

KLM - 040MA - 16B

This module designed for light emitting display device. Organize with 16 x 32 matrix combination with 512 of each Red, Green LED Chips, for indoor use.

FEATURES

- Active display size : 40mm x 80mm
- Dot size : $\phi 2$
- Dot pitch : 2.5mm
- Display color : RED, GREEN, AMBER(Mixed color)
- Duty rate : 1/16
- Dot matrix : 512(16 x 32)
- Weight : 50g(Typ.)
- With a simple serial - inter face.

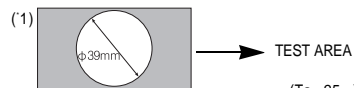
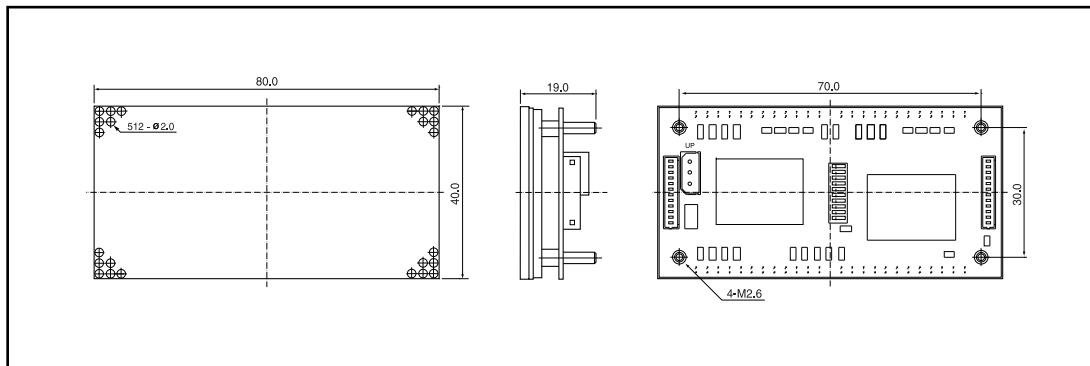
MAXIMUM RATINGS

(Ta=25)

ITEM	SYMBOL	RATING	UNIT	COND.
Power dissipation	P_D	12	W	
Supply voltage(DRIVE)	V_{DD}	6	V	
Supply voltage(LED)	V_{LED}	6	V	
Logic input power	V_{in}	- 0.5 ~ V_{DD}	V	
Junction Temp.	T_J	115		
Operating Temp.	T_{opr}	- 20 ~ +60		
Storage Temp.	T_{stg}	- 20 ~ +65		

DIMENSIONS

(Unit : mm)



OPTICAL CHARACTERISTICS

(Ta=25)

ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT.
Bright - ness(16x 16)	GREEN	$V_{DD} = 5V$	-	80	-	$cd/m^2 \cdot 1'$
	RED		-	60	-	
	AMBER		-	-	-	
Dot - Balance	GREEN	$V_{LED} = 5V$	-	-	2	-
	RED		-	-	2	
	AMBER		-	-	2	
Emission Wavelength	GREEN	$V_{DD} = 5V$	-	565	-	nm
	RED		-	630	-	
Spectrum half - band	GREEN	$V_{DD} = 5V$	-	25	-	nm
	RED		-	40	-	

LED Dot Matrix

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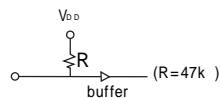
ELECTRICAL CHARACTERISTICS(VOLTAGE CURRENT CHARACTERISTICS)

(Ta=25 °C)

ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT.	
Supply voltage(LOGIC)	V _{DD}	-	4.75	5	5.25	V	
Supply voltage(LED)	V _{LED}	-	4.50	5	5.50	V	
Supply current(LOGIC)	I _{DD}	V _{DD} =5V	-	50.0	70.0	mA	
Supply current(LED)	GREEN	I _{LEDg}	Lighting all 1 ²	-	-	1	A
	RED	I _{LEDr}		-	-	1	
	AMBER	I _{LEDo}		-	-	1.5	
Logic - input voltage LOW	V _L	V _{LED} =5V	-	-	1.5	V	
Logic - input voltage HIGH	V _H	V _{DD} =5V	3.5	-	-	V	

*2. V_{DD}=5V, V_{LED}=5V

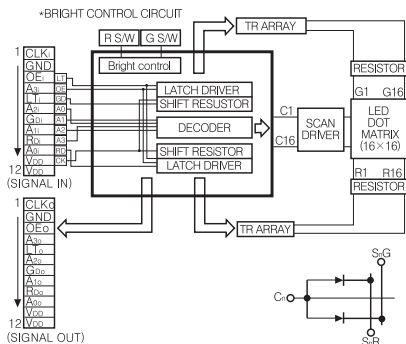
*PULL UP



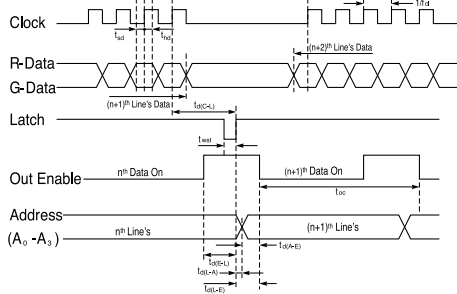
ELECTRICAL CHARACTERISTICS (CONNECTOR SPECIFICATION)

CLASSIFICATION	NAME	STANDARD	LENGTH	COMPANY	REMARK	
POWER CONN.	WAFER	5267 - 03A	-	molex	-	
INPUT SIGNAL CONN.	WAFER	53047 - 1210	-	molex	-	
OUTPUT SIGNAL CONN.	WAFER	53047 - 1210	-	molex	-	
ASSY	POWER	HARNESS	5263PBT/5264 - 03/AWG24	Option	molex	Ring type
		HARNESS	5263PBT/5264 - 03/AWG24	Option	molex	Solder type
	SIGNAL	HARNESS	50079 - 8000/51021 - 1200/AWG26	Option	molex	-

BLOCK DIAGRAM



TIMING CHART



RECOMMENDED TIMING CONDITION

NO	ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT.
1	CLOCK FREQUENCY	f _{cl}	-	-	40	MHz
2	CLOCK CYCLE	1/f _{cl}	25	-	-	ns
3	CLOCK - LATCH TIME	t _{d(C-L)}	25	-	-	ns
4	LATCH PULSE WIDTH	t _{wtst}	25	-	-	ns
5	ENABLE - LATCH TIME	t _{d(E-L)}	0	-	-	ns
6	DATA SETUP TIME	t _{sd}	6	-	-	ns
7	DATA HOLD TIME	t _{hd}	6	-	-	ns
8	ADDRESS - ENABLE TIME	t _{d(A-E)}	25	-	-	ns
9	LATCH - ADDRESS TIME	t _{d(L-A)}	0	-	-	ns
10	LATCH - ENABLE TIME	t _{d(L-E)}	0	-	-	ns
11	ENABLE CYCLE	t _{oc}	-	-	1	ms