



0.56" Blue LED Numeric Displays

LTS-5501AB/5503AB

LTD-5521AB/5523AB Series

LTC-5653B-01/5753B-01

Features

- 0.56 inch (14.22mm) digit height
- Continuous uniform segments.
- Low power requirement.
- Excellent characters appearance.
- Solid state reliability.
- Wide viewing angle.
- Categorized for luminous intensity.
- I.C. compatible.
- Easy mounting on P.C. board or socket.

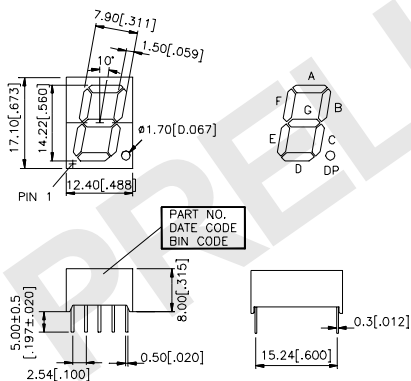
Description

The LTS-5000AB/LTD-5000AB/LTC-5x53B-01 series are 0.56 inch (14.22mm) height seven segment single, dual and quadruple displays.

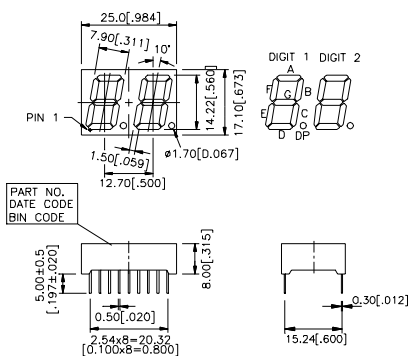
The blue series devices utilize LED chips which are made from GaN on a SiC substrate. The displays have gray face and white segments.

Package Dimensions

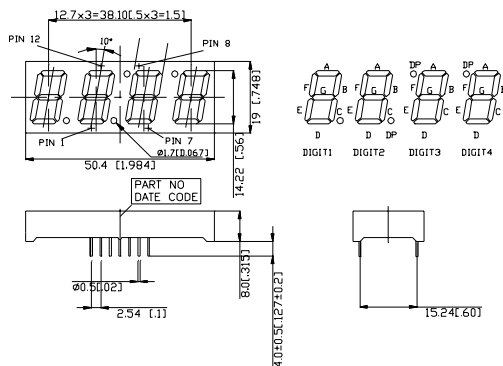
A.LTS-5501AB/5503AB



B.LTD-5521AB/5523AB



C.LTC-5653B-01/5753B-01



Notes: All dimensions are in millimeters (inches). Tolerance: $\pm 0.25\text{mm}$ ($\pm 0.01"$) unless otherwise noted.

Devices

Part No.	Description	Package Dimension	Internal Circuit Diagram
blue			
LTS-5501B	Common Anode, Rt. Hand Decimal	A	A
LTS-5503B	Common Cathode, Rt. Hand Decimal	A	B
LTD-5521B	Common Anode, Rt. Hand Decimal	B	C
LTD-5523B	Common Cathode, Rt. Hand Decimal	B	D
LTC-5653B	Multiplex Common Anode	C	E
LTC-5753B	Multiplex Common Cathode	C	F

Pin Connection

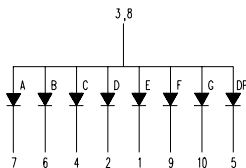
Pin No.	Connection			
	A.LTS-5501B	B.LTS-5503B	C.LTD-5521B	D.LTC-5523B
1.	Cathode E	Anode E	Cathode E (Digit 1)	Anode E (Digit 1)
2.	Cathode D	Anode D	Cathode D (Digit 1)	Anode D (Digit 1)
3.	Common Anode *1	Common Cathode*1	Cathode C (Digit 1)	Anode C (Digit 1)
4.	Cathode C	Anode C	Cathode D.P. (Digit 1)	Anode D.P. (Digit 1)
5.	Cathode D.P.	Anode D.P.	Cathode E (Digit 2)	Anode E (Digit 2)
6.	Cathode B	Anode B	Cathode D (Digit 2)	Anode D (Digit 2)
7.	Cathode A	Anode A	Cathode G (Digit 2)	Anode G (Digit 2)
8.	Common Anode *1	Common Cathode*1	Cathode C (Digit 2)	Anode C (Digit 2)
9.	Cathode F	Anode F	Cathode D.P. (Digit 2)	Anode D.P. (Digit 2)
10.	Cathode G	Anode G	Cathode B (Digit 2)	Anode B (Digit 2)
11.	-	-	Cathode A (Digit 2)	Anode A (Digit 2)
12.	-	-	Cathode F (Digit 2)	Anode F (Digit 2)
13.	-	-	Common Anode (Digit 2)	Common Cathode (Digit 2)
14.	-	-	Common Anode (Digit 1)	Common Cathode (Digit 1)
15.	-	-	Cathode B (Digit 1)	Anode B (Digit 1)
16.	-	-	Cathode A (Digit 1)	Anode A (Digit 1)
17.	-	-	Cathode G (Digit 1)	Anode G (Digit 1)
18.	-	-	Anode F (Digit 1)	Anode F (Digit 1)

Note:*Pin 3 & 8 are internally connected.

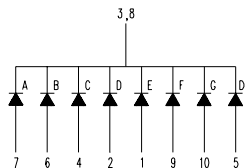
Pin No.	Connection	
	E.LTC-5653B	F.LTC-5753B
1.	Cathode E	Anode E
2.	Cathode D	Anode D
3.	Cathode D.P.	Anode D.P.
4.	Cathode C	Anode C
5.	Cathode G	Anode G
6.	Common Anode (Digit 4)	Common Cathode (Digit 4)
7.	Cathode B	Anode B
8.	Common Anode (Digit 3)	Common Cathode (Digit 3)
9.	Common Anode (Digit 2)	Common Cathode (Digit 2)
10.	Cathode F	Anode F
11.	Cathode A	Anode A
12.	Common Anode (Digit 1)	Common Cathode (Digit 1)

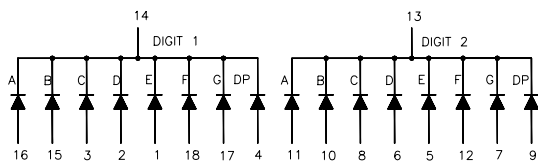
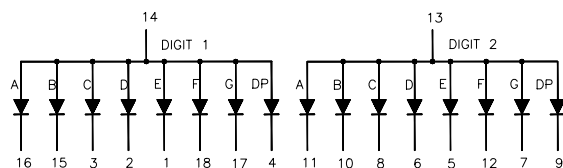
Internal Circuit Diagrams

A.LTS-5501AB

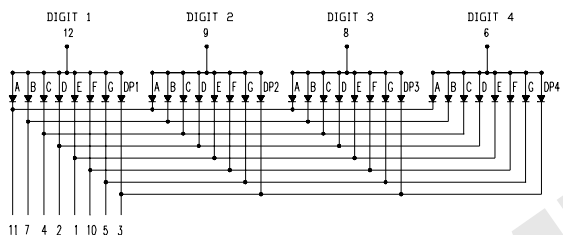


B.LTS-5503AB

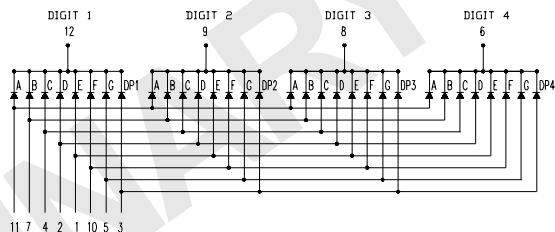




E.LTC-5653B-01



F.LTC-5753B-01



Absolute Maximum Rating at Ta=25°C

Parameter	Blue	Unit
Power Dissipation Per Segment	65	mW
Peak Forward Current Per Segment (1/10 Duty Cycle, 0.1ms Pulse Width)	60	mA
Continuous Forward Current Per Segment	15	mA
Derating Linear from 25°C Per Segment	0.2	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 Ta=25°C

Parameter	Symbol	Min.	Typ.	Max.	Unit	Test Condition
Average Luminous Intensity	I _v	1400	4300		μ cd	I _F =10mA
Peak Emission Wavelength	λ _P		428		nm	I _F =20mA
Spectral Line Half-Width	Δλ		65		nm	I _F =20mA
Dominant Wavelength	λ _d		466		nm	I _F =20mA
Forward Voltage, Per Segment	V _F		3.8	4.5	V	I _F =20mA
Reverse Current, Per Segment	I _R			100	μ A	V _R =5V
Luminous Intensity Matching Ratio	I _v -m			2:1		I _F =10mA

Notes: 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)

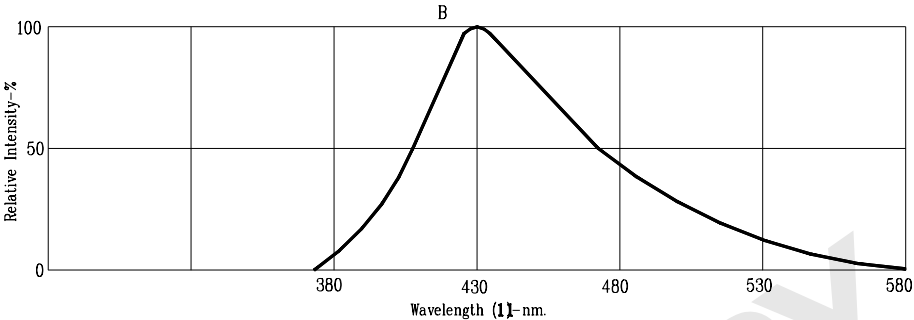


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

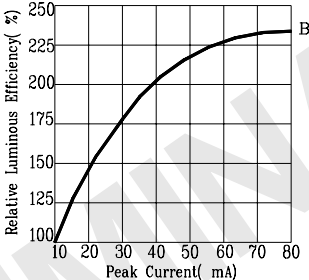


Fig2. RELATIVE LUMINOUS EFFICIENCY
VS. PEAK FORWARD CURRENT
(125us pulse width; 1ms period)

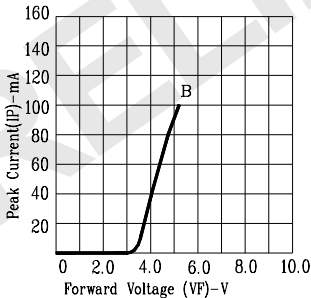


Fig3. FORWARD CURRENT VS.
FORWARD VOLTAGE

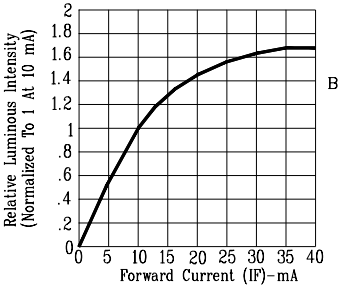


Fig4. RELATIVE LUMINOUS INTENSITY
VS. FORWARD CURRENT

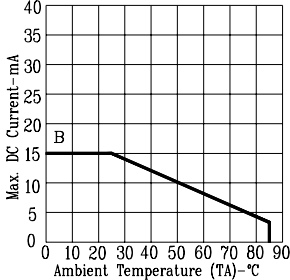


Fig5. MAX. ALLOWABLE DC CURRENT
VS. AMBIENT TEMPERATURE.

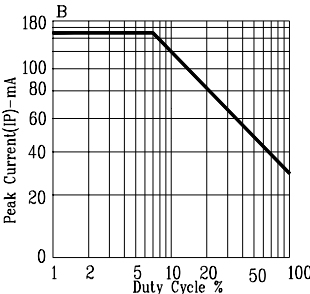


Fig6. MAX. PEAK CURRENT VS.
DUTY CYCLE %
(REFRESH RATE 1KHz)

NOTE: B= BLUE (REFRESH RATE 1KHz)