

Product Specification

Part Name: OEL Display Module

Customer Part ID:

Wisevision Part ID: X035-0504KSWAG01-H09

Ver: A

Customer:

Approved by

From: Wisevision Optronics Co.,Ltd.

Approved by

Wisevision Optronics Co.,Ltd.

Notes:

1. Please contact Wisevision Optronics Co.,Ltd. before assigning your product based on this module specification
2. The information contained herein is presented merely to indicate the characteristics and performance of our products. No responsibility is assumed by Wisevision Optronics Co.,Ltd. for any intellectual property claims or other problems that may result from application based on the module described herein.

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1. Basic Specifications

1.1 Display Specifications

- 1) Display Color: Monochrome (White)
- 2) Drive Duty: 1/4 Duty

1.2 Mechanical Specifications

- 1) Outline Drawing: According to the annexed outline drawing
- 2) Number of Pixels: 20 Icon
- 3) Panel Size: 12.1 × 6 × 1.2 (mm)
- 4) Active Area: 7.7582 × 2.8 (mm)

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1.3 Mechanical Drawing

| Item | Date | Remark |
|------|----------|------------------|
| A | 20230417 | Original Drawing |
| B | 20230418 | 修改FPC外形 |
| C | 20230506 | 修改FPC外形 |

全显示效果图
Scale 2X

| | | | | | | | | | |
|------|------|------|------|------|----|----|----|----|----|
| PIN | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| COM1 | COM1 | | | | 03 | 2D | 06 | 05 | 04 |
| COM2 | | COM2 | | | 2C | 2E | 02 | 1D | 01 |
| COM3 | | | COM3 | | 2G | 2F | 1C | 1G | 1E |
| COM4 | | | | COM4 | 2B | 2A | 1B | 1A | 1F |

| | | | | | | |
|-----------------------------|---|-------|-----------------------|----------|----------------------|--------|
| Customer Approval Signature | Wisevision Optronics Co., Ltd. | | | | Drawing Number | Rev. |
| | Title: X035-0504KSWAG01-H09 Folding Type OEL Display Module | | | | X035-0504KSWAG01-H08 | C |
| Unless Otherwise Specified | Unit | mm | Material | | | |
| General Roughness | Tolerance | | Soda Lime / Polyimide | | | |
| Dimension | ±0.3 | Drawn | | Jesen | Panel / E. | P.M. |
| Angle | ±1 | By | | 20230417 | Scale | Sheet |
| | | Date | | 20230417 | 1:1 | 1 of 1 |
| | | | | | A3 | A3 |

Notes:

- Color: White
- FPC Number: NFP188A-01
- General Tolerance: ±0.30
- Viewing Direction: ALL



2. Optics & Electrical Characteristics

2.1 Optics Characteristics

| Characteristics | Symbol | Conditions | Min | Typ | Max | Unit |
|----------------------------|-----------------|-------------|--------------|--------------|--------------|-------------------|
| Brightness | L _{br} | | 300 | 380 | - | cd/m ² |
| Supply Voltage for Display | V | | 3.0 | 3.3 | 3.5 | V |
| <i>Operating Current</i> | I | | - | 1.2 | 1.5 | mA |
| C.I.E. (White) | (x) (y) | C.I.E. 1931 | 0.26 0.29 | 0.30 0.33 | 0.34 0.37 | |
| Dark Room Contrast | CR | | - | 2000:1 | - | |
| Viewing Angle | | | - | Free | - | degree |

3. Reliability

3.1 Contents of Reliability Tests

| Item | Conditions | Criteria |
|-------------------------------------|--|---------------------------------|
| High Temperature Operation | 70°C, 240 hrs | The operational functions work. |
| Low Temperature Operation | -40°C, 240 hrs | |
| High Temperature Storage | 85°C, 240 hrs | |
| Low Temperature Storage | -40°C, 240 hrs | |
| High Temperature/Humidity Operation | 60°C, 90% RH, 120 hrs | |
| Thermal Shock | -40°C ⇔ 85°C, 24 cycles 60 mins dwell | |

- * The samples used for the above tests do not include polarizer.
- * No moisture condensation is observed during tests.

3.2 Failure Check Standard

After the completion of the described reliability test, the samples were left at room temperature for 2 hrs prior to conducting the failure test at 23±5°C; 55±15% RH.

4. Outgoing Quality Control Specifications

4.1 Environment Required

Customer's test & measurement are required to be conducted under the following conditions:

| | |
|---|-------------|
| Temperature: | 23 ± 5°C |
| Humidity: | 55 ± 15% RH |
| Fluorescent Lamp: | 30W |
| Distance between the Panel & Lamp: | ≥ 50cm |
| Distance between the Panel & Eyes of the Inspector: | ≥ 30cm |
| Finger glove (or finger cover) must be worn by the inspector. | |
| Inspection table or jig must be anti-electrostatic. | |

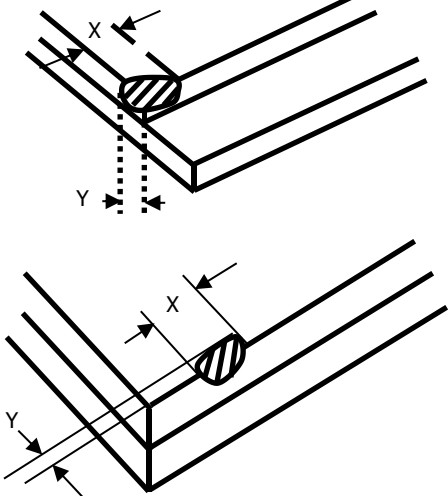
4.2 Sampling Plan

Level II, Normal Inspection, Single Sampling, MIL-STD-105E

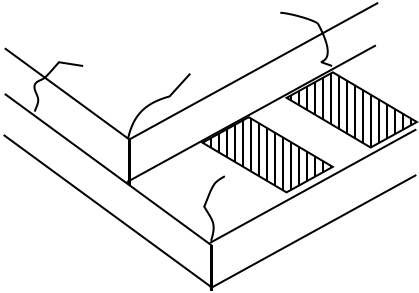

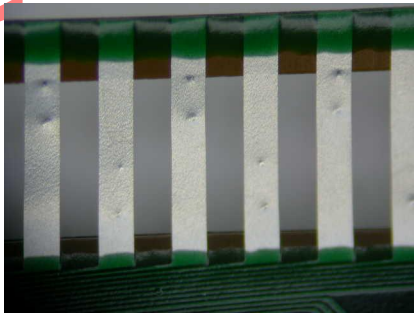
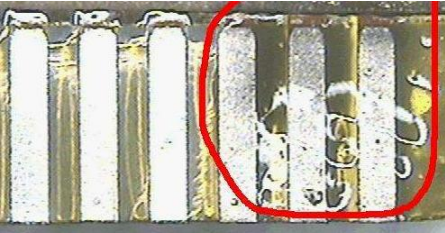
4.3 Criteria & Acceptable Quality Level

| Partition | AQL | Definition |
|-----------|------|---|
| Major | 0.65 | Defects in Pattern Check (Display On) |
| Minor | 1.0 | Defects in Cosmetic Check (Display Off) |

4.3.1 Cosmetic Check (Display Off) in Non-Active Area

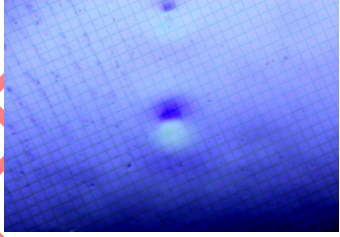
| Check Item | Classification | Criteria |
|------------------------|----------------|---|
| Panel General Chipping | Minor | <p>X > 6 mm (Along with Edge) Y > 1 mm (Perpendicular to edge)</p>  |

4.3.1 Cosmetic Check (Display Off) in Non-Active Area (Continued)

| Check Item | Classification | Criteria |
|---|----------------|---|
| Panel Crack | Minor | Any crack is not allowable.  |
| Copper Exposed (Even Pin or Film) | Minor | Not Allowable by Naked Eye Inspection |
| Film or Trace Damage | Minor |  |
| Terminal Lead Prober Mark | Acceptable |  |
| Glue or Contamination on Pin (Couldn't Be Removed by Alcohol) | Minor |  |
| Ink Marking on Back Side of panel (Exclude on Film) | Acceptable | Ignore for Any |

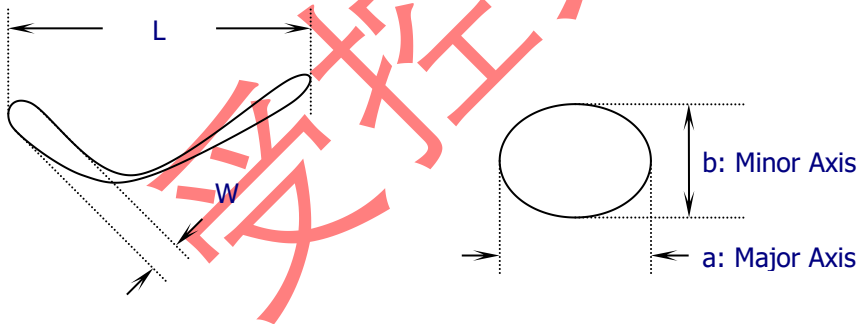
4.3.2 Cosmetic Check (Display Off) in Active Area

It is recommended to execute in clear room environment (class 10k) if actual in necessary.

| Check Item | Classification | Criteria |
|---|----------------|--|
| Any Dirt & Scratch on Polarizer's Protective Film | Acceptable | Ignore for not Affect the Polarizer |
| Scratches, Fiber, Line-Shape Defect (On Polarizer) | Minor | $W \leq 0.1$ Ignore $W > 0.1$ $L \leq 2$ $n \leq 1$ $L > 2$ $n = 0$ |
| Dirt, Black Spot, Foreign Material, (On Polarizer) | Minor | $\Phi \leq 0.1$ Ignore $0.1 < \Phi \leq 0.25$ $n \leq 1$ $0.25 < \Phi$ $n = 0$ |
| Dent, Bubbles, White spot (Any Transparent Spot on Polarizer) | Minor | $\Phi \leq 0.5$ → Ignore if no Influence on Display $0.5 < \Phi$ $n = 0$  |
| Fingerprint, Flow Mark (On Polarizer) | Minor | Not Allowable |

* Protective film should not be tear off when cosmetic check.

** Definition of W & L & Φ (Unit: mm): $\Phi = (a + b) / 2$



**Warranty:**

The warranty period shall last twelve (12) months from the date of delivery. Buyer shall be completed to assemble all the processes within the effective twelve (12) months. Wisevision Optronics Co.,Ltd. shall be liable for replacing any products which contain defective material or process which do not conform to the product specification, applicable drawings and specifications during the warranty period. All products must be preserved, handled and appearance to permit efficient handling during warranty period. The warranty coverage would be exclusive while the returned goods are out of the terms above.

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