



GUOYEXING OPTOELECTRONICS CO.LTD

SPECIFICATION

| | |
|---------------|---------------------------|
| FOR APPROVAL | |
| ISSUED DATE : | |
| CUSTOMER : | |
| DESCRIPTION : | |
| MODEL NO.: | GYX - P16F4D - 13L - V1.1 |
| DOCUMENTNO. : | |

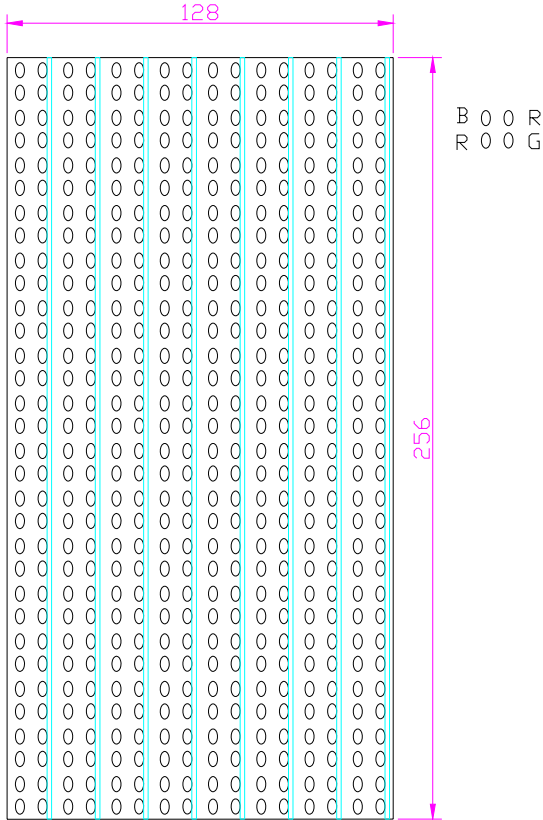
[GUOYEXING TECH.]

| ISSUE | REVIEW | APPRL |
|-------|--------|-------|
| | | |

[CUSTOMER APPROVAL]

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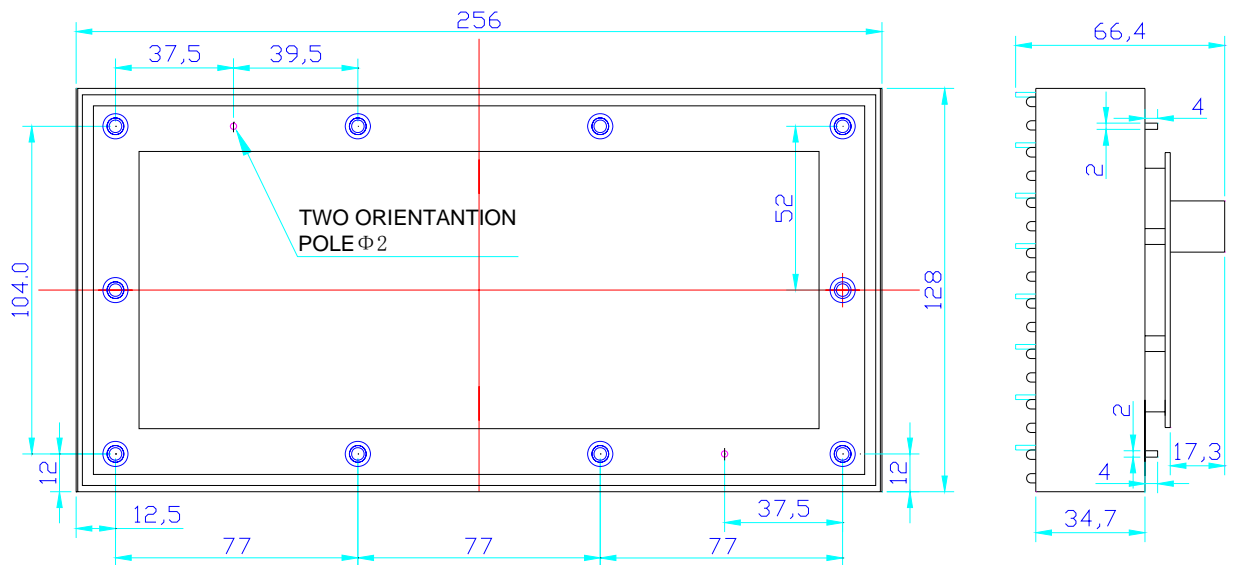
***DATE—CONNECTOR (JIN1、JOUT1)**



| PIN NO | SIGNAL | PIN NO | SIGNAL |
|--------|--------|--------|--------|
| 1 | RA0 | 2 | RA1 |
| 3 | G0 | 4 | B0 |
| 5 | RB0 | 6 | RB1 |
| 7 | G1 | 8 | B1 |
| 9 | CLK | 10 | GND |
| 11 | STB | 12 | GND |
| 13 | OE | 14 | GND |
| 15 | GND | 16 | GND |

***POWER CONNECTOR (J POWER1)**

| NO | SIGNAL | LEVEL |
|----|--------|-------|
| 1 | VDD | 5 (V) |
| 2 | VCC | 5 (V) |
| 3 | GND | 0 (V) |

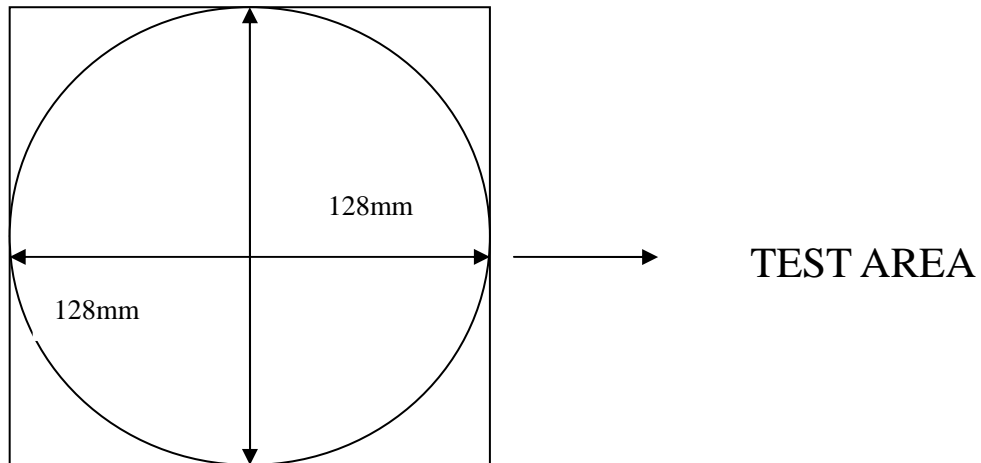


5、 OPTICAL CHARACTERISTICS

Ta=25°C

| TTEM | SYMBOL | COND | MIN. | TYP | MAX | UNIT |
|------------|---------|------|------|--------|------|-------|
| Brightness | RED | IVr | 420 | 535 | 650 | MCD |
| | P-GREEN | IVg | 1190 | 1367.5 | 1545 | |
| | BLUE | IVb | 350 | 385 | 420 | |
| | WHITE | IVa | 7700 | 8000 | 8300 | CD/m² |
| Wavelength | RED | Dr | — | 625 | — | Nm |
| | GREEN | Dg | — | 525 | — | |
| | BLUE | Db | — | 468 | — | |

(*1)



6、 ELECTRICAL CHARACTERISTICS

6-1.Voltage-Current Characteristics

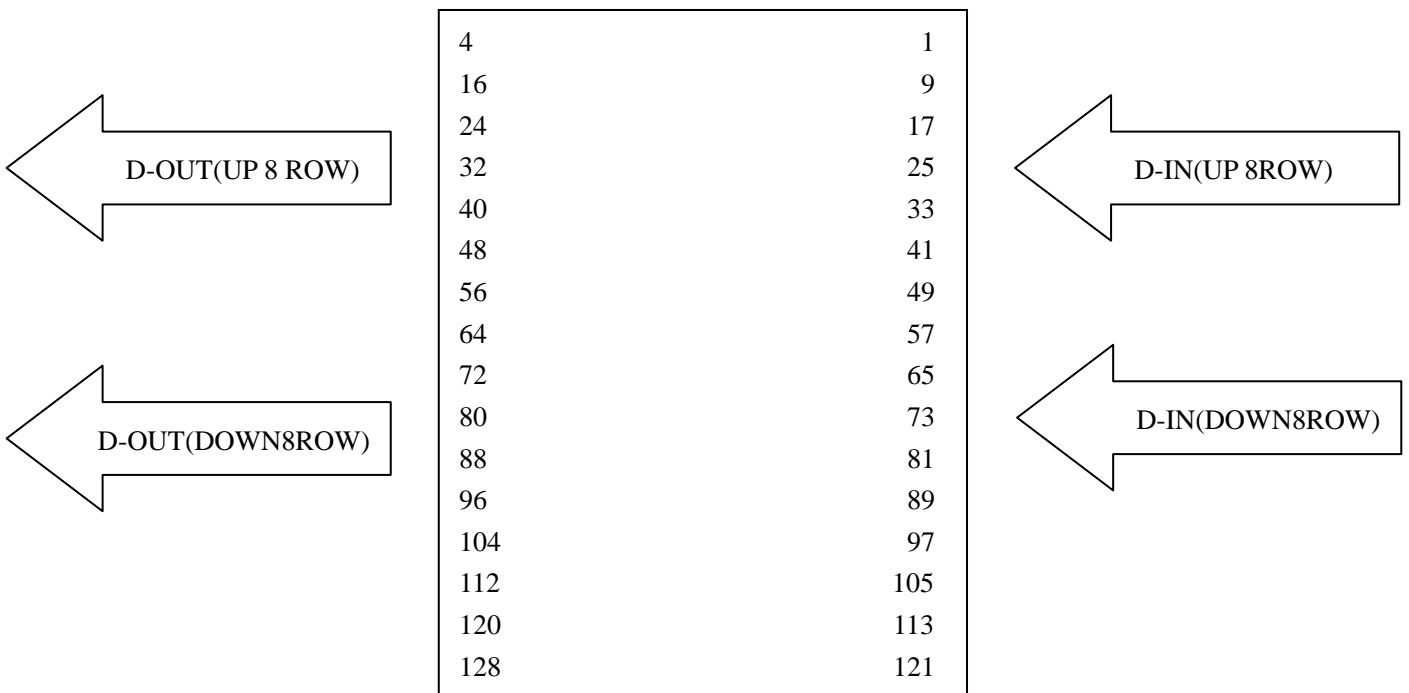
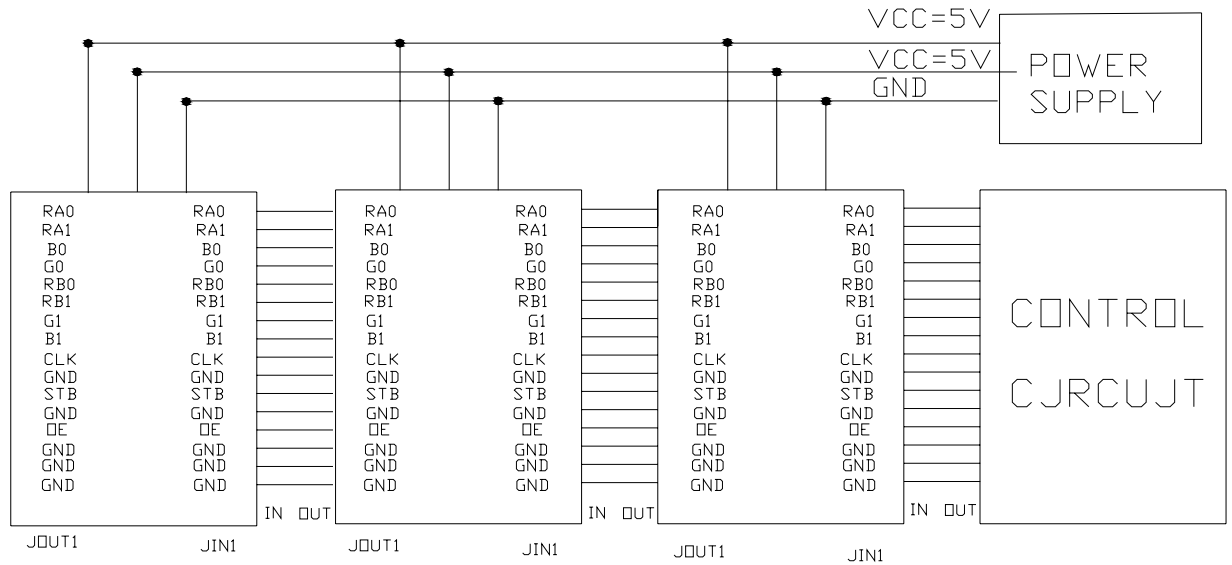
Ta=25°C

| ITEM | SYMBOL | COND | MIN | TYP. | MAX | UNIT |
|-----------------------|--------|--------|------------------|-------|-----|------|
| Supply voltage(LOGIC) | Vcc | — | | 5 | | V |
| Supply voltage(LED) | Vdd | — | | 5 | | V |
| Supply current(LOGIC) | Icc | Vcc=5V | — | 200 | | mA |
| Supply-current | RED | ILEDr | Lighting —all | 10.24 | | A |
| | GREEN | ILEDg | | | | |
| | BLUE | ILEDb | | | | |



7. OTHER ITEM

7-1. Connection example between products



8. INTERFACE

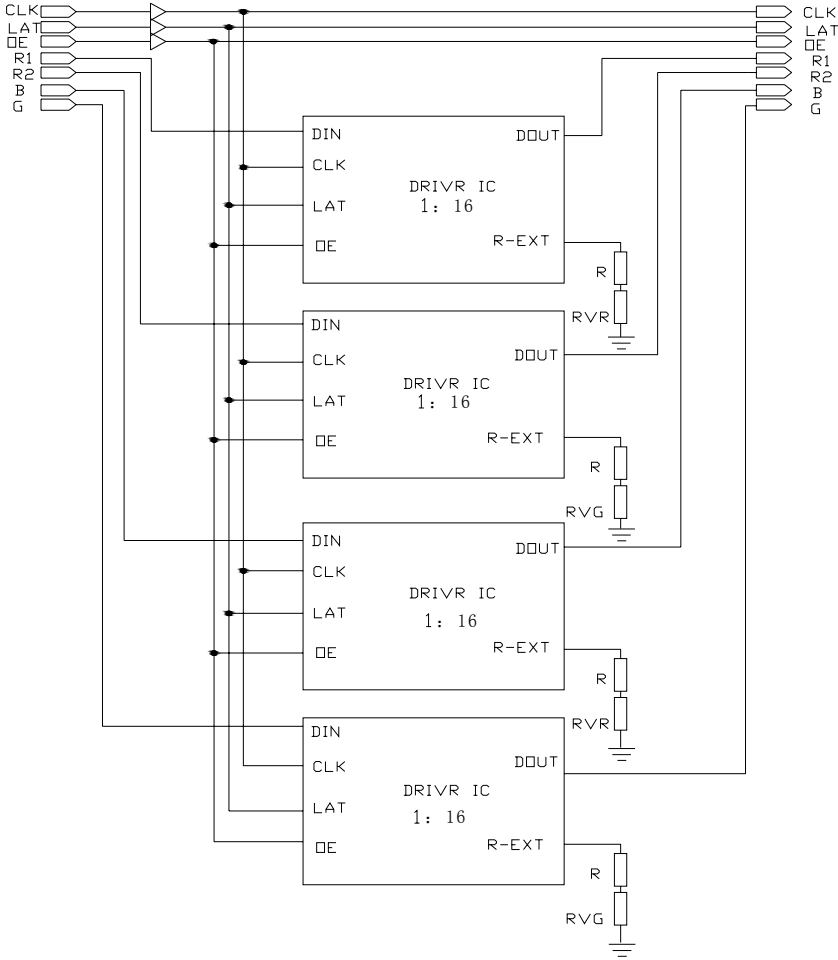
8-1.IN/OUT PUT connector pin number & signal function

| PORT | Pin No. | SIGNAL | SIGNAL-FUNCTION |
|---------------------------------|---------|--------|---------------------------|
| INPUT/ OUTPUT SIGNAL (IN) | 1 | RA0 | RED DATA (UP 8 ROW) |
| | 2 | RA1 | RED DATA (UP 8 ROW) |
| | 3 | G0 | Y-GREEN DATA (UP 8 ROW) |
| | 4 | B0 | BLUE DATA (UP 8 ROW) |
| | 5 | RB0 | RED DATA (DOWN 8 ROW) |
| | 6 | RB1 | RED DATA (DOWN 8 ROW) |
| | 7 | G1 | Y-GREEN DATA (DOWN 8 ROW) |
| | 8 | B1 | BLUE DATA (DOWN 8 ROW) |
| | 9 | CLK | SHIFT CLOCK |
| | 10 | GND | GROUND |
| | 11 | STB | DATA LATCH |
| | 12 | GND | GROUND |
| | 13 | OE | OUTPUT ENABLE |
| | 14 | GND | GROUND |
| | 15 | GND | GROUND |
| | 16 | GND | GROUND |

8-2. Power connector pin number & signal function

| NO | SIGNAL | LEVEL | FUNCTION | WIRE |
|----|--------|-------|--------------|-------|
| 1 | VDD | 5 (V) | POWER OF LED | RED |
| 2 | VCC | 5 (V) | LOGIC | RED |
| 3 | GND | 0 (V) | GROUND | BLACK |

9. principle drawing

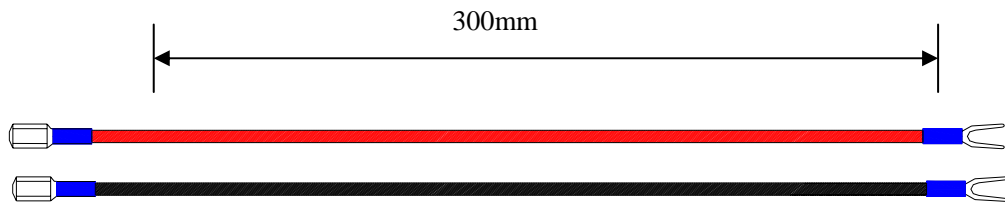


| | | | | |
|------------------|-----------------|-----------------|-----------------|-----------------|
| ROUT1 {1:16} | ROUT2 {1:16} | ROUT3 {1:16} | ROUT4 {1:16} | GOUT1 {1:16} |
| LED ARRAY | | | | GOUT2 {1:16} |
| (16×32) | | | | GOUT3 {1:16} |
| BOUT1 {1:16} | BOUT2 {1:16} | BOUT3 {1:16} | BOUT4 {1:16} | GOUT4 {1:16} |

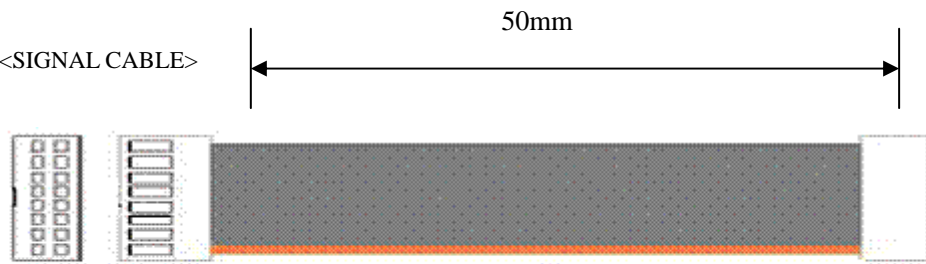
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10.CABLE SPEC

<POWER CABLE>



<SIGNAL CABLE>



| PART NO. | STANDARD | VENDOR |
|-----------------|---|--------|
| FL01-14D-50mm | 2.54mm PITCH 16 P WIRE (FLAT CABLE/50mm) | |
| Gu396-0418-300R | 4mm PITCH 4 P WIRE | |

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11.PART LIST

| NO | PART LIST | DWG NO | QUAN. | TYPE | PART NAME | MAKER | NOTE |
|----|------------------|--------|-------|-------------|--------------|-------|-------------|
| 1 | RED LED | | 256 | SMD-0603 | | | |
| 2 | P/G LED | | 128 | SMD-0603 | | | |
| 3 | BLUE LED | | 128 | SMD-0603 | | | |
| 4 | PCB(Display) | | 1 | 2Layer/1.6t | | | 128mm*256mm |
| 5 | DRIVE IC | | 24 | SSOP-24 | MBI5026C(GF) | | |
| 6 | IC | | 2 | SOJ-20 | 74AHC245D | | |
| 7 | IC | | 1 | SO-16 | 74HC138D | | |
| 8 | IC | | 4 | SOP-8 | CEM4953 | | |
| 9 | CONDENSER | | 1 | DIP | 470uF/16V | | POWER |
| 10 | CONDENSER | | 1 | DIP | 1000uF/16V | | POWER |
| 11 | CHIP SEAMIC CON. | | 14 | 0805 | 0.1 uF | | DRIVE |
| 12 | CHIP SEAMIC CON. | | 1 | 0805 | 0.1 uF | | POWER |
| 13 | CHIP RESISTOR | | 32 | 0805 | 510 ϕ | | |
| 14 | CHIP RESISTOR | | 2 | 0805 | 100 ϕ | | |
| 15 | CHIP RESISTOR | | 2 | 0805 | 1K ϕ | | |
| 16 | CHIP RESISTOR | | 1 | 0805 | 51 ϕ | | |

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12. INSTALLATION 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.
- 2) Check surely the power condition to operation test in order to prevent module damage which might be caused by the excessive power.
- 3) Modules should be set up within the guarantee limitation and especially kept away from salt dust, soot and SO₂ gas etc.
- 4) When there is no data transmission at operation test just turn power off immediately. Otherwise operating gets damaged.
- 5) Please apply this product under the range of guarantee, considering the sufficient radiation in case of the assembled multi-module.
- 6) V led is recommended the maximum of rating voltage for best result under the low temperature such as -15° C below.
- 7) Please check the insert direction when you attach SIGNAL CONNECTOR or link the power.

13 .REFERENCES

- 1) Check SYSTEM weight before apply modules into housing.
 - 2) Operation test or anti-static electricity need for the COMS 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 Supply.
 - 5) Use power bus bar when connecting power. It helps power to keep from falling down..
 - 6) Please don't change "switch was set as outgoing" The switch was set as out-going.
 - 7) Any further question or trouble herein will be worked out mutually by customer and supplier through sales manager.
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