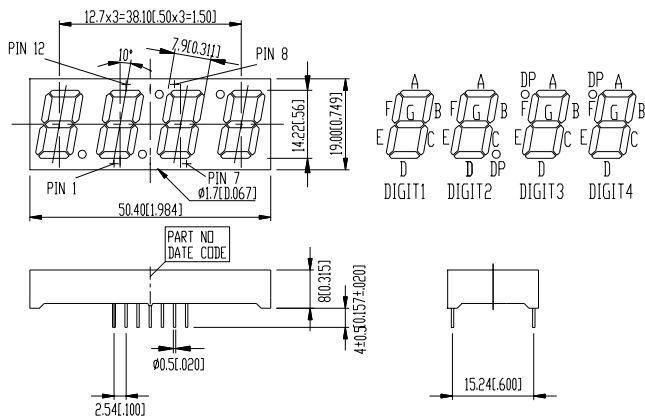


C.LTC-5653/5753



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

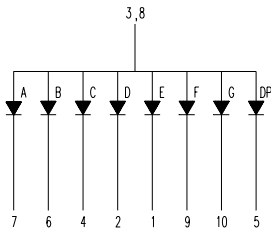
Pin No.	Connection			
	A.LTS-5X01A	B.LTS-5X03A	C.LTD-5X21A	D.LTD-5X23A
1.	Cathode E	Anode E	Cathode E (Digit 1)	Anode E (Digit 1)
2.	Cathode D	Anode D	Cathode D (Digit 1)	Anode D (Digit 1)
3.	Common Anode *1	Common Cathode *1	Cathode C (Digit 1)	Anode C (Digit 1)
4.	Cathode C	Anode C	Cathode D.P. (Digit 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)

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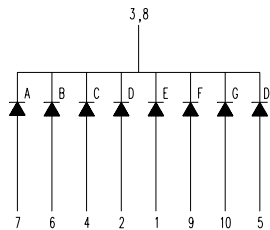
Pin No.	Connection	
	E.LTC-5653X-01	F.LTC-5753X-01
1.	Cathode E	Anode E
2.	Cathode D	Anode D
3.	Cathode D.P.	Anode D.P.
4.	Cathode C	Anode C
5.	Cathode G	Anode G
6.	Common Anode (Digit 4)	Common Cathode (Digit 4)
7.	Cathode B	Anode B
8.	Common Anode (Digit 3)	Common Cathode (Digit 3)
9.	Common Anode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

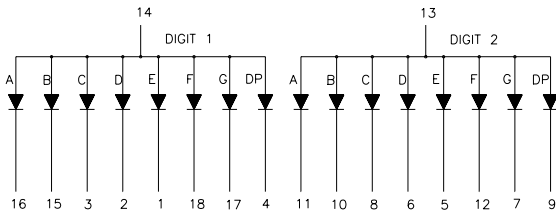
A.LTS-5X01A



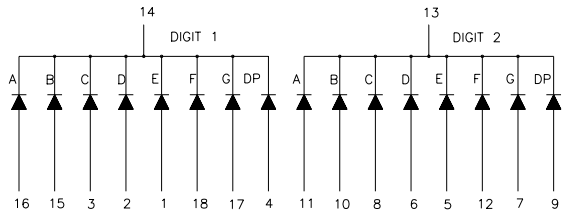
B.LTS-5X03A



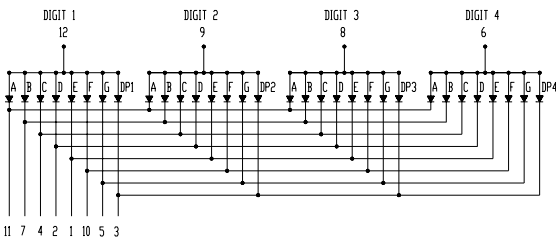
C.LTD-5X21A



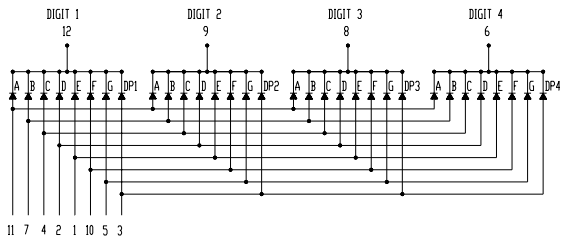
D.LTD-5X23A



E.LTC-5653X-01

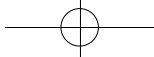


F.LTC-5753X-01



Absolute Maximum Rating at Ta=25°C

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	30	15	25	20	25	mA
Derating Linear from 25°C Per Segment	0.4	0.2	0.33	0.27	0.33	mA/°C
Reverse Voltage Per Segment	5	5	5	5	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

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Tset Condition
Average Luminous Intensity	I _v	320	700		μ cd	I _F =1mA
			3750			I _F =5mA
Peak Emission Wavelength	λ P		660		nm	I _F =20mA
Spectral Line Half-Width	Δ λ		35		nm	I _F =20mA
Dominant Wavelength	λ d		638		nm	I _F =20mA
Forward Voltage, Per Segment	V _F		1.6	2.4	V	I _F =1mA
			1.7			I _F =5mA
			1.8			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 =1mA

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

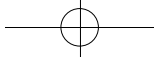
Parameter	Symbol	Min.	Typ.	Max.	Unit	Tset Condition
Average Luminous Intensity	I _v	320	950		μ cd	I _F =10mA
Peak Emission Wavelength	λ P		697		nm	I _F =20mA
Spectral Line Half-Width	Δ λ		90		nm	I _F =20mA
Dominant Wavelength	λ d		657		nm	I _F =20mA
Forward Voltage, Per Segment or D.P.	V _F		2.1	2.6	V	I _F =20mA
Reverse Current, Per Segment or D.P.	I _R			100	μ A	V _R =5V
Luminous Intensity Matching Ratio	I _v -m			2:1		I _F =10mA

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Tset Condition
Average Luminous Intensity	I _v	800	2400		μ cd	I _F =10mA
Peak Emission Wavelength	λ P		565		nm	I _F =20mA
Spectral Line Half-Width	Δ λ		30		nm	I _F =20mA
Dominant Wavelength	λ d		569		nm	I _F =20mA
Forward Voltage, Per Segment or D.P.	V _F		2.1	2.6	V	I _F =20mA
Reverse Current, Per Segment or D.P.	I _R			100	μ A	V _R =5V
Luminous Intensity Matching Ratio	I _v -m			2:1		I _F =10mA

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	Tset Condition
Average Luminous Intensity	I _v	800	2400		μ cd	I _F =10mA
Peak Emission Wavelength	λ P		630		nm	I _F =20mA
Spectral Line Half-Width	Δ λ		40		nm	I _F =20mA
Dominant Wavelength	λ d		621		nm	I _F =20mA
Forward Voltage, Per Segment or D.P.	V _F		2.0	2.6	V	I _F =20mA
Reverse Current, Per Segment or D.P.	I _R			100	μ A	V _R =5V
Luminous Intensity Matching Ratio	I _v -m			2:1		I _F =10mA



LTS-5701AY/5703AY/LTD-5721AY/5723AY/LTC-5653Y-01/5753Y-01

Parameter	Symbol	Min.	Typ.	Max.	Unit	Tset Condition
Average Luminous Intensity	I_v	800	2400		μ cd	$I_F=10\text{mA}$
Peak Emission Wavelength	λ_P		585		nm	$I_F=20\text{mA}$
Spectral Line Half-Width	$\Delta\lambda$		35		nm	$I_F=20\text{mA}$
Dominant Wavelength	λ_d		588		nm	$I_F=20\text{mA}$
Forward Voltage, Per Segment or D.P.	V_F		2.1	2.6	V	$I_F=20\text{mA}$
Reverse Current, Per Segment or D.P.	I_R			100	μ A	$V_R=5\text{V}$
Luminous Intensity Matching Ratio	$I_v\text{-m}$			2:1		$I_F=10\text{mA}$

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)

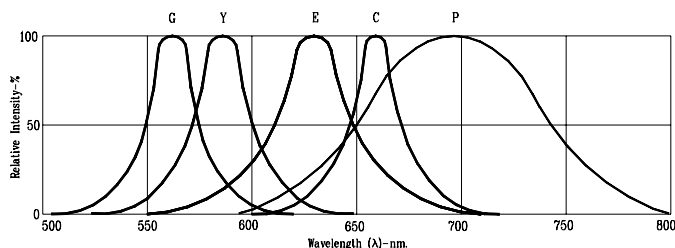


Fig1. RELATIVE INTENSITY VS. WAVELENGTH

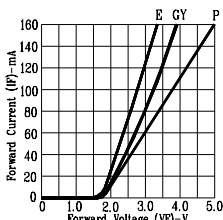


Fig2. FORWARD CURRENT VS. FORWARD VOLTAGE

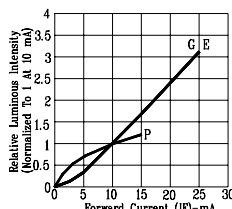


Fig3. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

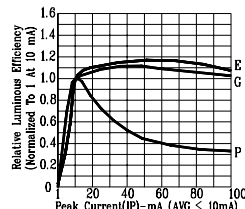


Fig4. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT

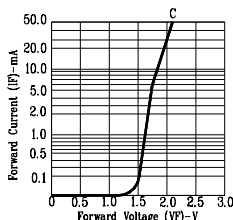


Fig5. FORWARD CURRENT VS. FORWARD VOLTAGE

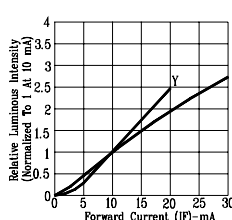


Fig6. RELATIVE LUMINOUS INTENSITY VS. FORWARD CURRENT

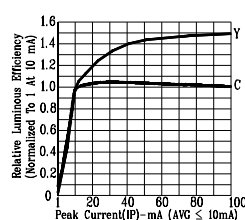


Fig7. RELATIVE LUMINOUS EFFICIENCY (LUMINOUS INTENSITY PER UNIT CURRENT) VS. PEAK CURRENT

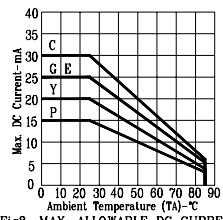


Fig8. MAX. ALLOWABLE DC CURRENT VS. AMBIENT TEMPERATURE.

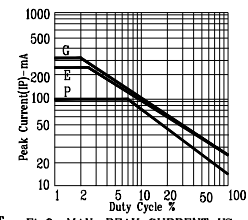


Fig9. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

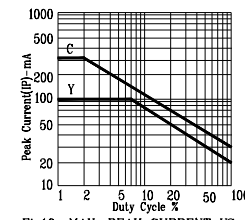


Fig10. MAX. PEAK CURRENT VS. DUTY CYCLE % (REFRESH RATE 1KHz)

