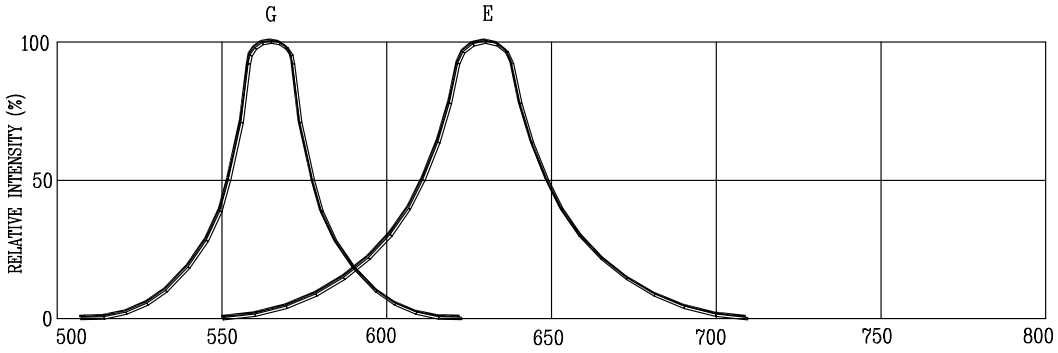


Fig1.Spectral Emission

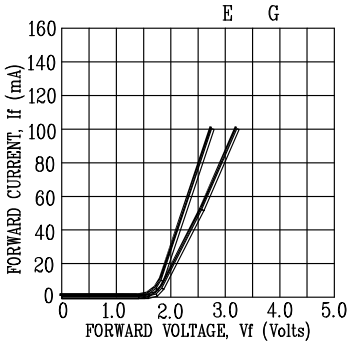


Fig2. Forward Current vs. Forward Voltage

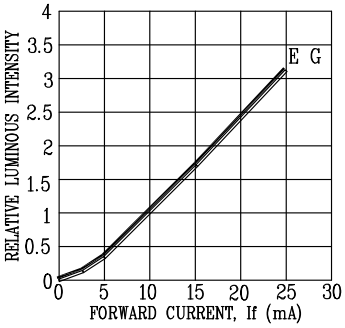


Fig3. Relative Luminous Intensity vs. DC Forward Current

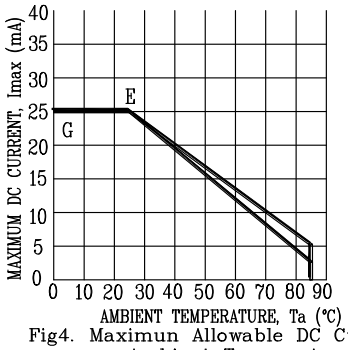


Fig4. Maximun Allowable DC Current vs. Ambient Temperature

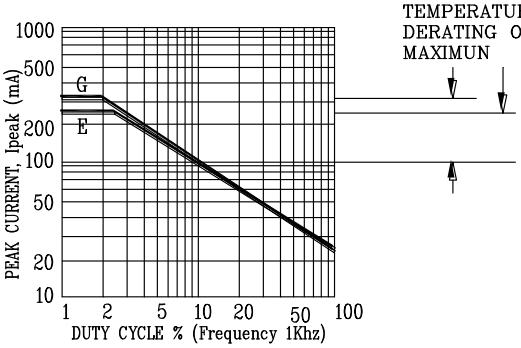


Fig5. Maximum Peak Current vs. Duty Cycle %

NOTE: G=GREEN E=RED ORANGE