阅读申明

1.本站收集的数据手册和产品资料都来自互联网，版权归原作者所有。如读者和版权方有任何异议请及时告之，我们将妥善解决。
2.本站提供的中文数据手册是英文数据手册的中文翻译，其目的是协助用户阅读，该译文无法自动跟随原稿更新，同时也可能存在翻译上的不当。建议读者以英文原稿为参考以便获得更精准的信息。
3.本站提供的产品资料，来自厂商的技术支持或者使用者的心得体会等，其内容可能存在描叙上的差异，建议读者做出适当判断。
4.如需与我们联系，请发邮件到marketing@iczoom.com，主题请标有“数据手册”字样。

Read Statement

1. The datasheets and other product information on the site are all from network reference or other public materials, and the copyright belongs to the original author and original published source. If readers and copyright owners have any objections, please contact us and we will deal with it in a timely manner.

2. The Chinese datasheets provided on the website is a Chinese translation of the English datasheets. Its purpose is for reader’ s learning exchange only and do not involve commercial purposes. The translation cannot be automatically updated with the original manuscript, and there may also be improper translations. Readers are advised to use the English manuscript as a reference for more accurate information.

3. All product information provided on the website refer to solutions from manufacturers’ technical support or users the contents may have differences in description, and readers are advised to take the original article as the standard.

4. If you have any questions, please contact us at marketing@iczoom.com and mark the subject with “Datasheets”.

0.56" Seven-Segment Numeric LED Display

LTS-5x01A/5x03A
LTD-5x21A/5x23A Series
LTC-5653x-01/5753x-01

Features

- 0.56 inch (14.22mm) 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.
- I.C. compatiable.
- Easy mounting on P.C. board or socket.

Description

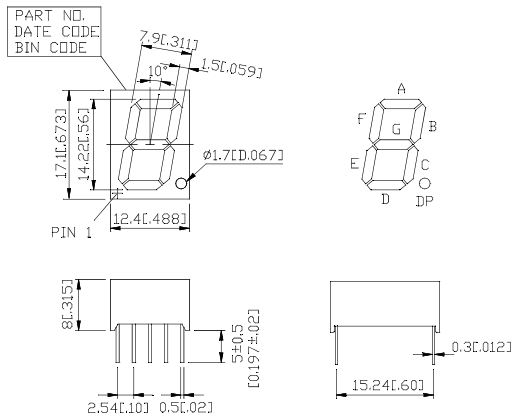
The LTS-5000A/LTD-5000A/LTC-5x53x-01 is a 0.56 inch (14.22mm) height 7-Segment single, dual and quadruple displays. AlGaAs red displays have gray face and white segments. The LTS-5000A/LTD-5000A bright red, yellow and red orange displays have gray face and white segments, and green displays have gray face and green segments. The LTC-5x53x-01 displays have gray face and white segments.

The AlGaAs red 7-seven segment displys are designed for applications requiring low power consumption. They are tested and selected for the excellent low current characteristics to ensure that the segments are matched at low current. Drive current as low as 1 mA per segment is available.

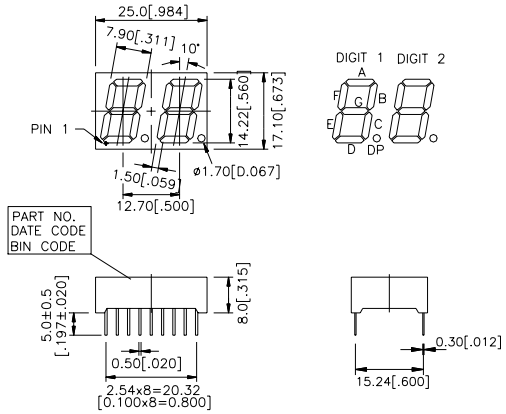
The AlGaAs red series devices utilize LED chips which are made from AlGaAs on a non-transparent GaAs substrate. The bright red and green series devices utilize LED chips which are made from GaP on a transparent GaPsubstrate. The yellow and red orange series devices utilize LED chips which are made from GaAsP on a transparent GaP substrate.

Package Dimensions

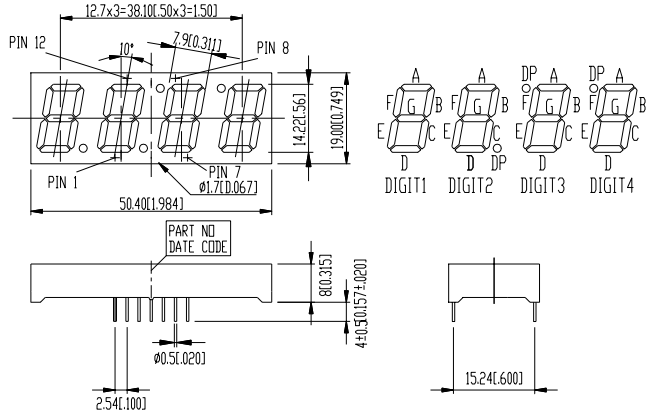
A.LTS-5X01A/5X03A



B.LTD-5X21A/5X23A



C.LTC-5653/5753



Notes:All dimensions are in millimeters (inches).

Tolerance:± 0.25mm (0.01") unless otherwise noted.

DISPLAYS

Devices

Part No.					Description	Package Dimension	Internal Circuit Diagram
AlGaAs Red	Bright Red	Green	Yellow	Red Orange			
LTS-5001AWC	5301AP	5601AG	5701AY	5501AE	Common Anode, Rt. Hand Decimal	A	A
LTS-5003AWC	5303AP	5603AG	5703AY	5503AE	Common Cathode, Rt. Hand Decimal	A	B
LTD-5021AWC	5321AP	5621AG	5721AY	5521AE	Common Anode, Rt. Hand Decimal	B	C
LTD-5023AWC	5323AP	5623AG	5723AY	5523AE	Common Cathode, Rt. Hand Decimal	B	D

Part No. LTC-					Description	Package Dimension	Internal Circuit Diagram
AlGaAs Red	Bright Red	Green	Yellow	Red Orange			
LTC-5653WC-01	5653P-01	5653G-01	5653Y-01	5653E-01	Common Anode Multiplex	C	E
LTC-5753WC-01	5753P-01	5753G-01	5753Y-01	5753E-01	Common Cathode Multiplex	C	F

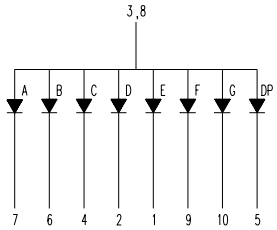
Pin Connection

Pin No.	Connection			
	A.LTS-5X01A	B.LTS-5X03A	C.LTD-5X21A	D.LTD-5X23A
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.	-	-	Cathode Anode (Digit 2)	Common Cathode (Digit 2)
14.	-	-	Cathode 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.	-	-	Cathode F (Digit 1)	Anode F (Digit 1)

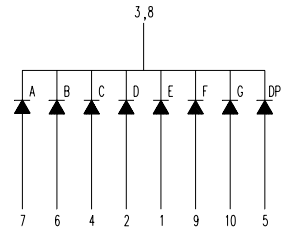
Pin No.	Connection	
	E.LTC-5653X-01	F.LTC-5753X-01
1.	Cathode E	Anode E
2.	Cathode D	Anode D
3.	Cathode D.P.	Anode D.P.
4.	Cathode C	Anode C
5.	Cathode G	Anode G
6.	Common Anode (Digit 4)	Common Cathode (Digit 4)
7.	Cathode B	Anode B
8.	Common Anode (Digit 3)	Common Cathode (Digit 3)
9.	Common Anode (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

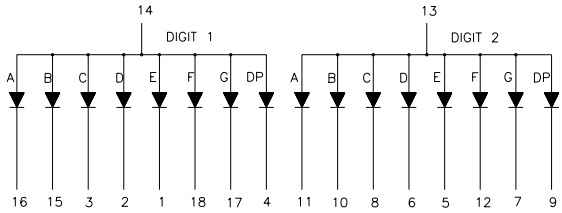
A.LTS-5X01A



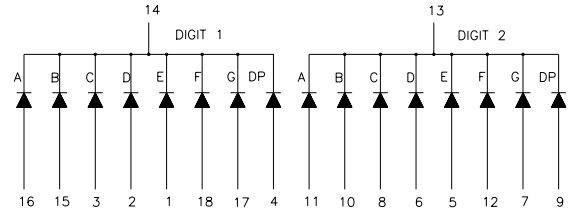
B.LTS-5X03A



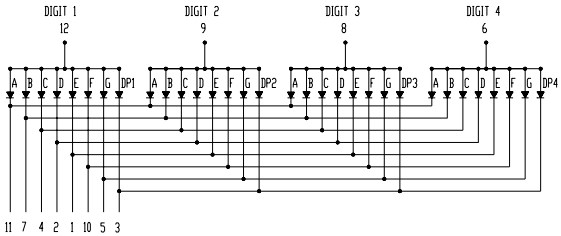
C.LTD-5X21A



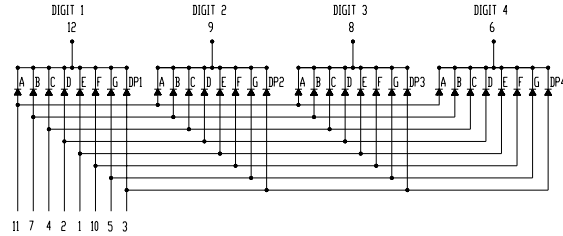
D.LTD-5X23A



E.LTC-5653X-01



F.LTC-5753X-01



Absolute Maximum Rating at Ta=25℃

Parameter	AlGaAs Red	Bright Red	Green	Yellow	Red Orange	Unit
Power Dissipation Per Segment	75	40	75	60	75	mW
Peak Forward Current Per Segment (1/10 Duty Cycle, 0.1ms Pulse Width)	125	60	100	80	100	mA
Continuous Forward Current Per Segment Derating Linear from 25℃ Per Segment	30 0.4	15 0.2	25 0.33	20 0.27	25 0.33	mA mA/℃
Reverse Voltage Per Segment	5	5	5	5	5	V
Operating Temperature Range	-35℃ to +85℃					
Stroage Temperature Range	-35℃ to +85℃					
Solder Temperature 1/16 Inch Below Seating Plane for 3 Seconds at 260℃						

Electrical/Optical Characteristics at Ta=25℃

LTS-5001AWC/5003AWC/LTD-5021AWC/5023AWC/LTC-5653AWC/5753AWC

Parameter	Symbol	Min.	Typ.	Max.	Unit	Tset Condition
Average Luminous Intensity	Iv	320	700		μcd	IF=1mA
			3750			IF=5mA
Peak Emission Wavelength	λP		660		nm	IF=20mA
Spectral Line Half-Width	Δλ		35		nm	IF=20mA
Dominant Wavelength	λd		638		nm	IF=20mA
Forward Voltage, Per Segment	VF		1.6	2.4	V	IF=1mA
			1.7			IF=5mA
			1.8			IF=20mA
Reverse Current, Per Segment	IR			100	μA	VR=5V
Luminous Intensity Matching Ratio	Iv-m			2:1		IF=1mA

LTS-5301AP/5303AP/LTD-5321AP/5323AP/LTC-5653P-01/5753P-01

Parameter	Symbol	Min.	Typ.	Max.	Unit	Tset Condition
Average Luminous Intensity	Iv	320	950		μcd	IF=10mA
Peak Emission Wavelength	λP		697		nm	IF=20mA
Spectral Line Half-Width	Δλ		90		nm	IF=20mA
Dominant Wavelength	λd		657		nm	IF=20mA
Forward Voltage, Per Segment or D.P.	VF		2.1	2.6	V	IF=20mA
Reverse Current, Per Segment or D.P.	IR			100	μA	VR=5V
Luminous Intensity Matching Ratio	Iv-m			2:1		IF=10mA

LTS-5601AG/5603AG/LTD-5621AG/5623AG/LTC-5653G-01/5753G-01

Parameter	Symbol	Min.	Typ.	Max.	Unit	Tset Condition
Average Luminous Intensity	Iv	800	2400		μcd	IF=10mA
Peak Emission Wavelength	λP		565		nm	IF=20mA
Spectral Line Half-Width	Δλ		30		nm	IF=20mA
Dominant Wavelength	λd		569		nm	IF=20mA
Forward Voltage, Per Segment or D.P.	VF		2.1	2.6	V	IF=20mA
Reverse Current, Per Segment or D.P.	IR			100	μA	VR=5V
Luminous Intensity Matching Ratio	Iv-m			2:1		IF=10mA

LTS-5501AE/5503AE/LTD-5521AE/5523AE/LTC-5653E-01/5753E-01

Parameter	Symbol	Min.	Typ.	Max.	Unit	Tset Condition
Average Luminous Intensity	Iv	800	2400		μcd	IF=10mA
Peak Emission Wavelength	λP		630		nm	IF=20mA
Spectral Line Half-Width	Δλ		40		nm	IF=20mA
Dominant Wavelength	λd		621		nm	IF=20mA
Forward Voltage, Per Segment or D.P.	VF		2.0	2.6	V	IF=20mA
Reverse Current, Per Segment or D.P.	IR			100	μA	VR=5V
Luminous Intensity Matching Ratio	Iv-m			2:1		IF=10mA

Parameter	Symbol	Min.	Typ.	Max.	Unit	Tset Condition
Average Luminous Intensity	Iv	800	2400		μcd	IF=10mA
Peak Emission Wavelength	λP		585		nm	IF=20mA
Spectral Line Half-Width	Δλ		35		nm	IF=20mA
Dominant Wavelength	λd		588		nm	IF=20mA
Forward Voltage, Per Segment or D.P.	VF		2.1	2.6	V	IF=20mA
Reverse Current, Per Segment or D.P.	IR			100	μA	VR=5V
Luminous Intensity Matching Ratio	Iv-m			2:1		IF=10mA

Note: Luminous intensity is measured with a light sensor and filter combination that appoximates the CIE (Commision Internationale De L'Eclairage)eye-response curve.

Typical Electrical/Optical Characteristic Curves (25℃ Ambient Temperature Unless Otherwise Noted)

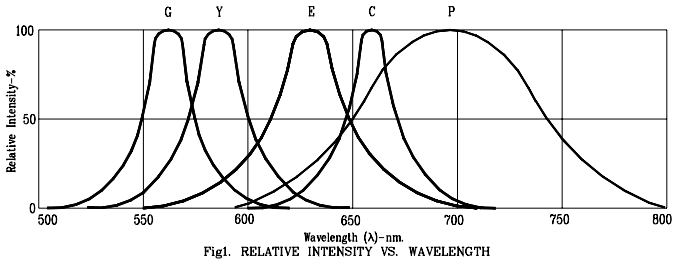


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

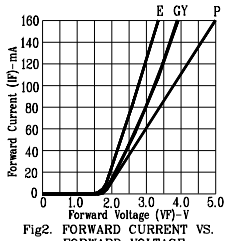


Fig2. FORWARD CURRENT VS. FORWARD VOLTAGE

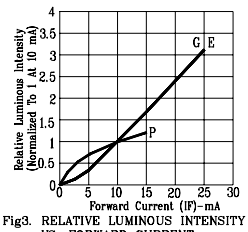


Fig3. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

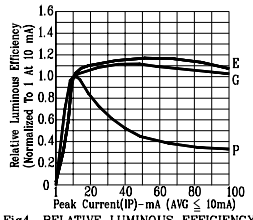


Fig4. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT

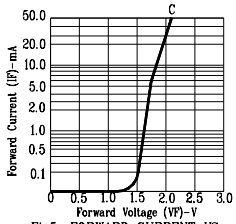


Fig5. FORWARD CURRENT VS. FORWARD VOLTAGE

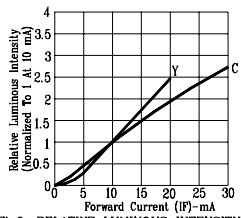


Fig6. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

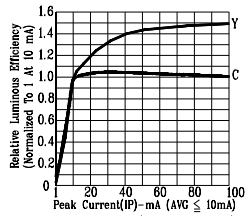


Fig7. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT

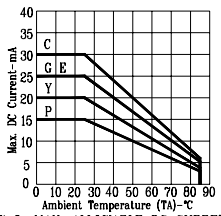


Fig8. MAX. ALLOWABLE DC CURRENT. VS. AMBIENT TEMPERATURE.

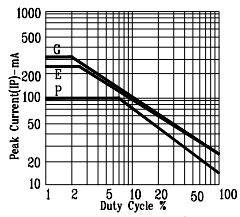


Fig9. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

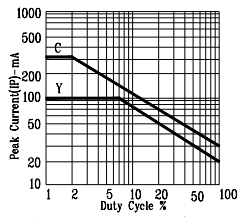


Fig10. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

NOTE: P=BRIGHT RED E=RED ORANGE G=GREEN Y=YELLOW C=AlGaAs RED (REFRESH RATE 1KHz)