![Chipsmall logo]

Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of "Quality Parts,Customers Priority,Honest Operation,and Considerate Service",our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!
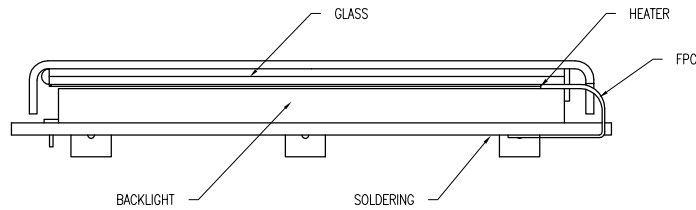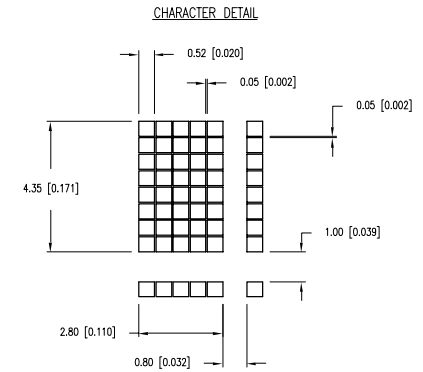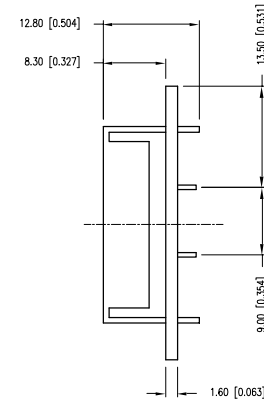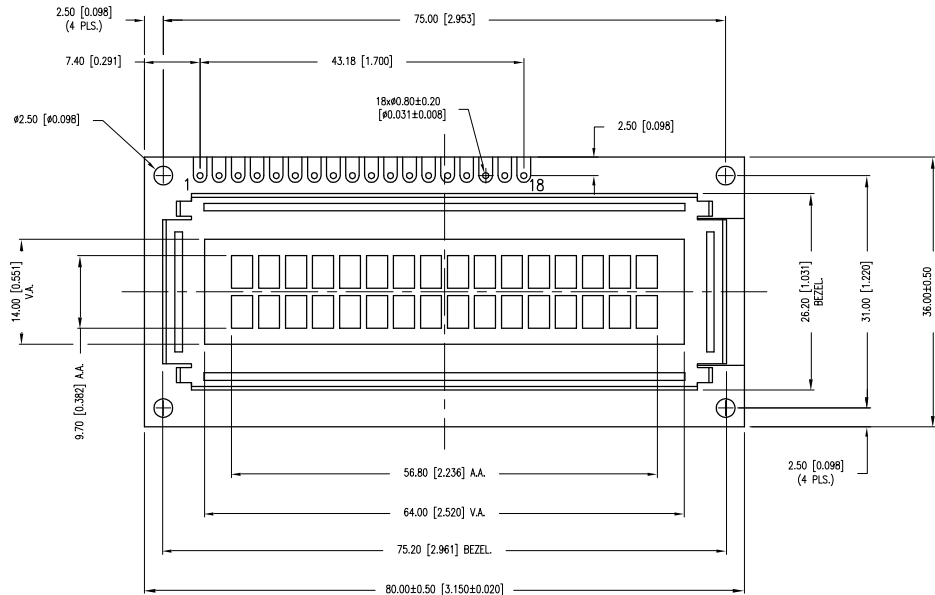
Contact us

PART NUMBER	LCR-U01602DSF/A-WH		REV.	A
DATE	E.C.N. NUMBER AND REVISION COMMENTS			REV.
05.20.10	E.C.N. #11642.			A

CHARACTER DETAIL

GLASS
HEATER
FPC
BACKLIGHT
SOLDERING

CAUTION: STATIC SENSITIVE DEVICE
FOLLOW PROPER E.S.D. HANDLING PROCEDURES
WHEN WORKING WITH THIS PART.

*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= +DECIMAL PRECISION / -0.00   MAX.= +0.00 / -DECIMAL PRECISION

LUMEX®
Creating LED and LCD Solutions Together™

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16 x 2 CHARACTER LCD MODULE, STN GRAY, W/ HEATER, TRANSFLECTIVE, WHITE LED BACKLIGHT, 6:00 VIEW.

DATE:	11.13.09	DRAWN BY:	JN
PAGE:	1 OF 2	CHKD BY:	JD
SCALE:	N/A	APRVD BY:	SA
UNIT:	mm [INCH]		

PART NUMBER	LCR-U01602DSF/A-WH		REV.	A
DATE	E.C.N. NUMBER AND REVISION COMMENTS			REV.
	SEE PAGE 1			

PIN CONFIGURATION

PIN NO.	SYMBOL	LEVEL	FUNCTION		
1	Vss	–	POWER SUPPLY	GND (0V)	
2	V_{DD}	–		5V	
3	Vo	–		FOR LCD DRIVE	
4	RS	H/L	REGISTER SELECT SIGNAL H: DATA INPUT L: INSTRUCTION INPUT		
5	R/$\overline{W}$	H/L	H: DATA READ (MODULE-->MPU) L: DATA WRITE (MODULE<--MPU)		
6	E	H,H->L	ENABLE		
7~14	DB0~DB7	H/L	DATA BUS-SOFTWARE SELECTABLE 4 OR 8 BIT MODE.		
15	A	–	ANODE	LED BACKLIGHT	
16	K	–	CATHODE	LED BACKLIGHT	
17	HTR +	–	+12V		
18	HTR –	–	GND (0V)		

V_{DD}-Vo: LCD DRIVING VOLTAGE

VR: 10KΩ-20KΩ

BLOCK DIAGRAM — 16 x 2, 1/16 DUTY, 1/5 BIAS
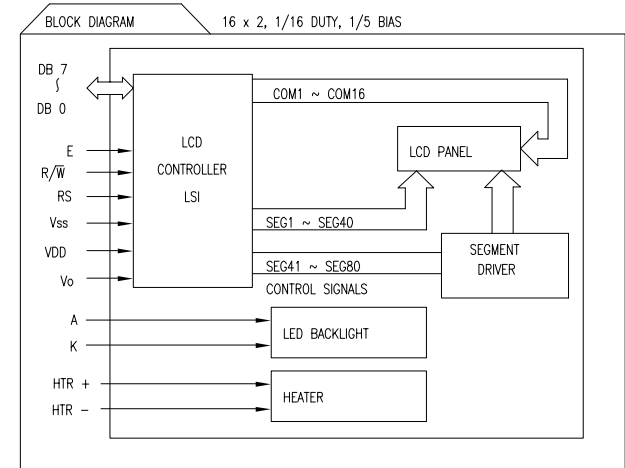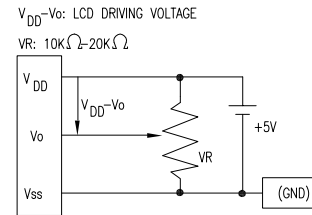
ELECTRICAL CHARACTERISTICS — V_{DD}=4.7V to 5.3V, T_A=25°C

ITEM			SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
SUPPLY VOLTAGE FOR LOGIC			V_{DD}-Vss	–	–	5.0	–	V
SUPPLY CURRENT FOR LOGIC			I_{DD}	V_{DD}=5V	–	1.6	2.5	mA
INPUT VOLTAGE	HIGH		V_{IH}	–	2.2	–	V_{DD}	V
	LOW		V_{IL}	–	0	–	0.6	V
OUTPUT VOLTAGE	HIGH		V_{OH}	–	2.4	–	–	V
	LOW		V_{OL}	–	–	–	0.4	V
LED BACKLIGHT	VOLTAGE		Vf	If=15mA	–	6.2	6.8	V
	CURRENT		If	–	–	15	–	mA
	POWER CUNSUMPTION		PD	–	–	90	–	mW
	LUMINOUS		L	If=15mA	70	–	–	cd/m^2
	COLOR COORDINATE		X	WHITE	.240	–	.330	
			Y		.240	–	.330	
HEATER	VOLTAGE		V_{fH}	–	–	12	20	V
	RESISTANCE			–	50	100	150	OHM
	CURRENT		IH	–	100	150	200	mA
	POWER		PH	–	1.0	1.6	2.2	W

[A]

ABSOLUTE MAXIMUM RATINGS

ITEM	SYMBOL	TEST CONDITION	MIN	MAX	UNIT
SUPPLY VOLTAGE FOR LOGIC	V_{DD}-Vss	Ta=25°C	4.7	5.3	V
SUPPLY VOLTAGE FOR LCD DRIVE	V_{DD}-Vo	–	4.2@50°C	4.8@0°C	V
INPUT VOLTAGE	V_I	Ta=25°C	Vss	V_{DD}	V
OPERATING TEMPERATURE	Topr	W/ HEATER	–40	+85	°C
STORAGE TEMPERATURE	Tstg	W/ HEATER	–40	+85	°C

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