



# LED Display Product Data Sheet LTC-4727JF

Spec No.: DS30-2000-184

Effective Date: 08/11/2000

Revision: -

**LITE-ON DCC**

**RELEASE**

BNS-OD-FC001/A4

**FEATURES**

- \* 0.4inch (10.0mm) 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.

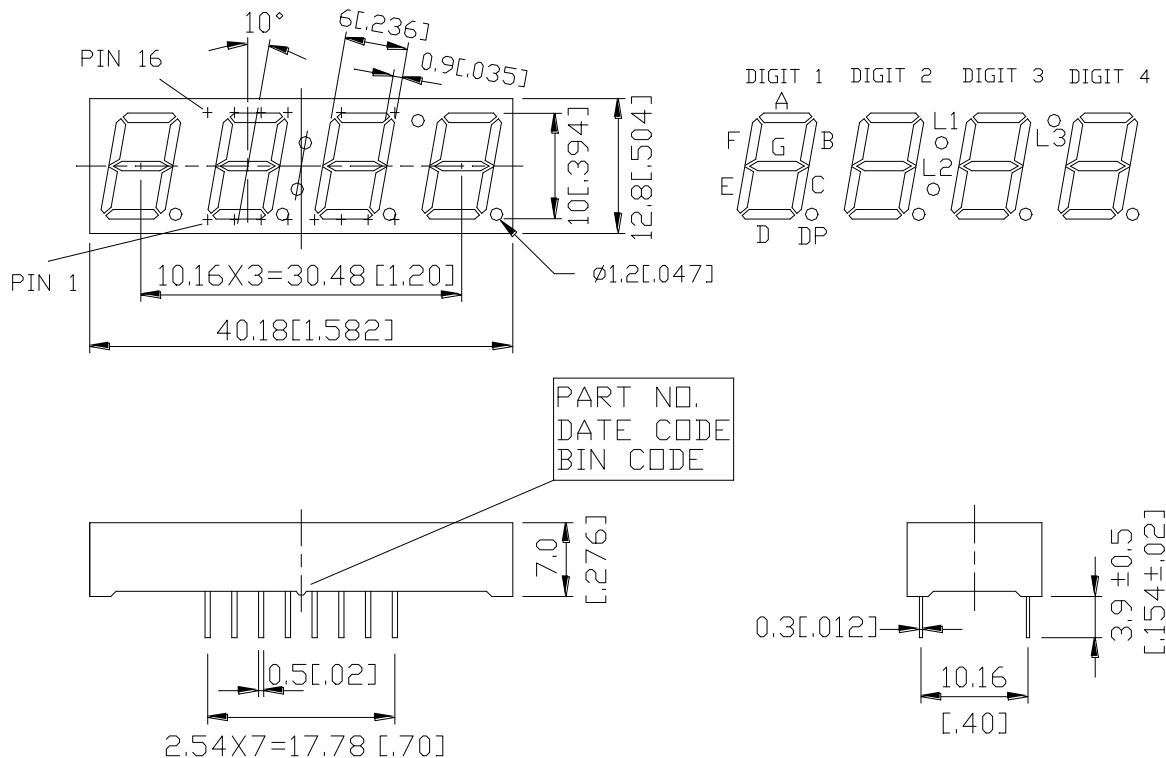
**DESCRIPTION**

The LTC-4727JF inch (10.0 mm) digit height quadruple digit seven-segment display. This device utilizes AllnGaP yellow orange LED chips, which are made from AllnGaP on a non-transparent GaAs substrate, and has a gray face and white segments.

**DEVICE**

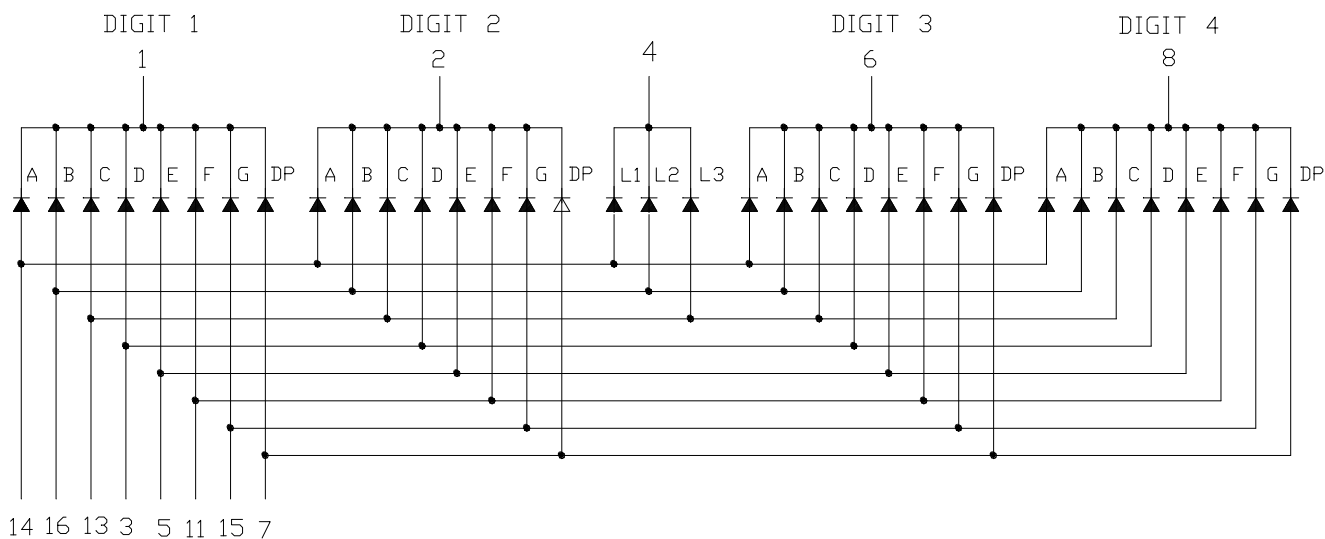
<b>PART NO.</b>	<b>DESCRIPTION</b>
AllnGaP Yellow Orange	Multiplex Common Cathode Rt. Hand Decimal
LTC-4727JF	

## PACKAGE DIMENSIONS



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

## INTERNAL CIRCUIT DIAGRAM



**PIN CONNECTION**

NO	CONNECTION
1	COMMON CATHODE DIGIT 1
2	COMMON CATHODE DIGIT 2
3	ANODE D
4	COMMON CATHODE L1,L2,L3
5	ANODE E
6	COMMON CATHODE DIGIT 3
7	ANODE DP
8	COMMON CATHODE DIGIT 4
9	NO CONNECTION
10	NO PIN
11	ANODE F
12	NO PIN
13	ANODE C,L3
14	ANODE A,L1
15	ANODE G
16	ANODE B,L2

**ABSOLUTE MAXIMUM RATING AT Ta=25°C**

PARAMETER	MAXIMUM RATING	UNIT
Power Dissipation Per Segment	70	mW
Peak Forward Current Per Segment ( 1/10 Duty Cycle, 0.1ms Pulse Width )	90	mA
Continuous Forward Current Per Segment	25	mA
Derating Linear From 25°C Per Segment	0.33	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: max 260°C for max 3sec at 1.6mm below seating plane.		

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

PARAMETER	SYMBOL	MIN.	TYP.	MAX.	UNIT	TEST CONDITION
Average Luminous Intensity	I <sub>v</sub>	200	650		μcd	I <sub>F</sub> =10mA
Peak Emission Wavelength	λ <sub>p</sub>		611		nm	I <sub>F</sub> =20mA
Spectral Line Half-Width	Δλ		17		nm	I <sub>F</sub> =20mA
Dominant Wavelength	λ <sub>d</sub>		605		nm	I <sub>F</sub> =20mA
Forward Voltage Per Segment	V <sub>F</sub>		2.05	2.6	V	I <sub>F</sub> =20mA
Reverse Current Per Segment	I <sub>R</sub>			100	μA	V <sub>R</sub> =5V
Luminous Intensity Matching Ratio	I <sub>v</sub> -m			2:1		I <sub>F</sub> =1mA

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)

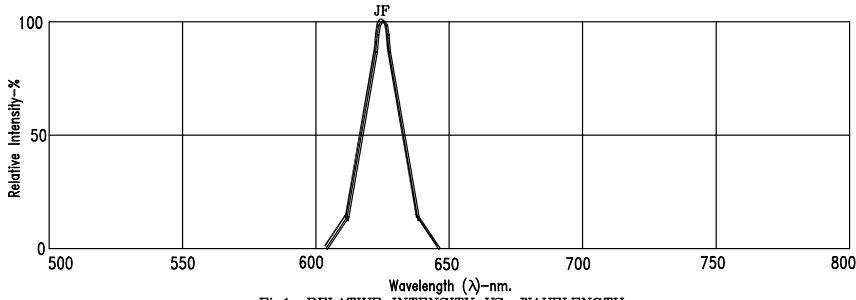


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

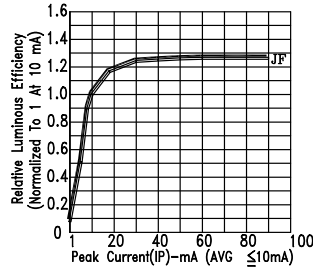


Fig2. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT

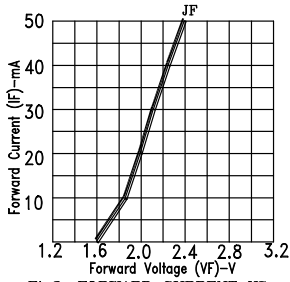


Fig3. FORWARD CURRENT VS. FORWARD VOLTAGE

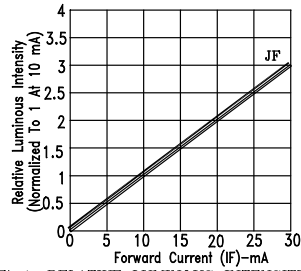


Fig4. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

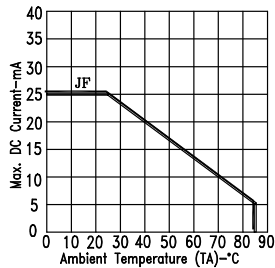


Fig5. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

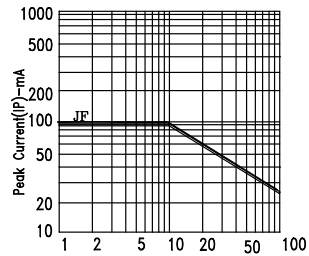


Fig6. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)