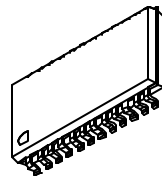
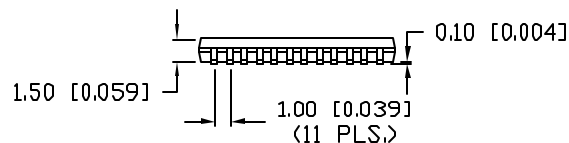
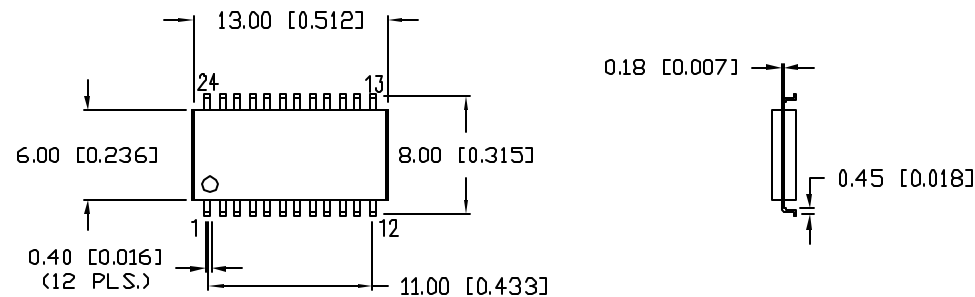
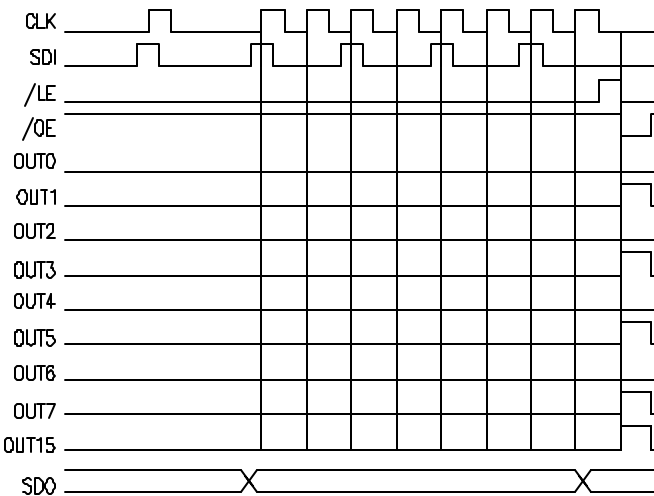


UNCONTROLLED DOCUMENT



TIMING DIAGRAM

PIN OUT	PIN NO.	PIN NAME	FUNCTION
	1	GND	GND TERMINAL
	2	SDI	SERIAL DATA INPUT
	3	CLK	CLOCK INPUT
	4	/LE	LATCH INPUT
	5~20	OUT 0~15	OUTPUT
	21	/OE	OUTPUT ENABLE
	22	SDO	SERIAL DATA OUTPUT
	23	R-EXT	CONSTANT CURRENT PROG.
	24	VDD	5V SUPPLY



*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), X.X=±0.5 (±0.020), X.XX=±0.25 (±0.010), X.XXX=±0.127 (±0.005). LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030), MIN.=+0.00 DECIMAL PRECISION MAX.=+0.00 DECIMAL PRECISION

PART NUMBER
LSD-LXS1624SOPREV.
A

REV.	E.C.N. NUMBER AND REVISION COMMENTS	DATE
A	E.C.N. #11148.	01.24.07

ELECTRICAL CHARACTERISTICS $T_A=25^\circ\text{C}$

PARAMETER	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
INPUT VOLTAGE "H"	V_{IH}		0.7 V_{DD}		V_{DD}	V
INPUT VOLTAGE "L"	V_{IL}		GND		0.3 V_{DD}	V
OUTPUT LEAKAGE	I_{OH}	$V_{OH}=15.0\text{V}$			10	μA
OUTPUT VOLTAGE	V_{OL}	$I_{OL}=+1.0\text{mA}$			0.4	V
SERIAL OUT	V_{OH}	$I_{OH}=-1.0\text{mA}$	4.6			V
OUTPUT CURRENT 1	I_{OL1}	$V_{CE}=1.2\text{V}$, $R_{EXT}=3.3\text{k}\Omega$		40		mA
CURRENT SKEW	dI_{OL1}			±1.5	±6.0	%
OUTPUT CURRENT 2	I_{OL2}	$V_{CE}=1.2\text{V}$, $R_{EXT}=1.4\text{k}\Omega$		75.5		mA
CURRENT SKEW	dI_{OL2}			±1.5	±6.0	%
PULL-UP RESISTOR	$R_{IN(UP)}$		150	300	600	$\text{k}\Omega$
PULL-DOWN RESISTOR	$R_{IN(DOWN)}$		100	200	400	$\text{k}\Omega$
SUPPLY CURRENT						
OUTPUTS "OFF"	$I_{DD(off)1}$	$R_{EXT}=\text{OPEN}$		0.6	1.2	mA
	$I_{DD(off)2}$	$R_{EXT}=3.3\text{k}\Omega$	3.5	5.8	8.0	mA
	$I_{DD(off)3}$	$R_{EXT}=1.4\text{k}\Omega$	6.5	10.2	15.0	mA
OUTPUTS "ON"	$I_{DD(on)1}$	$R_{EXT}=3.3\text{k}\Omega$	10	16	22	mA
	$I_{DD(on)2}$	$R_{EXT}=1.4\text{k}\Omega$	18	28.3	38.5	mA

LIMITS OF SAFE OPERATION AT 25°C

PARAMETER	MAX	UNITS
SUPPLY VOLTAGE	0~+7.0	V
OUTPUT VOLTAGE	-0.5~+15.0	V
OUTPUT CURRENT	90	mA
INPUT VOLTAGE	-0.4~ $V_{DD}+0.4$	V
GND TERMINAL CURRENT	1440	mA
CLOCK FREQUENCY	20	MHz
POWER DISSIPATION	1.78	W
OPERATING TEMPERATURE	-40 TO +85	$^\circ\text{C}$
STORAGE TEMPERATURE	-55 TO +150	$^\circ\text{C}$



UNCONTROLLED DOCUMENT

REV.
APART NUMBER
LSD-LXS1624SOP16-BIT CONSTANT CURRENT LED SINK DRIVER,
24 PIN SOP PACKAGE.

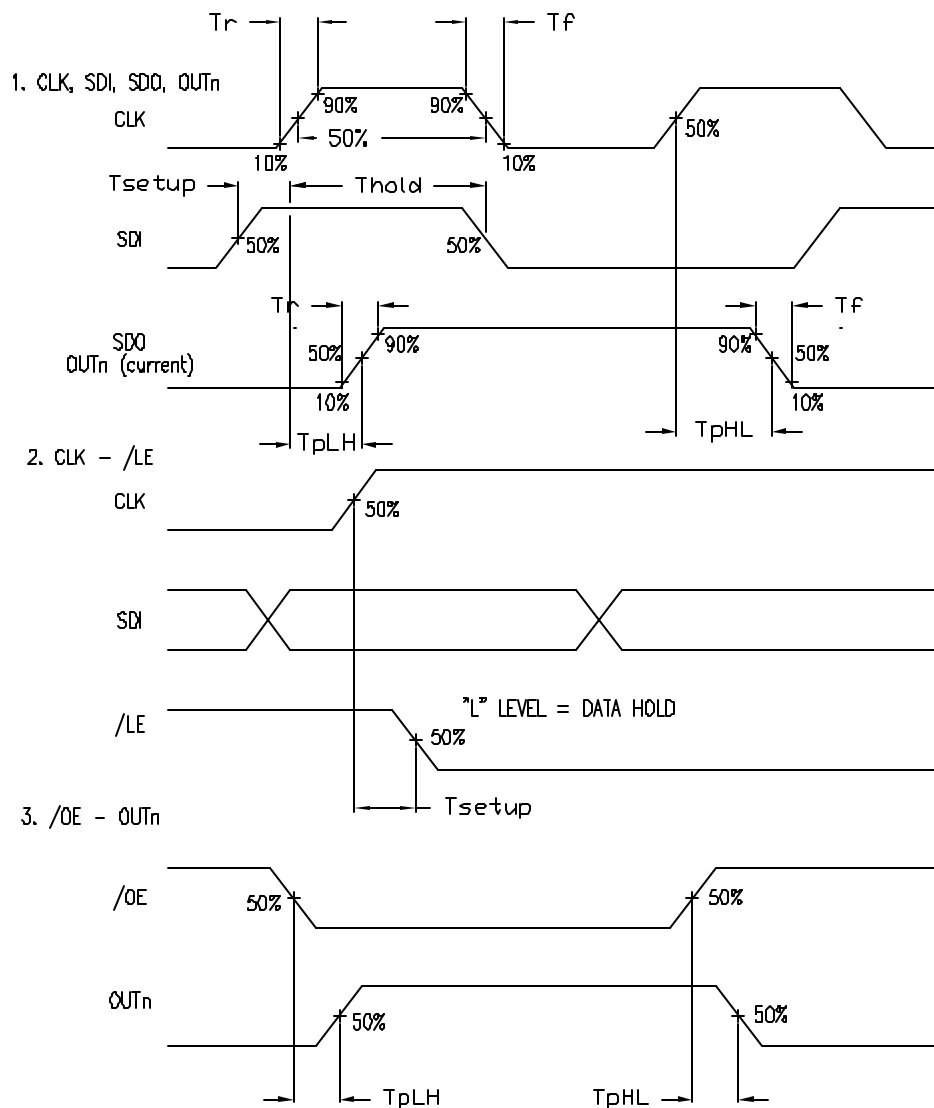
CONFIDENTIAL INFORMATION
THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE PROPERTY OF LUMEX INC. EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING BY LUMEX INC., THE HOLDER OF THIS DOCUMENT SHALL KEEP ALL INFORMATION CONTAINED HEREIN CONFIDENTIAL AND SHALL PROTECT SAME IN WHOLE OR IN PART FROM DISCLOSURE AND DISSEMINATION TO ALL THIRD PARTIES.

RELIABILITY NOTE
OUR MANY YEARS OF EXPERIENCE DATA ACCUMULATION INDICATE THAT SOLDER HEAT IS A MAJOR CAUSE OF EARLY AND FUTURE FAILURE. PLEASE PAY ATTENTION TO YOUR SOLDERING PROCESS.



290 E. HELEN ROAD
PALATINE, IL 60067-6976
PHONE: +1.847.359.2790
US WEB: www.lumex.com
TW WEB: www.lumex.com.tw

DRAWN BY: JC	CHECKED BY:	APPROVED BY:	DATE: 2.22.02
			PAGE: 1 OF 2
			SCALE: N/A

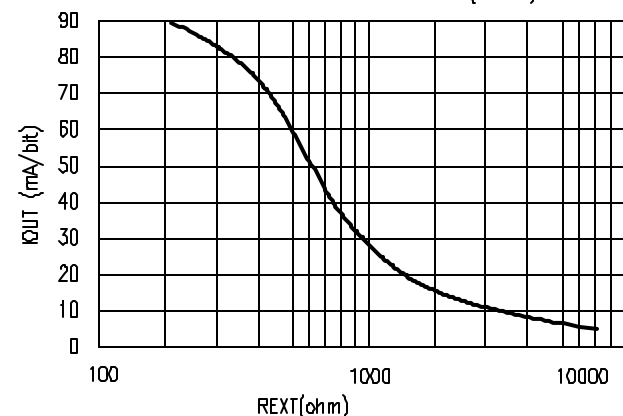
PART NUMBER
LSD-LXS1624SOPREV.
AREV. A E.C.N. NUMBER AND REVISION COMMENTS
SEE PAGE 1

DATE

SWITCHING CHARACTERISTICS $T_A=25^\circ\text{C}$

PARAMETER	MIN	TYP	MAX	UNIT
PROPAGATION DELAY TIME (L ~ H)		200	300	nS
PROPAGATION DELAY TIME (H ~ L)		200	300	nS
PULSE WIDTH	CLK	15	20	nS
SET-UP TIME FOR LATCH	/LE	10	20	nS
HOLD TIME FOR LATCH	/LE	10	25	nS
MAX CLK RISE TIME	/LE		5	nS
MAX CLK FALL TIME	/LE		5	nS
OUTPUT RISE TIME	/LE	150	200	nS
OUTPUT FALL TIME	/LE	150	200	nS

* TEST CONDITIONS: $V_{DD}=5.0V$, $V_{CE}=0.8V$, $V_{IH}=V_{DD}$, $V_{IL}=GND$, $R_{EXT}=3.3k\Omega$, $I_{OUT}=10mA$, $V_L=3.0V$, $R_L=65\Omega$, $C_L=10.5pF$

8 BIT LED DRIVER $R_{EXT}-I_{OUT}$ (BLACK)

*UNLESS OTHERWISE SPECIFIED TOLERANCES PER DECIMAL PRECISION ARE: X=±1 (±0.039), XX=±0.5 (±0.020), XXX=±0.25 (±0.010), XXXX=±0.127 (±0.005). LEAD SIZE=±0.05 (±0.002), LEAD LENGTH=±0.75 (±0.030). MIN.= +DECIMAL PRECISION MAX.= +0.00 -DECIMAL PRECISION

REV.
APART NUMBER
LSD-LXS1624SOP

CONFIDENTIAL INFORMATION
THE INFORMATION CONTAINED IN THIS DOCUMENT IS THE PROPERTY OF LUMEX INC. EXCEPT AS SPECIFICALLY AUTHORIZED IN WRITING BY LUMEX INC., THE HOLDER OF THIS DOCUMENT SHALL KEEP ALL INFORMATION CONTAINED HEREIN CONFIDENTIAL AND SHALL PROTECT SAME IN WHOLE OR IN PART FROM DISCLOSURE AND DISSEMINATION TO ALL THIRD PARTIES.

RELIABILITY NOTE
OUR MANY YEARS OF EXPERIENCE DATA ACCUMULATION INDICATE THAT SOLDER HEAT IS A MAJOR CAUSE OF EARLY AND FUTURE FAILURE. PLEASE PAY ATTENTION TO YOUR SOLDERING PROCESS.



290 E. HELEN ROAD
PALATINE, IL 60067-6976
PHONE: +1.847.359.2790
US WEB: www.lumex.com
TW WEB: www.lumex.com.tw

DRAWN BY:

CHECKED BY:

APPROVED BY:

DATE: 2.22.02

PAGE: 2 OF 2

SCALE: N/A

16-BIT CONSTANT CURRENT LED SINK DRIVER,
24 PIN SOP PACKAGE.