PART NUMBER
LCR-U01602DSF/D-WH

REV.

122.00±0.50 [4.803±0.020]
115.00 [4.528]
114.50 [4.508] BEZEL
106.00 [4.173]
99.00 [3.898] V.A.
94.84 [3.734] A.A.

0.25 [0.010]
4.50 [0.177]
8.00 [0.315]
10.08 [0.397]

8.00 [0.315]

13.10 [0.516]
9.00 [0.354]

14.00 [0.551]

2.00 [0.079] V.A.
24.00 [0.945]

20.00 [0.787] A.A.
35.50 [1.398] BEZEL
37.00 [1.457]
44.00±0.50 [1.732±0.020]

1.50 [0.059]
12.00 [0.472]

1.60 [0.063]

14
1 15 16 17 18

2.54 [0.100]
2.50 [0.098]

18×Ø0.80±0.20 [Ø0.031±0.008]

3.50 [0.138]
7.48 [0.295]
43.18 [1.700]

3.25 [0.128]
Ø3.50 [Ø0.138] (4 PLS.)

CHARACTER DETAIL

HEATER
FPC
GLASS

SOLDERING
BACKLIGHT

0.92 [0.036]
0.06 [0.002]
4.84 [0.191]
1.16 [0.046]
0.06 [0.002]
1.10 [0.043]
9.66 [0.380]
0.50 [0.020]
0.68 [0.027]

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

Pb

*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

REV.	PART NUMBER	CONFIDENTIAL INFORMATION		

PART NUMBER
LCR-U01602DSF/D-WH

16 x 2 CHARACTER LCD MODULE, STN GRAY, -40°C TO +85°C OPERATING TEMPERATURE, W/ HEATER, TRANSFLECTIVE, WHITE LED BACKLIGHT, 6:00 VIEW.

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PAGE: 1 OF 2
SCALE: N/A

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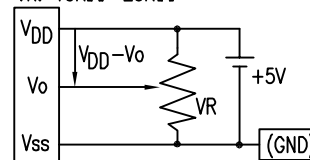
BLOCK DIAGRAM   16 x 2, 1/16 DUTY, 1/5 BIAS
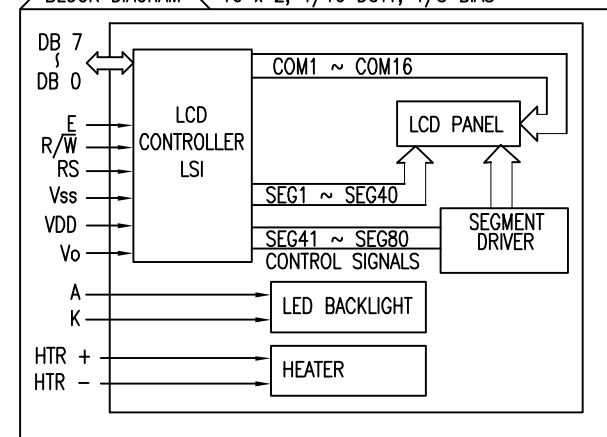
ELECTRICAL CHARACTERISTICS V_{DD}=4.7V to 5.3V, T_A=25°C

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	–	V
	RESISTANCE		–	–	12.4	–	OHM
	CURRENT	IH	–	–	0.97	–	AMP
	POWER	PH	–	–	11.6	–	W

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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UNCONTROLLED DOCUMENT

16 x 2 CHARACTER LCD MODULE, STN GRAY, –40°C TO +85°C OPERATING TEMPERATURE, W/ HEATER, TRANSFLECTIVE, WHITE LED BACKLIGHT, 6:00 VIEW.

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