

# 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.



**Revised History**

Part Number	Revision	Revision Content	Revised on
X035-0504KSWAG01-H09	A	New	20230518

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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	20	06	05	04
COM2		COM2			20	2E	02	10	01
COM3			COM3		26	2F	1C	1G	1E
COM4				COM4	2B	2A	1B	1A	1F

Customer Approval Signature	Wisevision Optronics Co., Ltd.				Drawing Number	Rev.
	X035-0504KSWAG01-H09 Folding Type OEL Display Module				X035-0504KSWAG01-H08	C
Unless Otherwise Specified		Title		Material		
Unit	mm	mm	mm	Soda Lime / Polyimide		
General Roughness		By	Drawn	E.E.	Panel / E.	P.M.
Tolerance	±0.3	Angle	Date			
Dimension	±1		20230417			Scale
Angle						Sheet
						Size
						1:1
						1 of 1
						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 <sub>br</sub>		300	380	-	cd/m <sup>2</sup>
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.	

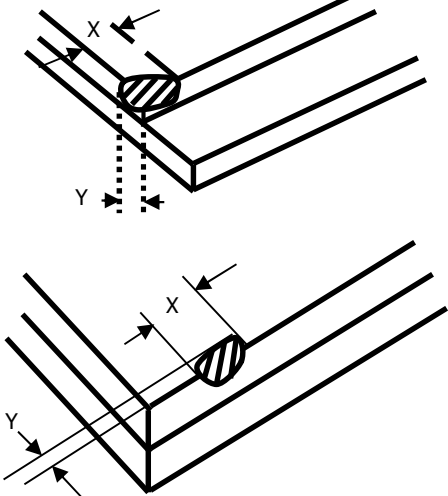
### 4.2 Sampling Plan

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

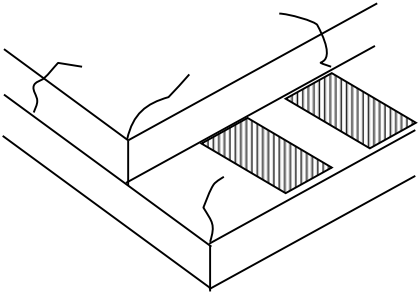

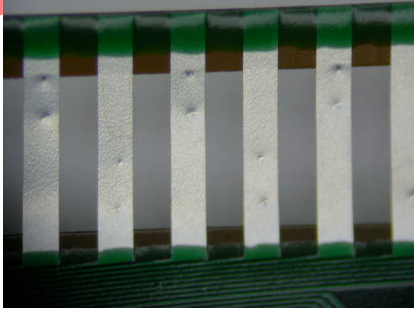
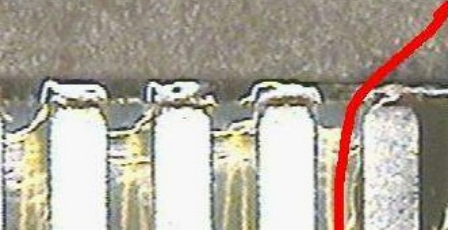
### 4.3 Criteria & Acceptable Quality Level

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 &gt; 6 mm (Along with Edge) Y &gt; 1 mm (Perpendicular to edge)</p> 

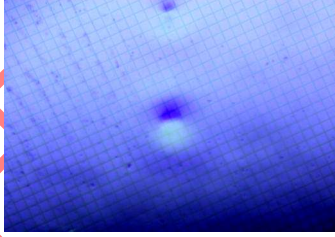
4.3.1 Cosmetic Check (Display Off) in Non-Active Area (Continued)

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



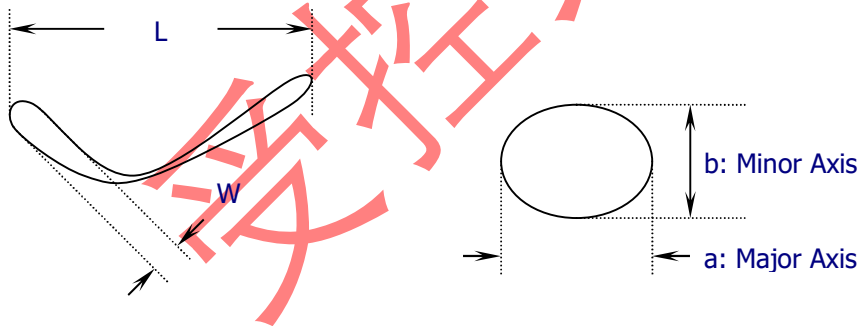
4.3.2 Cosmetic Check (Display Off) in Active Area

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 &  $\Phi$  (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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