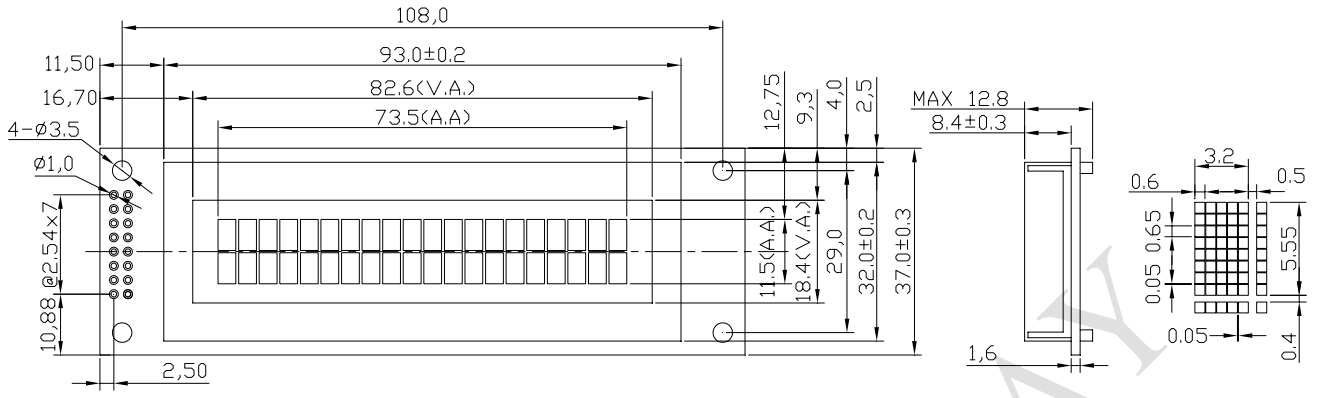
HC2021 1/16DUTY 1/5BIAS



PIN CONNECTIONS

Pin	Symbol	Level	Function
1	V_{SS}	0V	GND
2	V_{DD}	+5V	Power supply for logic
3	V_O	-	Operating voltage for lcd
4	RS	H/L	"H" Data, "L" Instruction code
5	R/W	H/L	"H" Read, "L" Write
6	E	H-L	Enable signal
7	DB0	H/L	Data bus line
8	DB1	H/L	
9	DB2	H/L	
10	DB3	H/L	
11	DB4	H/L	
12	DB5	H/L	
13	DB6	H/L	
14	DB7	H/L	
15	LEDA	+5V	Power supply for LED backlight
16	LEDK	0V	

NOTES:

1. Built-in controller (KS0066 or Equivalent)
2. LED can be driven by pin15, pin16 or A and K

MECHANICAL DATA

Item	Nominal Dimensions	Unit
Module Size (W x H x T)	116.0X37.0X12.8	mm
Viewing Area (W x H)	82.6X18.4	mm
Character Size (W x H)	3.20X5.55	mm
Dot Size (W x H)	0.60X0.65	mm

ABSOLUTE MAXIMUM RATINGS

Item	Symbol	Min.	Max.	Unit
Supply Voltage (Logic)	V_{DD}-V_{SS}	-0.3	7.0	V
Supply Voltage (LCD)	V_{DD}-V_O	-0.3	13.0	V
Input Voltage	V_I	-0.3	V_{DD}+0.3	V
Operating Temp.	T_{OPR}	-20	70	℃
Storage Temp.	T_{STG}	-30	80	℃

ELECTRICAL CHARACTERISTICS (V_{DD}=5.0V, Ta=25℃)

Item	Symbol	Min.	Typ.	Max.	Unit
Input High Voltage	V_{IH}	2.2	-	V_{DD}	V
Input Low Voltage	V_{IL}	-0.3	-	0.6	V
Output High Voltage	V_{OH}	2.4	-	V_{DD}	V
Output Low Voltage	V_{OL}	0	-	0.4	V
Supply Current	I_{DD}	-	1.5	-	mA
LCD Driving Voltage	V_{DD}-V_0	-	5	-	V

LED BACKLIGHT SPECIFICATIONS (Ta=25℃)

Item	Forward Voltage	Forward Current
YELLOW-GREEN	4.1V	240mA

TSINGTEK DISPLAY