



LED Display

Product Data Sheet

LTP-3785E

Spec No.: DS30-2001-079

Effective Date: 03/27/2001

Revision: -

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

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FEATURES

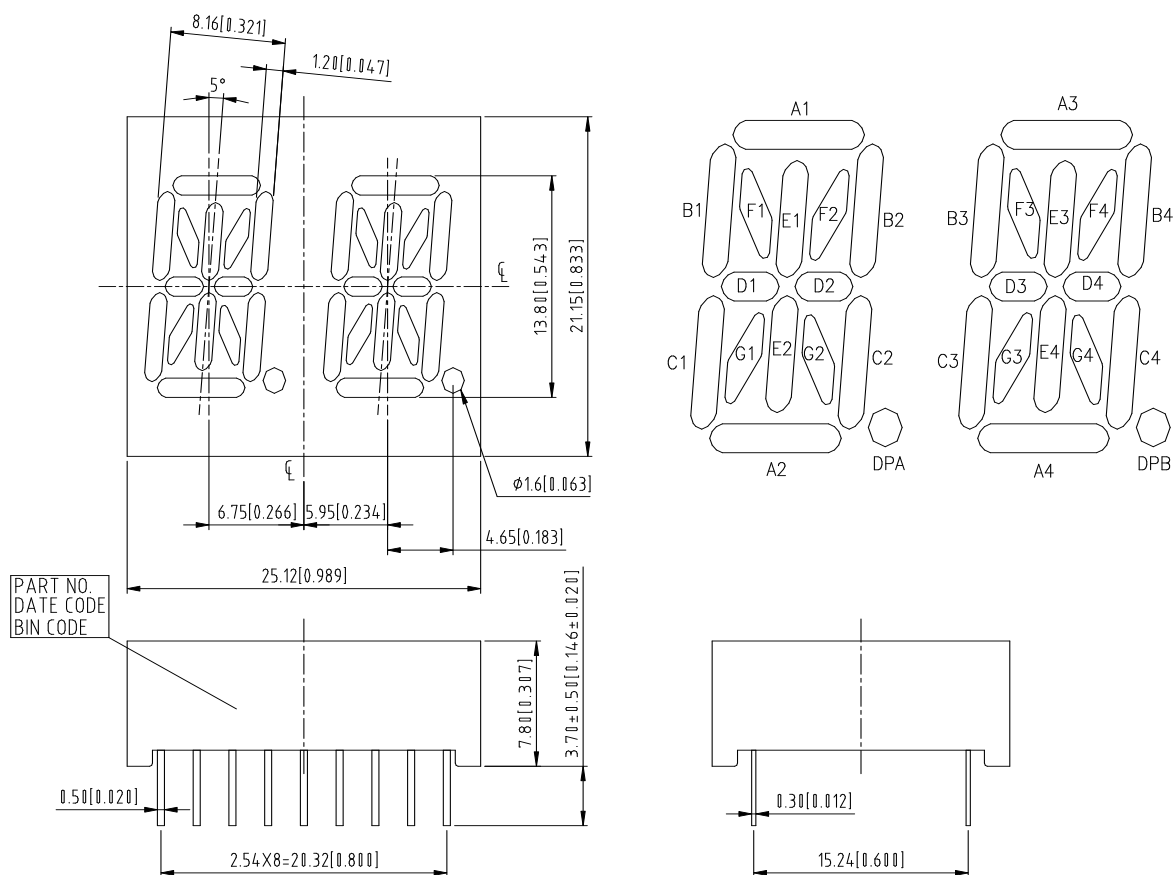
- * 0.54-INCH (13.8-mm) DIGIT HEIGHT.
- * CONTINUOUS UNIFORM SEGMENTS
- * LOW POWER REQUIREMENT.
- * EXCELLENT CHARACTERS APPEARANCE.
- * HIGH BRIGHTNESS & HIGH CONTRAST.
- * WIDE VIEWING ANGLE.
- * SOLID STATE RELIABILITY.
- * CATEGORIZED FOR LUMINOUS INTENSITY.

DESCRIPTION

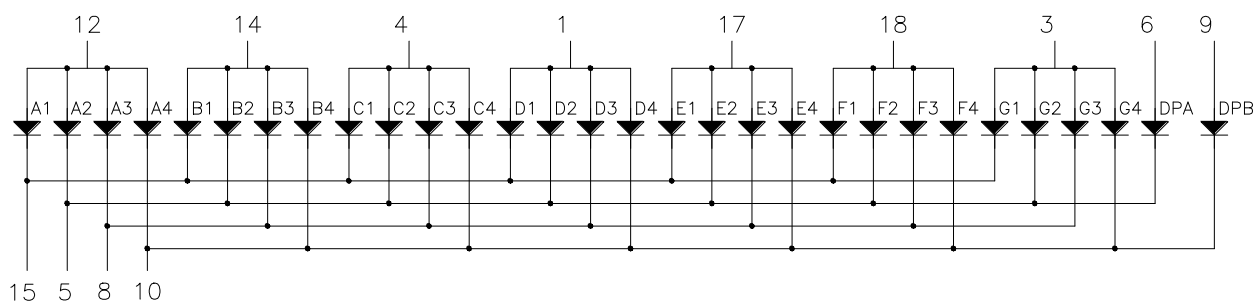
The LTP-3785E is a 0.54-inch (13.8-mm) digit height dual digit 14-segment alphanumeric display. This device utilizes red orange LED chips, which are made from GaAsP on a transparent GaP substrate, and has a gray face and white segments.

DEVICE

PART NO.	DESCRIPTION
RED ORANGE	Multiplex Common Anode Rt. Hand Decimal
LTP-3785E	

PACKAGE DIMENSIONS


NOTES: All dimensions are in millimeters. Tolerances are $\pm 0.25\text{-mm}$ (0.01") unless otherwise noted.

INTERNAL CIRCUIT DIAGRAM


PIN CONNECTION

No.	CONNECTION
1	ANODE D1, D2, D3, D4
2	NO CONNECTION
3	ANODE G1, G2, G3, G4
4	ANODE C1, C2, C3, C4
5	CATHODE A2, B2, C2, D2, E2, F2, G2, DPA
6	ANODE DPA
7	NO CONNECTION
8	CATHODE A3, B3, C3, D3, E3, F3, G3
9	ANODE DPB
10	CATHODE A4, B4, C4, D4, E4, F4, G4, DPB
11	NO CONNECTION
12	ANODE A1, A2, A3, A4
13	NO CONNECTION
14	ANODE B1, B2, B3, B4
15	CATHODE A1, B1, C1, D1, E1, F1, G1
16	NO CONNECTION
17	ANODE E1, E2, E3, E4
18	ANODE F1, F2, F3, F4

ABSOLUTE MAXIMUM RATING AT T_A=25°C

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation Per Segment	75	mW
Peak Forward Current Per Segment (1/10 Duty Cycle, 0.1ms Pulse Width)	100	mA
Continuous Forward Current Per Segment	25	mA
Derating Linear From 25 ⁰ C Per Segment	0.33	mA/ ⁰ C
Reverse Voltage Per Segment	5	V
Operating Temperature Range	-35 ⁰ C to +85 ⁰ C	
Storage Temperature Range	-35 ⁰ C to +85 ⁰ C	
Solder Temperature 1/16 inch Below Seating Plane for 3 Seconds at 260 ⁰ C		

ELECTRICAL / OPTICAL CHARACTERISTICS AT T_A=25°C

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I _v	800	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	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)

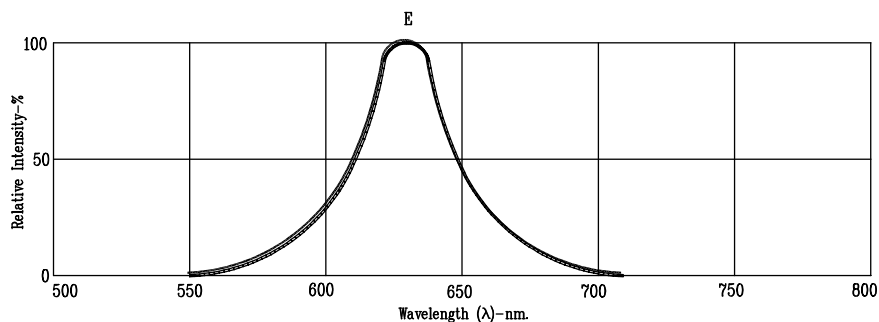


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

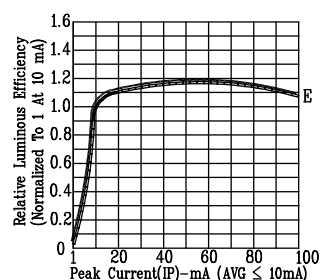


Fig2. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT (REFRESH RATE 1KHz)

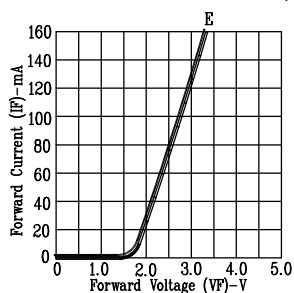


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

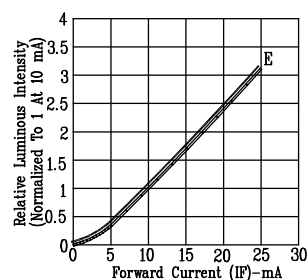


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

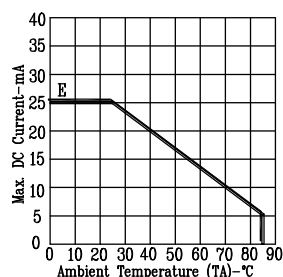


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

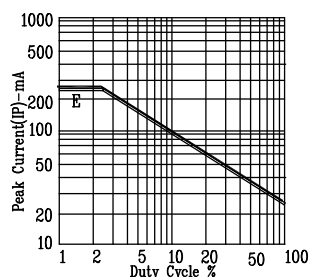


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE: E=RED ORANGE