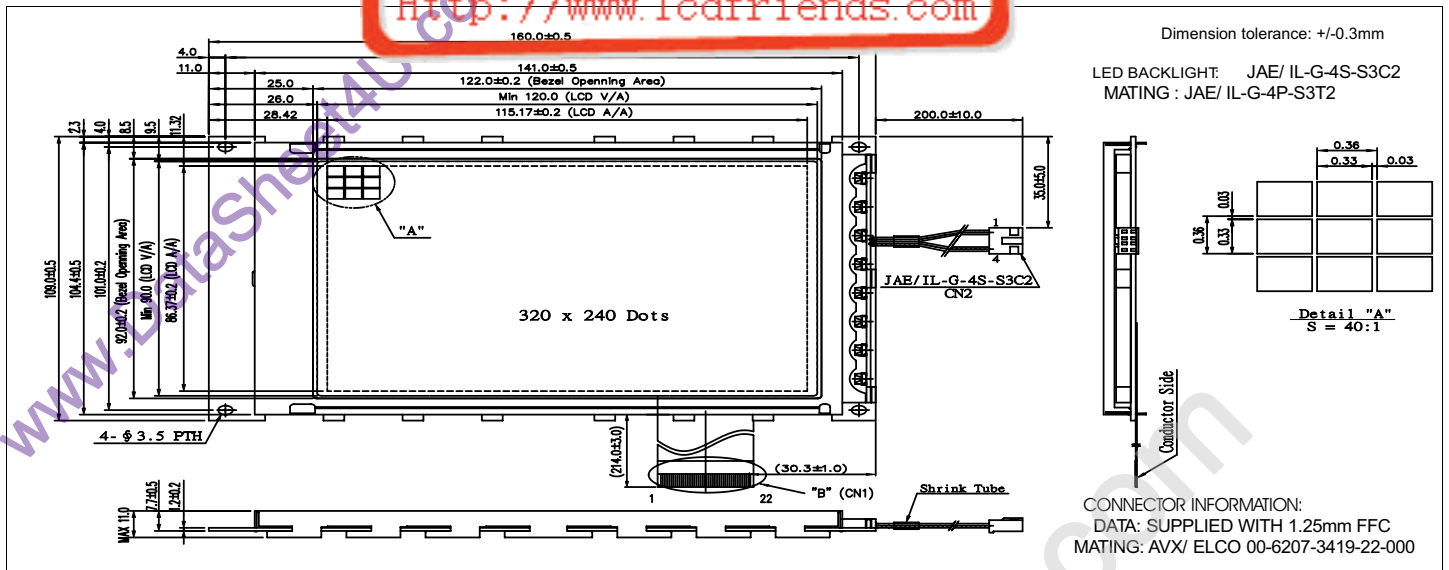


HDM 3224NL-1

Dimensional Drawing

液晶之友 电话: 020-33819057
 Http://www.ledfriends.com

3) X 240 Dots Graphic LED Backlight

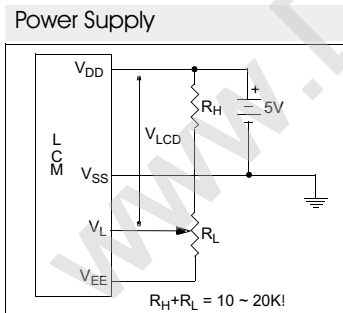


Features

- Backlight.....White LED
- Options.....STN/ Black and White FSTN
- Extended Temperature
- Bottom / Top Viewing
- Built-in Controller.....SED1335

Physical Data

- Module Size.....160.0W x 109.0H x 11.0T mm
- Viewing Area Size.....122.0W x 92.0H mm
- Dot Pitch.....0.36W x 0.36H mm
- Dot Size.....0.33W x 0.33H mm
- Weight.....199g



Electrical Characteristics (VDD=5.0±0.25V 25°C)

PARAMETER	SYM	CONDITION	MIN	TYP	MAX	UNIT
SUPPLY VOLTAGE	V _{DD}	-	4.5	5.0	5.5	V
	V _{LCD}	-	22.8	23.1	23.4	V
SUPPLY CURRENT	I _{DD}	FLM=70Hz V _{LCD} =23.1V	-	77	116	mA
	I _{EE}	-	-	3.85	5.78	mA
BRIGHTNESS	L	All Dots on	-	133	-	cd/m ²
		All Dots off	-	23.1	-	-
LED FORWARD VOLTAGE	V _{AK}	I _{AK} =150mA	4.6	5	5.4	V
LED FORWARD CURRENT	I _{AK}	V _{AK} =5V	-	150	160	mA
DRIVE METHOD	1/240 DUTY					

Pin Connections

PIN NO.	SYMBOL	LEVEL	FUNCTION
DATA CONNECTOR			
1	V _{SS}	0 V	Ground
2	V _{DD}	5 V	Power supply for logic
3	V _L	-	Operating voltage for LC
4	A0	H/L	Data type select
5	WR	L	Write signal
6	RD	L	Read signal
7	D0	H/L	Display Data
8	D1		
9	D2		
10	D3		
11	D4		
12	D5		
13	D6		
14	D7		
15	CS	L	Chip select
16	RES	L	Hardware reset for SED1335F
17	V _{EE}	-24V	Power supply for LC
18	SEL1	L/H	0 FOR 8080 MPU, 1 FOR 6080 MPU
19-22	NC	-	No connection
LED Backlight CONNECTOR			
1	A	-	Power supply for LED
2	NC	-	No Connection
3	NC	-	No Connection
4	K	-	Ground

Absolute Maximum Ratings

PARAMETER	SYMBOL	MIN	MAX	UNIT
SUPPLY VOLTAGE	V _{DD} -V _{SS}	0	7.0	V
SUPPLY VOLTAGE FOR LCD	V _{DD} -V _{EE}	0	30.0	V
INPUT VOLTAGE	V _{IN}	-	V _{DD} +0.3	V
OPERATING TEMPERATURE	T _{OP}	-20	+70	°C
STORAGE TEMPERATURE	T _{STG}	-30	+80	°C