



LED Display Product Data Sheet LTG-0734SM

Spec No.: DS30-2007-0202

Effective Date: 12/29/2007

Revision: -

LITE-ON DCC

RELEASE

BNS-OD-FC001/A4

FEATURES

- * 0.49 inch (12.41 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.
- * LEAD-FREE PACKAGE (ACCORDING TO RoHS).

DESCRIPTION

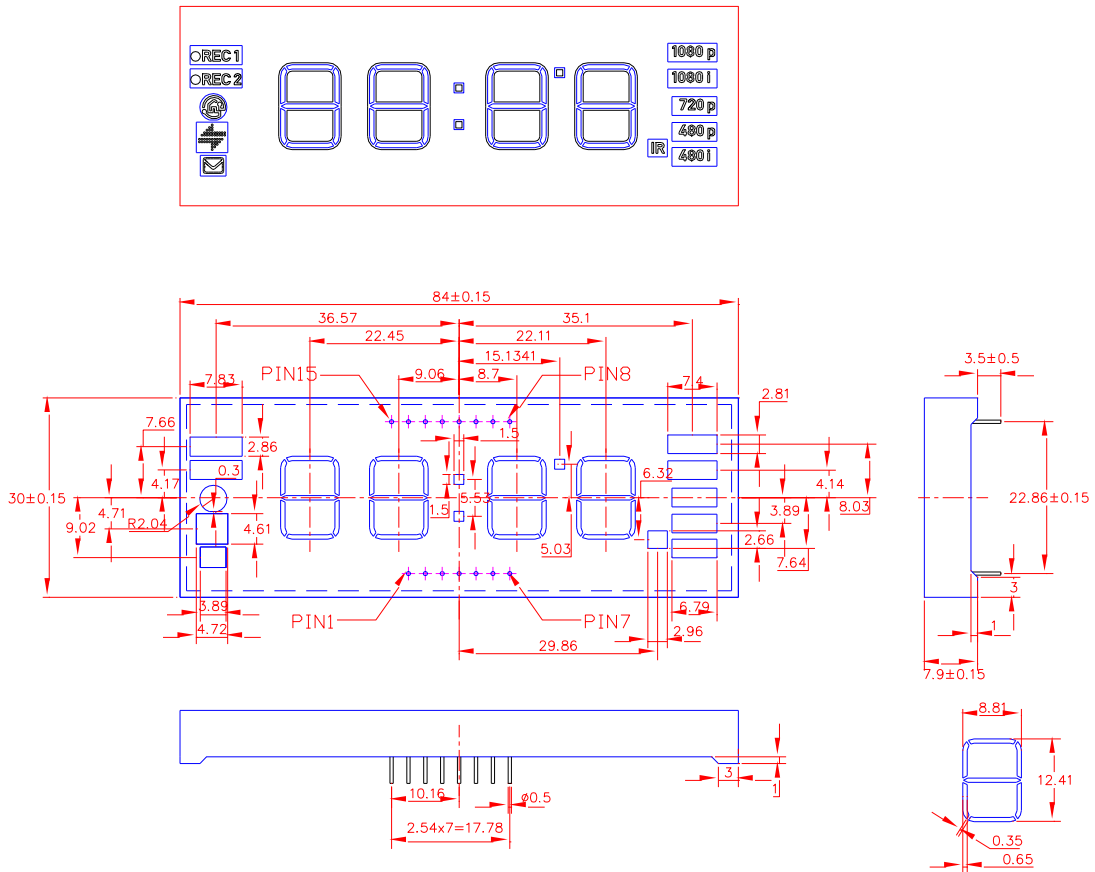
The LTG-0734SM is a 0.49 inch (12.41 mm) digit display. This device is a multi-color applicable display, it uses Ultra bright InCaN White Chip LED, Ultra bright AlInCaP RED Chip LED. This device is covered with a black pattern film, and packaged with epoxy.

DEVICE

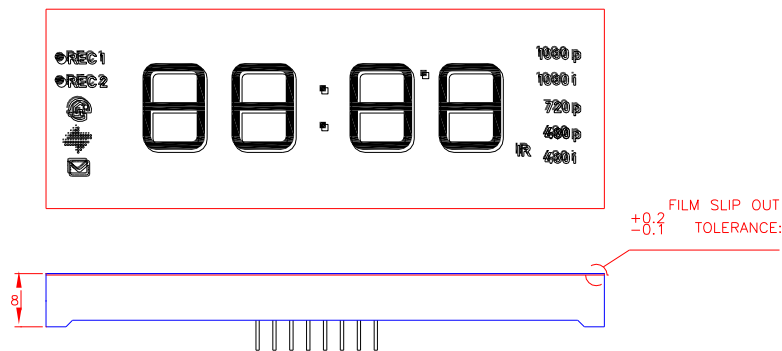
PART NO	DESCRIPTION
MULTI-COLOR	ANODE COLUMN
LTG-0734SM	CATHODE ROW

PACKAGE DIMENSIONS

ASSEMBLY WITH PRINT TAPE



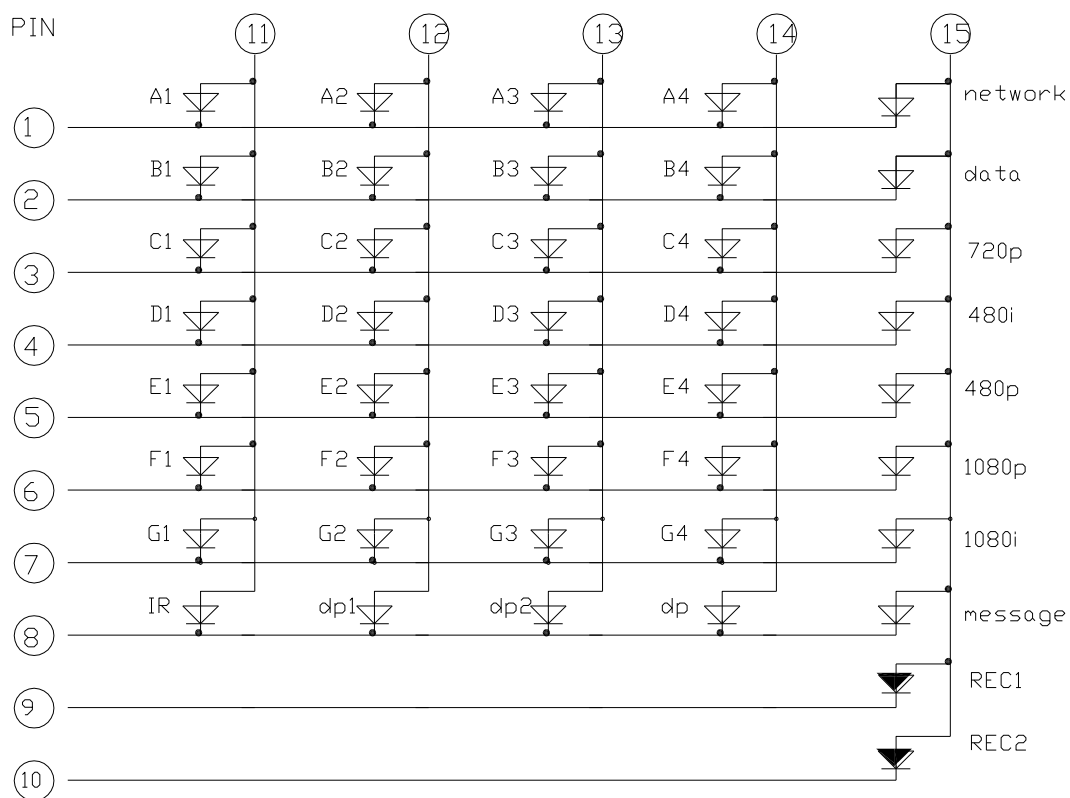
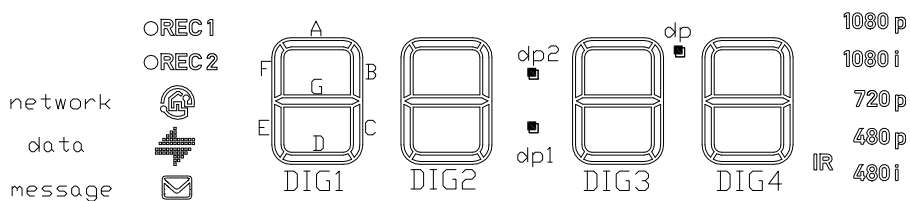
PRINT TAPE





- NOTES: 1. All dimensions are in millimeters. Tolerances are 0.15mm (0.005') unless otherwise
 2. Symbol on the top side.
 3. Pin tip's shift tolerance is +/- 0.4 mm.

Property of Lite-On Only

INTERNAL CIRCUIT DIAGRAM



THE SIGN "  " IS STANDARD FOR WHITE SMD(P/N LTW-C193TS5 1.6mmx0.8mm)
 THE SIGN "  " IS STANDARD FOR RED SMD (P/N LTST-C190KRKT 1.6mmx0.8mm)

PIN CONNECTION

NO.	CONNECTION
1	CATHODE A1&A2&A3&A4&network
2	CATHODE B1&B2&B3&B4&data
3	CATHODE C1&C2&AC3&C4&720p
4	CATHODE D1&D2&D3&D4&480i
5	CATHODE E1&E2&E3&E4&480p
6	CATHODE F1&F2&F3&F4&1080p
7	CATHODE G1&G2&G3&G4&1080i
8	CATHODE IR&dp1&dp2&dp&message
9	CATHODE REC1
10	CATHODE REC2
11	COMMON ANODE DIGIT 1 & IR
12	COMMON ANODE DIGIT 2 & dp1
13	COMMON ANODE DIGIT 3 & dp2
14	COMMON ANODE DIGIT 4 & dp
15	ANODE network&data&720p&480i&480p&1080p&1080i&message& REC1&REC2



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ELECTRICAL OPTICAL CHARACTERISTICS AT Ta=25°C

InGaN White CHIP LED

Absolute Maximum Ratings at Ta=25°C

Parameter	LTW-C193TS5	Unit
Power Dissipation	70	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	100	mA
DC Forward Current	20	mA
Derating Linear From 25 °C	0.25	mA/°C
Reverse Voltage	5	V
Operating Temperature Range	-35 °C to + 85 °C	
Storage Temperature Range	-35 °C to + 85 °C	
Soldering Temperature	260 °C For 5 Seconds	

Electrical Optical Characteristics at Ta=25°C

Parameter	Symbol	Part No. LTW-	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	IV	C193TS5	28.0		112.0	mcd	IF = 5mA Note 1, 2, 5
Viewing Angle	2θ 1/2	C193TS5		130		deg	Fig.6
Chromaticity Coordinates	x	C193TS5		0.294			IF = 5mA Note 3, 5 Fig.1
	y			0.286			
Forward Voltage	VF	C193TS5	2.70		3.15	V	IF = 5mA
Reverse Current	IR	C193TS5			10	μA	VR = 5V

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Note : 1. Luminous intensity is measured with a light sensor and filter combination that approximates the

CIE eye-response curve.

2. Iv classification code is marked on each packing bag.

3. The chromaticity coordinates (x, y) is derived from the 1931 CIE chromaticity diagram.

4. Caution in ESD:

Static Electricity and surge damages the LED. It is recommend to use a wrist band or anti-electrostatic

glove when handling the LED. All devices, equipment and machinery must be properly grounded.

5. Tester

CAS140B is for the chromaticity coordinates (x, y) and Iv.

6. The chromaticity coordinates (x, y) guarantee should be added ± 0.01 tolerance.

AllnGap RED CHIP LED

Absolute Maximum Ratings at Ta=25°C

Parameter	LTST-C190KRKT	Unit
Power Dissipation	75	mW
Peak Forward Current (1/10 Duty Cycle, 0.1ms Pulse Width)	80	mA
DC Forward Current	30	mA
Derating Linear From 50 °C	0.4	mA/°C
Reverse Voltage	5	V
Operating Temperature Range	-35 °C to + 85 °C	
Storage Temperature Range	-35 °C to + 85 °C	
Wave Soldering Condition	260 °C For 5 Seconds	
Infrared Soldering Condition	260 °C For 5 Seconds	
Vapor Phase Soldering Condition	215 °C For 3 Minutes	

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Electrical Optical Characteristics at Ta=25°C

Parameter	Symbol	Part No. LTST-	Min.	Typ.	Max.	Unit	Test Condition
Luminous Intensity	IV	C190KRKT	18.0	54.0		mcd	IF = 20mA Note 1
Viewing Angle	2θ 1/2	C190KRKT		130		deg	Note 2 (Fig.6)
Peak Emission Wavelength	λP	C190KRKT		639		nm	Measurement @Peak (Fig.1)
Dominant Wavelength	λd	C190KRKT		631		nm	Note 3
Spectral Line Half-Width	$\Delta \lambda$	C190KRKT		20		nm	
Forward Voltage	VF	C190KRKT		2.0	2.4	V	IF = 20mA
Reverse Current	IR	C190KRKT			10	μA	VR = 5V
Capacitance	C	C190KRKT		40		PF	VF = 0 f = 1MHZ

Notes: 1. Luminous intensity is measured with a light sensor and filter combination that approximates the

CIE eye-response curve.

2. θ 1/2 is the off-axis angle at which the luminous intensity is half the axial luminous intensity.

3. The dominant wavelength, λd is derived from the CIE chromaticity diagram and represents the

single wavelength which defines the color of the device.

Property of Lite-On Only**DEVICE TEMPERATURE CONDITION**

Operating Temperature Range	-35 ° C to + 85 ° C
Storage Temperature Range	-35 ° C to + 85 ° C

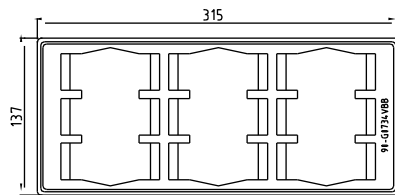
BOM

LTG-0734SM BOM

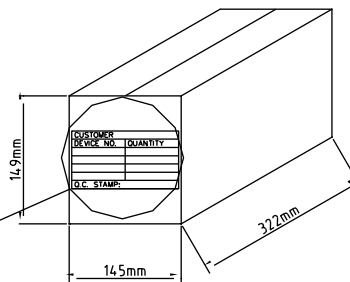
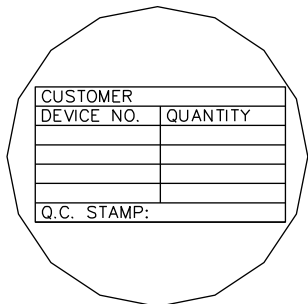
Component no.	Object description	Comp. Qty (CUn)	Un
LTST-C190KRKT	SMD LTST-C190KRKT 0603 TYPE		2 PC
LTW-C193TS5	SMD LTW-C193TS5 WHITE TYPE		40 PC
01-G0734S	81.6X27.4X0.8mm FR4 PCB		1 PC
05-G0734PM-BL	84*30*3.7 MM REF		1 PC
07YG0734	84.1*30.1 PRINT TAPE		1 PC
12E312	EPOXY RESIN		90 mg
12E313	HARDENER		100 mg
12E321	Diffuser		20 mg
09R007-T	10.28*0.51 CP N-PIN PB FREE		15 PC
90-G0734VBB	PVC TRAY ESD		0.12 PC
91-SNC07	INNER CARTON (322*145*149MM)		0.012 PC
92-SUC05	OUTER CARTON (477*339*326)		1.852 SPC

PACKAGE

THE PACKING SPEC.
FOR LTG-0734SM DEVICE



10 TRAYS/INNER CARTON
90 PCS/INNER CARTON



6 INNER CARTON/OUTER CARTON
540 PCS/OUTER CARTON

