

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.

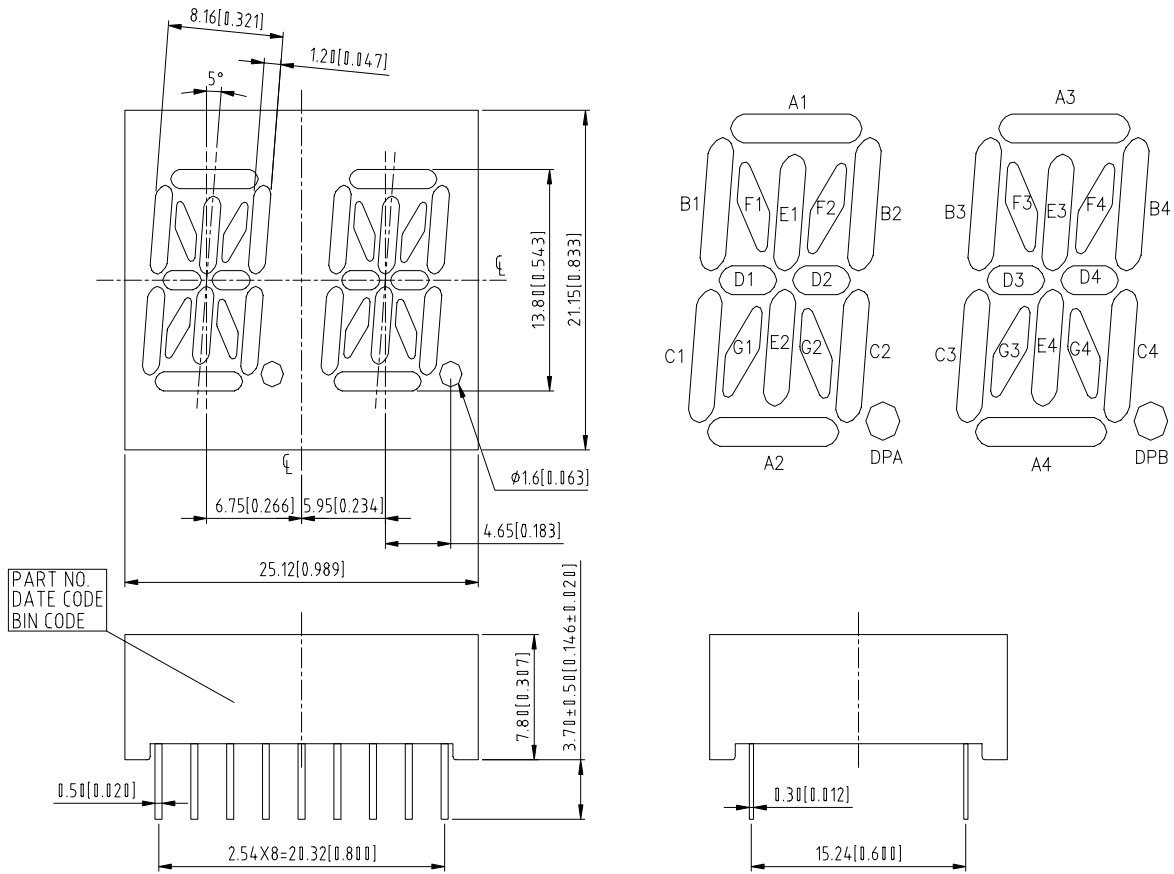
DESCRIPTION

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

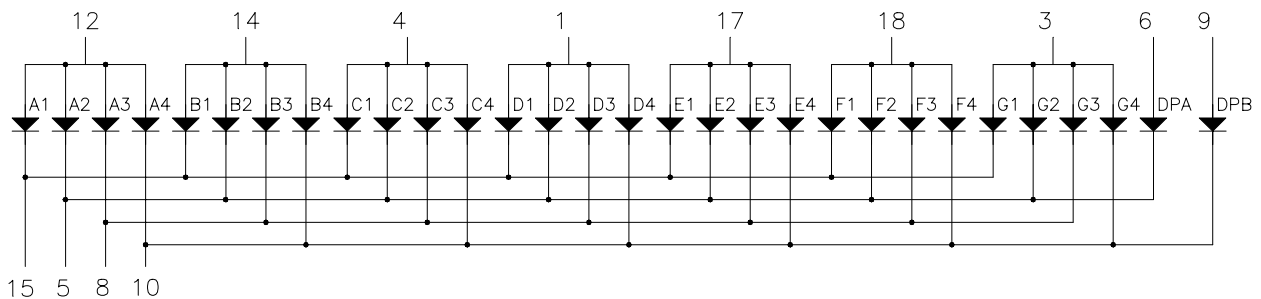
| PART NO. | DESCRIPTION |
|-----------------|------------------------|
| RED ORANGE | Multiplex Common Anode |
| LTP-3785E | Rt. Hand Decimal |

PACKAGE DIMENSIONS



NOTES: All dimensions are in millimeters. Tolerances are ± 0.25 -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 Derating Linear From 25°C Per Segment | 25 0.33 | mA mA/°C |
| Reverse Voltage Per Segment | 5 | V |
| Operating Temperature Range | -35°C to +85°C | |
| Storage Temperature Range | -35°C to +85°C | |
| Solder Temperature 1/16 inch Below Seating Plane for 3 Seconds at 260°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 (Commission Internationale De L'Eclairage) eye-response curve.

TYPICAL ELECTRICAL / OPTICAL CHARACTERISTIC CURVES

(25°C Ambient Temperature Unless Otherwise Noted)

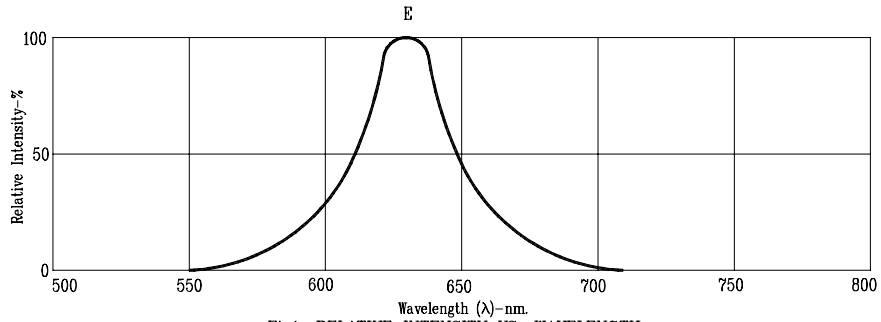


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

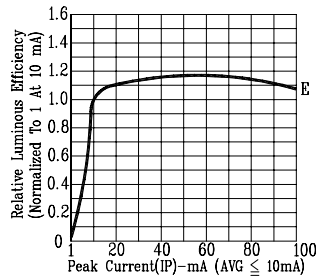


Fig2. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT (REFRESH RATE 1KHz)

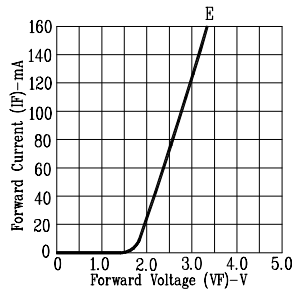


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

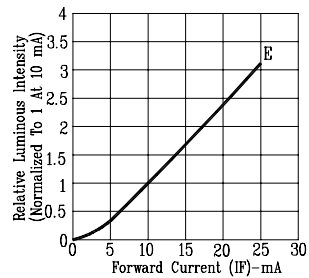


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

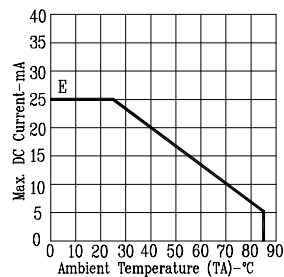


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

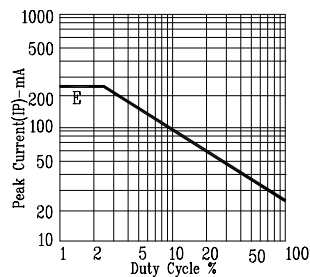


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE: E=RED ORANGE