

## TEST REPORT

Hardline Laboratory

Report No. : YA40090/2020

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Date : MAY 08, 2020

### Suzhou LYlap Optical Technology Co., Ltd.

NO. 66-26 Linggang Road, Luzhi Town, Wuzhong District,  
Suzhou, Jiangsu

### The following merchandise was submitted and identified by the applicant as:

Style/Item No.: LYM001  
Manufacturer/Vendor: Suzhou LYlap Optical Technology Co., Ltd.  
SGS Reference No.: SHHL2004512247MD

### We have tested the submitted sample(s) as requested and the following results were obtained:

Test Requested: EN 166:2001 / BS EN 166:2002 Personal eye-protection – Specifications  
(clause 6.2 not evaluated)

Optional Requirements: 7.2.4 Protection Against Droplets and Splashes of Liquids (3)  
7.3.2 Resistance to fogging of oculars (N)

Test Method & Result: --- See following sheet(s) ---

Date of Receipt: APR. 20, 2020

Testing Period: APR. 20 ~ MAY 08, 2020

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Testing site:  
61, Kai-Fa Road, Nanzih Export Processing Zone, 81170, Kaohsiung, Taiwan

Signed for and on behalf of  
SGS Taiwan Ltd.

  
Owen Cheng  
Manager



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### Test Method & Result:

EN 166:2001 / BS EN 166:2002 Personal eye-protection – Specifications Personal eye-protection – Specifications

#### Clause

6 Design and manufacturing requirements

6.1 General construction

Result

Pass

### **Finding**

All samples were assessed. The samples were free from projections, sharp edges or other defects which are likely to cause discomfort or injury during use.

6.2 Materials

No parts of the eye-protector which are in contact with the wearer shall be made of materials which are known to cause any skin irritation.

N/E

6.3 Headbands

7 Basic, particular and optional requirements

7.1 Basic requirements

7.1.1 Field of vision

Excluded

Pass

### **Finding**

Samples 01 to 03 were assessed. The samples exhibited at least the minimum field of vision as defined by the Standard.

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### Test Result

#### Clause

7.1.2 Optical requirements

7.1.2.1 Spherical, astigmatic and prismatic refractive powers

7.1.2.1.2 Mounted oculars and unmounted oculars covering both eyes

#### Result

Optical Class 1

### Finding

| Sample | Requirement | Optical Class | Spherical Power (D1+D2)/2<br>m <sup>-1</sup> |              | Astigmatic Power   D1-D2  <br>m <sup>-1</sup> |              |
|--------|-------------|---------------|--|--------------|---|--------------|
|        |             |               | ± 0.06                                       |              | Max. 0.06                                     |              |
|        |             | 1             | Left Ocular                                  | Right Ocular | Left Ocular                                   | Right Ocular |
| 01     | Test Value  | 1             | 0.00   | -0.02        | 0.04  | 0.00         |
| 02     |             |               | -0.01  | -0.01        | 0.00  | 0.00         |
| 03     |             |               | -0.01  | 0.00         | 0.04  | 0.00         |

| Sample | Requirement | Optical Class | Difference In Prismatic Power |                 |                  |
|--------|-------------|---------------|-------------------------------|-----------------|------------------|
|        |             |               | Horizontal                    |                 | Vertical<br>cm/m |
|        |             |               | Base Out<br>cm/m              | Base In<br>cm/m |                  |
|        |             | 1             | Max. 0.75                     | Max. 0.25       | Max. 0.25        |
| 01     | Test Value  | 1             | 0.10                          | --              | 0.00             |
| 02     |             |               | 0.10                          | --              | 0.00             |
| 03     |             |               | 0.10                          | --              | 0.00             |

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### Test Result

#### Clause

7.1.2.2 Transmittance

7.1.2.2.1 Oculars without filtering action

Result

Pass

#### Finding

| Sample | Requirement                     | Test Value  |              |
|--------|---------------------------------|-------------|--------------|
|        |                                 | Left Ocular | Right Ocular |
| 04     | Luminous Transmittance > 74.4 % | 89.14 %     | 87.52 %      |
| 05     |                                 | 89.73 %     | 89.20 %      |
| 06     |                                 | 89.22 %     | 89.19 %      |

7.1.2.3 Diffusion of light

Pass

#### Finding

| Sample | Requirement  | Test Value [(cd/m <sup>2</sup> )/lx] |
|--------|--|--------------------------------------|
| 04L    | Reduced Luminance Factor $\leq$ 0.50 [(cd/m <sup>2</sup> )/lx] | 0.21                                 |
| 05R    |  | 0.23                                 |
| 06L    |  | 0.21                                 |

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### Test Result

#### Clause

7.1.3 Quality of material and surface

Result

Pass

#### **Finding**

Samples 01 to 03 were assessed. The samples were free from bubbles, scratches, inclusions, dull spots, pitting, mould marks, notches, reinforced points, specks, beads, water specks, pocking, gas inclusions, splintering, cracks, polishing defects or undulations.

7.1.4.2 Increased robustness

7.1.4.2.2 Complete eye-protectors and frames

Excluded

7.1.5 Resistance to ageing

7.1.5.1 Stability at an elevated temperature

Pass

#### **Finding**

Samples 01 to 03 were assessed. The samples tested showed no apparent deformation.

7.1.5.2 Resistance to ultraviolet radiation (oculars only)

Pass

#### **Finding**

| Sample | Requirement            |                             | Test Value |
|--------|------------------------|-----------------------------|------------|
|        | Luminous Transmittance | Permissible Relative Change |            |
| 04L    | 17.8 % ~ 100 %         | ± 5 %                       | -0.73 %    |
| 05R    |                        |                             | -0.27 %    |
| 06L    |                        |                             | 1.26 %     |

#### **Finding**

| Sample | Requirement   | Test Value [(cd/m <sup>2</sup> )/lx] |
|--------|---|--------------------------------------|
| 04L    | Reduced Luminance Factor ≤ 0.50 [(cd/m <sup>2</sup> )/lx] | 0.23                                 |
| 05R    |   | 0.37                                 |
| 06L    |   | 0.30                                 |

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### Test Result

Clause

7.1.6 Resistance to corrosion

Result

Pass

### Finding

Samples 07 to 09 were assessed. All metal parts of the samples displayed smooth surfaces, free from corrosion.

7.1.7 Resistance to ignition

Pass

### Finding

Samples 10 to 12 were assessed. For each of the samples tested, no part of the eye-protectors ignites or continues to glow after removal of the steel rod.

7.2.4 Protection Against Droplets and Splashes of Liquids (3)

Eye-protectors for use against droplets (goggles) and splashes of liquids (face-shields) shall be tested in accordance with the methods specified in clause 12 of EN 168:2001.

Pass

7.3.2 Resistance to fogging of oculars (N)

Pass

### Finding

The assessed samples were free from fogging for a minimum of 8 seconds.

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### Test Result

#### Clause

9. Marking

#### Result

No Claim

10. Information supplied by the manufacturer

No provided

### Remark:

1. Samples were provided by applicant and samples were randomly selected to be assessed.
2. Only applicable clauses were shown.
3. N/E = Not Evaluated
4. N/A = Not Applicable
5. The content of this report is invalid if it is not presented as the entire report.
6. The statement of conformity is based on the test results, but does not include the measurement uncertainty.

– Picture(s) –

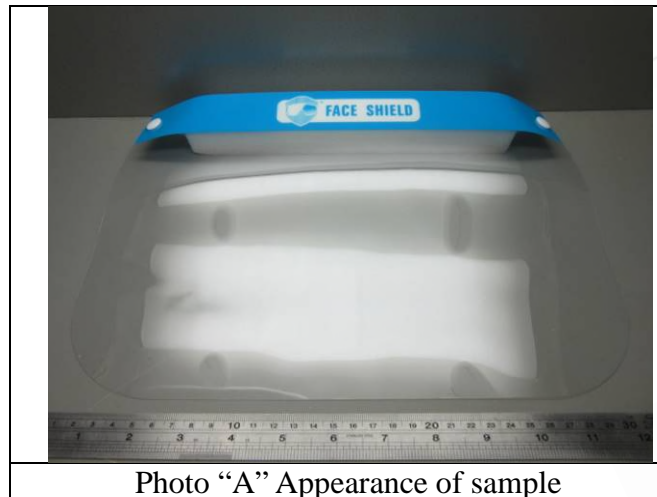


Photo "A" Appearance of sample

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### Annex

#### Estimates of the uncertainty of measurement at a confidence level of 95 %

| Clause    |   | Uncertainty       | Unit                      |
|-----------|---|-------------------|---------------------------|
| 6.3       | Headbands                                 | 0.4 (Max.)        | mm                        |
| 7.1.2.1   | Spherical and astigmatic refractive power | 0.01 (Max.)       | D                         |
|           | Prismatic refractive power difference     | 0.01 (Max.)       | cm/m                      |
| 7.1.2.2.1 | Transmittance values (%)                  | from 100 to 17.8  | %                         |
| 7.1.2.2.2 |   |                   |                           |
| 7.1.2.2.3 |   | from 17.8 to 0.44 |                           |
| 7.1.5.2   |   |                   |                           |
| 7.2.1     |   | 0.25              |                           |
| 7.1.2.3   | Diffusion of light                        | 0.0251            | [(cd/m <sup>2</sup> )/lx] |
| 7.3.1     |   |                   |                           |
| 7.1.2.4   | Polarizing filters                        | 0.1 (Max.)        | degree                    |

**Remark:** Values expressed as a percentage (%) are relative.

--- End of Report ---