

KLM-080CA-16B

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

FEATURES

- Active display size(x×y) : 160mm × 80mm
- Dot pitch : 5mm
- Display color : RED, GREEN, AMBER (3 color)
- Duty rate : 1/16
- Dot matrix(x×y) : 512(32×16)
- Viewing angle : ±60°
- Weight : 65g(Typ.)

ABSOLUTE MAXIMUM RATINGS

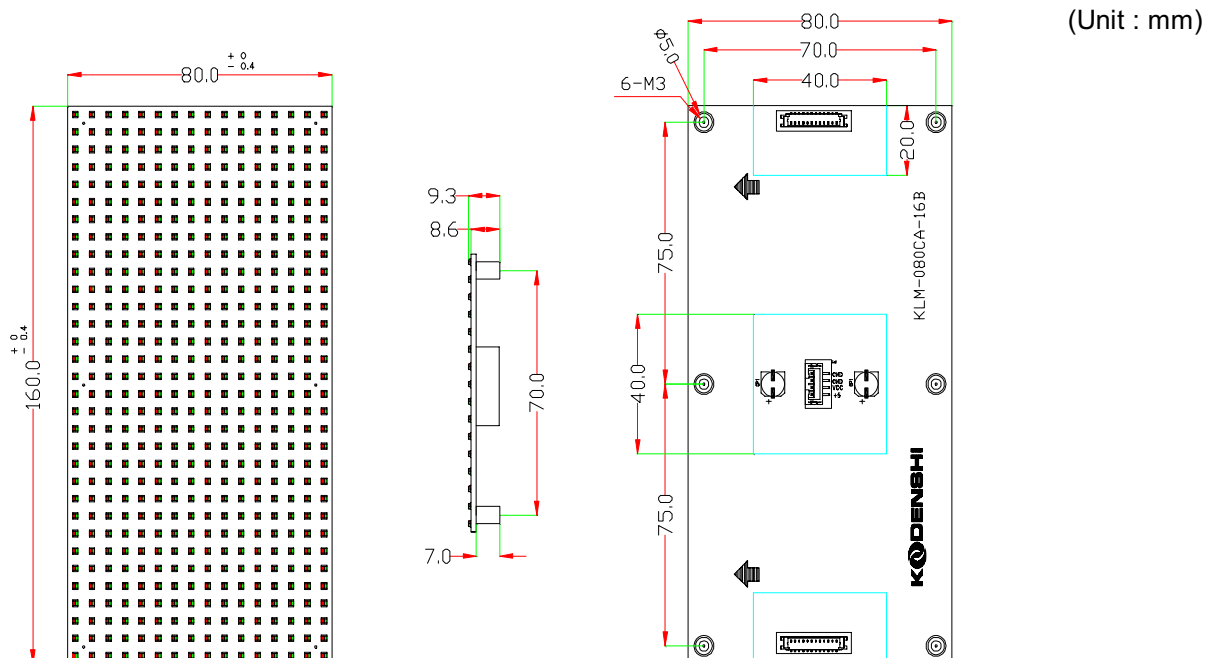
ITEM	SYMBOL	RATINGS	UNIT
Power dissipation	P	20	W
Supply voltage(DRIVE)	V _{DD}	5	V
Supply voltage(LED)	V _{LED}	5	V
Logic input power	V _{in}	-0.5 ~ V _{DD}	V
Junction Temp.	T _j	115	°C
Operating Temp.	T _{opr}	-20 ~ +65	°C
Storage Temp.	T _{stg}	-20 ~ +70	°C

OPTICAL CHARACTERISTICS

Ta=25°C

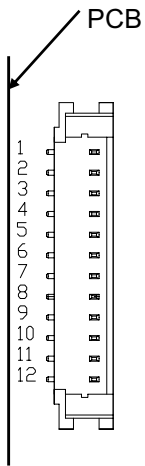
ITEM	SYMBOL	CONDITION	MIN.	TYP.	MAX.	UNIT
Brightness (16 * 16)	GREEN	I _{v_g}	-	180		cd/m ²
	RED	I _{v_r}	-	270		
	-		-	-		
	AMBER	I _{v_o}	-	450		
Supply-current(LED)	GREEN	I _{LEDg}	-	-	2	A
	RED	I _{LEDr}	-	-	2	
	AMBER	I _{LEDa}	-	-	4	
Emission Wavelength	GREEN	λ _{P_g}	-	570		nm
	RED	λ _{P_r}	-	630		
	-		-	-		

DIMENSION



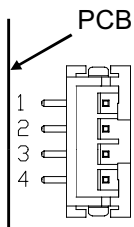
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INTERFACE



connector pin number & signal function

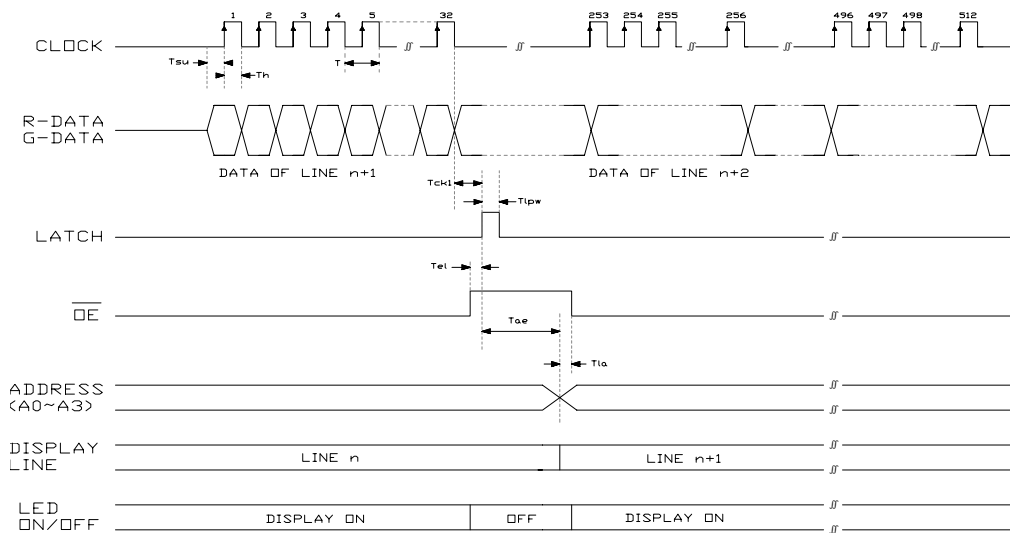
PIN NO	SIGNAL	SIGNAL-FUNCTIO
1	RD	RED DATA SIGNAL(HIGH)
2	GD	GREEN DATA SIGNAL(HIGH)
3	A0	LINE SELECT SIGNAL
4	A1	LINE SELECT SIGNAL
5	A2	LINE SELECT SIGNAL
6	A3	LINE SELECT SIGNAL
7	OE	DISPLAY ON/OFF SIGNAL
8	LAT	DATA LATCH SIGNAL
9	CLK	DATA SHIFT SIGNAL
10	GND	GROUND
11	N.C	No signal
12	N.C	No signal



Power connector pin number & signal function

PIN NO	SIGNAL	LEVEL	SIGNAL-FUNCTIO	WIRE COLOR
1	VLED	5 [V]	POWER OF THE LED	WHITE
2				
3	GND	0 [V]	GROUND	BLACK
4				

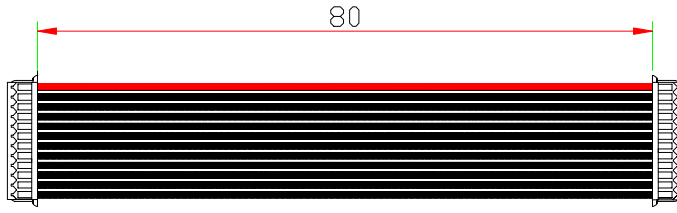
TIMING CHART MODULE(32X16) DISPLAY



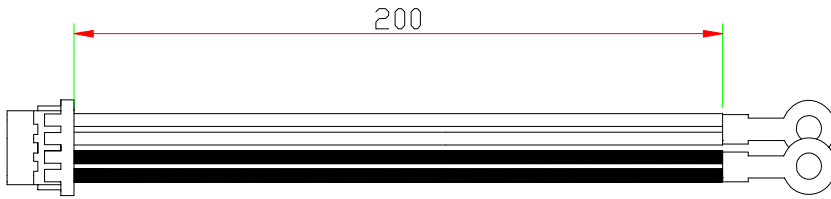
NO	ITEM	SYMBOL	MIN.	TYP.	MAX.	UNIT
1	CLOCK CYCLE	T	-	-	25	Mhz
2	CLOCK-LATCH TIME	T _{ckl}	50	-	-	ns
3	LATCH PULSE WIDTH	T _{lpw}	100	-	-	ns
4	ENABLE- LATCH TIME	T _{el}	100	-	-	μs
5	DATA SETUP TIME	T _{su}	20	-	-	ns
6	DATA HOLD TIME	T _h	25	-	-	ns
7	ADDRESS-ENABLE TIME	T _{ae}	20	-	-	μs
8	LATCH-ADDRESS TIME	T _{la}	20	-	-	ns

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CONNECTOR SPECIFICATION



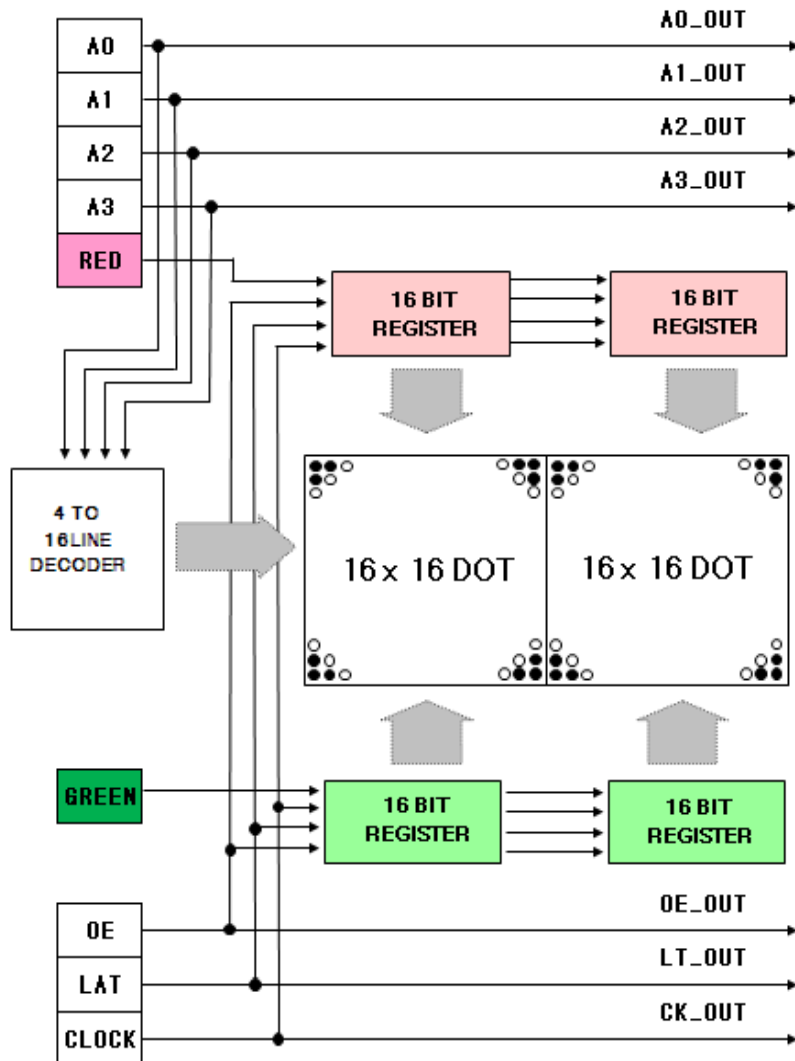
DATA CABLE



POWER CABLE

ITEM		VENDOR	MODEL NO.	NOTE
CONNECTOR	DATA	YEONHO	12505WS-12	
	POWER	YEONHO	20022WS-04	
CABLE	DATA	DAECHANG	12505HS-12	
	POWER	DAECHANG	20022HS-04	

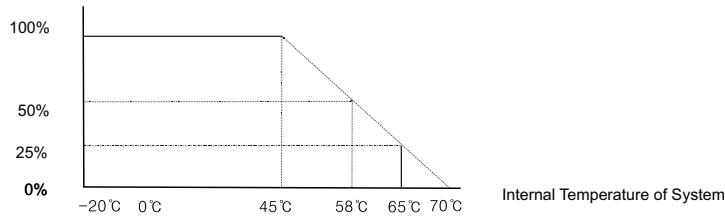
BLOCK DIAGRAM



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The rate of Display lights

Display light rate



* Please control Module Temperature with keeping Display Light Rate in mind and being compliant to the chart above.

* The proof measure for sufficient radiation is requisite in case of multi-units, such as using fan.

Please keep an eye on the surface temperature not to rise over 70°C

* You can control Display Light Rate with Out Enable when your controlling fails to go with the chart above.

INSTALLMENT NOTICES

- 1). Please apply this modules at a safe surrounding against noise because the error or mis-operation may occur at fragile place of noise. Therefore consider the place you will install.
- 2). Check surely the power condition previous to operation test in order to prevent module damage which might be caused by the excessive power.
- 3). Water proofing is not covered. Therefore we recommend water proofing at least in the front of modules.
- 4). Modules should be set up within the guarantee limitation and especially kept away from salt, dust, soot and **SO₂ GAS** etc.
- 5). When there is no data transmission at operation test, just turn power off immediately. Otherwise operating circuit gets damage.
- 6). Please apply this product under the range of guarantee, considering the sufficient radiation in case of the assembled multi-module.
- 7). V_{LED} is recommended the maximum of rating voltage for best result under the low temperature such as -15°C below.
- 8). Please check the insert direction when you attach SIGNAL CONNECTOR or link the power.
(Refer to Harness wire colors of which the insert direction is same.)

REFERENCES

- 1). Check **SYSTEM** weight before apply modules into housing
- 2). Operation test or anti-static electricity need for the **CMOS** attached in circuit board.
- 3). Sufficient power capability is necessary to deal with the excessive power which might be drastically caused depending on the condition of the on/off of unit.(Peak Current times 1.5 and higher)
- 4). Power for Logic or **LED** requires Switching Mode Power Supply.
- 5). Use power bus bar when connecting power.
It helps power to keep from falling down.
- 6). Please don't change "switch for luminance adjustment".
The switch was set as outgoing.
- 7). Any further question or trouble herein will be worked out mutually by customer and supplier through sales manager.