

## TEST REPORT

Hardline Laboratory

Report No.: YA10013/2020

Page: 1 of 4

Date: JAN. 22, 2020

### ECOSHINE TECHNOLOGY CO., LTD.

102R. R1 Building No. 31 Gongye 2<sup>nd</sup> Rd., Anping Dist.,  
Tainan City, 709, Taiwan (R.O.C.)

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

Product Description: Infra Red Optical Lens  
Style/Item No.: IRS310  
Manufacturer/Vendor: ECOSHINE TECHNOLOGY CO., LTD.  
Country of Origin: TAIWAN

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

Test Requested:

1. BS EN 172:1995 Personal eye-protection – Sunglare filters for industrial use  
Clause 4.1.2 Filters with code number 6
2. EN ISO 12312-1:2013+A1:2015 Eye and face protection — Sunglasses and related eyewear — Part 1: Sunglasses for general use  
Clause 5.2 Transmittance and filter categories
3. ANSI/ISEA Z87.1-2015 American National Standard for Occupational and Educational Personal Eye and Face Protection Devices  
Table 8. Transmittance Requirements for Infrared Filter Lenses

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

Date of Receipt: JAN. 08, 2020

Testing Period: JAN. 08 ~ 22, 2020

--- See Next Page ---

Signed for and on behalf of  
SGS Taiwan Ltd.

*Owen Cheng*  
Owen Cheng  
Manager



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

## TEST REPORT

Hardline Laboratory

Report No.: YA10013/2020

Page: 1 of 4

### Test Method & Result:

**BS EN 172:1995 Personal eye-protection – Sunglare filters for industrial use**

### Clause

4.1 Permissible transmittance and scale numbers

4.1.2 Filters with code number 6

### Result

Scale number

6-2,5

### Finding

Scale number 6-2,5	Range of luminous transmittance $\tau_v$	
	From (%)	To over (%)
Requirement	17.8 %	29.1 %
Sample	Test Value	
01	19.06 %	

Scale number 6-2,5	Maximum value of infra-red transmittance	
	$\tau_{SIR}$	
Requirement	$<\tau_v$	
Sample	Test Value	
01	5.02 %	

Additional requirements	Sample	Requirement	Test Value	
			Left Ocular	Right Ocular
a)Maximum value of spectral transmittance $\tau_v$ From 280nm to 315nm	01	$<0.1\tau_v$	0.00 % (0.00 $\tau_v$ )	0.00 % (0.00 $\tau_v$ )
b)Maximum value of spectral transmittance $\tau_v$ Over 315nm to 350nm	01	$<\tau_v$	0.00 % (0.00 $\tau_v$ )	0.00 % (0.00 $\tau_v$ )
c)Maximum mean value of spectral transmittance $\tau_v$ From 315nm to 380nm	01	$<\tau_v$	0.00 % (0.00 $\tau_v$ )	0.00 % (0.00 $\tau_v$ )

--- See Next Page ---

## TEST REPORT

Hardline Laboratory

Report No.: YA10013/2020

Page: 1 of 4

**Test Method & Result:****EN ISO 12312-1:2013+A1:2015 Eye and face protection — Sunglasses and related eyewear — Part 1: Sunglasses for general use**ClauseResult

5 Transmittance

5.2 Transmittance and filter categories

Category 2**Finding**

Filter Category	Range	Requirement	Test Value
2	380 ~ 780 nm Luminous Transmittance ( $\tau_v$ )	18 ~ 43 %	19.07 %
	780 ~ 2000 nm Solar IR Transmittance ( $\tau_{SIR}$ )	$< \tau_v$	5.02 %
	280 ~ 315 nm $\tau_{SUVB}$	$< 1.0$ %	0.00 $T_v$ (0.00 %)
	315 ~ 380 nm $\tau_{SUVA}$	$< 0.5 \tau_v$	0.00 $T_v$ (0.00 %)

--- See Next Page ---

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Report No.: YA10013/2020

Page: 1 of 4

**Test Method & Result:****ANSI/ISEA Z87.1-2015 American National Standard for Occupational and Educational Personal Eye and Face Protection Devices**Clause

5. General Requirements

5.1 Optical Requirements

5.1.2 Luminous Transmittance

ResultScale numberR4**Finding**

Scale	Maximum Infrared Average Transmittance %	Test Value
R4	< 5%	3.53 %

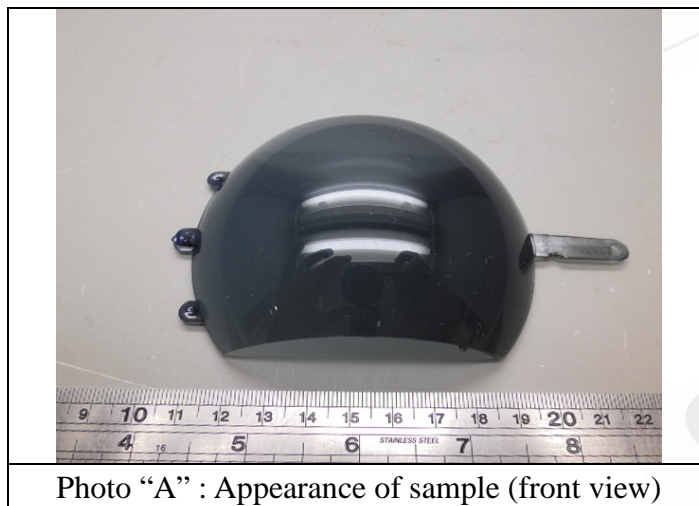
**– Picture(s) –**

Photo “A” : Appearance of sample (front view)

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