Test Report Number: SZHH01916196

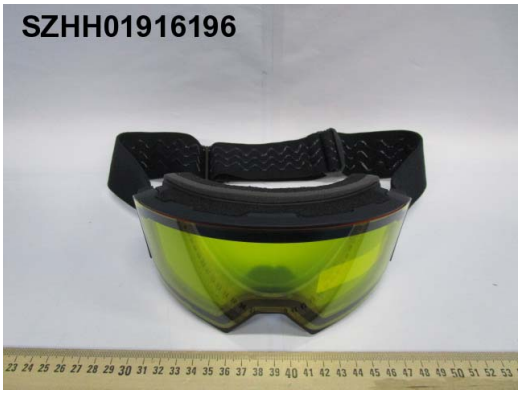
Applicant: GUANGZHOU FETOP OPTICS TECHNOLOGY CO.,LTD
NO.188,JIANSHE ROAD,HUADU DISTRICT, GUANGZHOU,CHINA 510800

Date: May 10, 2024

Sample Description:

Seven (7) pieces of submitted sample said to be :

Item Name	:	**Ski Goggles**
Item No.	:	**FT-026**
Reference No.	:	See Appendix
Trade	:	Fetop Optics
Date Sample Received	:	Apr 17, 2024
Testing Period	:	Apr 17, 2024 ~ May 10, 2024
Appendix	:	FT-001A/B/C, FT-002, FT-003, FT-004，FT-005A/B/C, FT-006A/B, FT-007, FT-008, FT-009A/B, FT-010, FT-011A/B/C, FT-012, FT-013, FT-014, FT-015A/B, FT-016, FT-017, FT-018A/B, FT-019, FT-020A/B, FT-021A/B, FT-022A/B, FT-023, FT-024，FT-025, FT-026, FT-027, FT-028, FT-029, FT-030,FT-031, FT-032, FT-033，FT-034，FT-035，FT-036，FT-037，FT-038，FT-039，FT-040，FT-041，FT-042，FT-043，FT-044，FT-045，FT-046，FT-047



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Tests conducted:
As requested by the applicant, refer to attached page(s) for details.

Conclusion:

Tested samples	Requirement	Result
Submitted samples	Test standard: EN ISO 18527-1:2022 Eye and face protection for sports use — Part 1: Requirements for downhill skiing and snowboarding goggles. Excluding: - Clause 15 - Marking and information to be supplied by the manufacturer	Pass
	UV400	See Test Conducted

Authorized by:
For Intertek Testing Services Shenzhen Ltd.

Rachel L. Guo
General Manager

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Tests Conducted

1 Requirements for downhill skiing and snowboarding goggles

Test standard: EN ISO 18527-1:2022 Eye and face protection for sports use — Part 1: Requirements for downhill skiing and snowboarding goggles.

Number of samples tested: Seven (7) pairs.

Note:

(1) The submitted eyewear was declared by applicant for adult use, and the reference head form was 1-M.

(2) Physiological compatibility
Goggles shall be designed and manufactured in such a way that when used under the conditions and for the purposes intended, they will not compromise the health or safety of the wearer. The risks posed by substances leaking or evaporating from the goggles that can come into prolonged contact with the wearer shall be reduced by the manufacturer to within the limits of any applicable regulatory requirement.

Special attention shall be given to substances that are allergenic, carcinogenic, mutagenic or toxic to reproduction.

Substances recommended for cleaning, maintenance or disinfection shall be known to be unlikely to have any adverse effect upon the wearer, when applied in accordance with the instructions given in the information to be supplied by the manufacturer.

Manufacturers/suppliers shall perform an appropriate risk analysis on potentially harmful substances contained in the goggles such that, when the goggles are used under the conditions and for the purposes intended, the health (and safety) of the wearer shall not be compromised.

Clause	Requirement	Result
4	General requirements for eyewear	
4.1	Physiological compatibility	Note (2)
4.2	Construction and adjustment	P
4.4	Lens material and surface quality	P
4.6	Retention by headband (sit and fit)	P
5	Transmittance of the lenses	
5.2	Transmittance and filter categories	P
5.3	Solar ultraviolet transmittance	P
5.3	General transmittance requirements	
5.4.1	Uniformity of luminous transmittance and transmittance matching	
5.4.1.1	Uniformity of luminous transmittance	P
5.4.1.2	Linear gradient-tinted lenses	NA
5.4.1.3	Radial gradient-tinted lenses	NA
5.4.1.4	Variations due to thickness variations	NA
5.4.2	Ultraviolet transmittance of the frame or housing	P
5.5	Special transmittance requirements	
5.5.1	Photochromic lenses	NA
5.5.2	Polarizing lenses	NA

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Clause	Requirement	Result
5.5.3	Gradient-tinted lenses	NA
5.6	Claimed solar absorption/transmittance properties (optional)	
5.6.2	Solar blue-light absorption/transmittance	NA (No claim)
5.6.3	Solar UV absorption/transmittance	NA (No claim)
5.6.4	Antireflective coated lenses	NA (No claim)
5.6.5	Reduced reflection coated lenses	NA (No claim)
5.6.6	Enhanced infrared absorption	NA (No claim)
6	Scattered light	P
7	Refractive power	
7.2	Spherical and cylindrical power	P
7.3	Spatial deviation	P
7.4	Prism imbalance	P
7.5	Goggles with inserts to carry prescription lenses	NA
8	Mechanical strength	P
9	Resistance to solar ultraviolet radiation	P
10	Resistance to ignition	P
11	Protection against water and snow	P
12	Field of view	P
13	Minimum area to be protected	P
14	Optional requirements	
14.1	Extended low temperature range	P
*14.2	Resistance to fogging	P
14.3	Resistance to abrasion	P
15	Marking and information to be supplied by the manufacturer	
15.1	Assessment	#1
15.2	Mandatory marking on goggles	#2
15.3	Information to be supplied with goggles by the manufacturer	#3
15.4	Additional information to be available from the manufacturer	#4

Abbreviation: P = Pass; NA = Not Applicable.
Note: *=The test was subcontracted item

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Tests Conducted

Test data:

5.2 Transmittance categories

Range	Left ocular (%)	Right ocular (%)	Tint category
380 - 780nm ($\tau_{v\ D65}$)	77.12	76.47	SW1

5.3 Solar ultraviolet transmittance

Range	Measured value (%)		Requirement (%)	
	Left ocular	Right ocular	Left	Right
280 - 315nm (τ_{SUVB})	0.00	0.02	$\leq 0.03\ \tau_{v\ D65}$ (2.31)	$\leq 0.03\ \tau_{v\ D65}$ (2.29)
315 - 380nm ($\tau_{SUVA\ 380}$)	0.00	0.02	$\leq 0.30\ \tau_{v\ D65}$ (23.14)	$\leq 0.30\ \tau_{v\ D65}$ (22.94)
380 - 400nm ($\tau_{m380-400}$)	0.01	0.02	$\leq 0.75\ \tau_{v\ D65}$ (57.84)	$\leq 0.75\ \tau_{v\ D65}$ (57.35)

Requirement: (Table 1)

Tint category	Wavelength range from 280 nm to 400 nm			Visible spectral range	Optional Infrared spectral range
	Maximum solar UV-B transmittance τ_{SUVB} 280 nm ≤ λ ≤ 315 nm (%)	Maximum solar UV-A transmittance $\tau_{SUVA\ 380}$ 315 nm ≤ λ ≤ 380 nm (%)	Maximum Mean 380 nm to 400 nm spectral transmittance $\tau_{m380-400}$ 380 nm ≤ λ ≤ 400 nm (%)	Luminous transmittance $\tau_{v\ D65}$ 380 nm ≤ λ ≤ 780 nm (%)	Maximum solar IR transmittance τ_{SIR} 780 nm ≤ λ ≤ 2000 nm (%)
S0	0.03 $\tau_{v\ D65}$	0.30 $\tau_{v\ D65}$	0.75 $\tau_{v\ D65}$	$\tau_{v\ D65} > 80\%$	$\tau_{v\ D65}$
S1				$43\% < \tau_{v\ D65} \leq 80\%$	$\tau_{v\ D65}$
S2		0.15 $\tau_{v\ D65}$	0.50 $\tau_{v\ D65}$	$18\% < \tau_{v\ D65} \leq 43\%$	$\tau_{v\ D65}$
S3				$8\% < \tau_{v\ D65} \leq 18\%$	$\tau_{v\ D65}$
S4			0.5% or 0.15 $\tau_{v\ D65}$ whichever is greater	$3\% < \tau_{v\ D65} \leq 8\%$	$\tau_{v\ D65}$
Note Some national requirements may stipulate a different requirement for long wavelength limit of UV-A.					

5.4.1.1 Uniformity tinted lenses

Uniformity	Left ocular (%)	Right ocular (%)	Requirement (%)
Variation within lens [relative to higher value]	3.65	1.11	≤ 15
Difference between lenses [relative to lighter filter]	0.84		≤ 15

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6 Scattered light

Scattered light	Left ocular (%)	Right ocular (%)	Requirement (%)
	0.29	0.25	≤ 3

7.2 Refractive power

Optical power	Left ocular (m^{-1})	Right ocular (m^{-1})	Requirement (m^{-1})
Spherical power	-0.04	-0.04	± 0.12
Astigmatic power	0.08	0.08	≤ 0.12
Difference of spherical power between left and right filters	0.00		≤ 0.18

7.4 Prism imbalance

Prismatic power difference (cm/m)			Requirement (cm/m)
Horizontal	Base out	0.410	≤ 1.00
	Base in	--	≤ 0.25
Vertical		0.001	≤ 0.25

9 Resistance to solar ultraviolet radiation

(a) Relative change in the luminous transmittance after irradiation

Left ocular (%)	1.06	Requirement ±3% for category S0 ±5% for category S1 ±8% for category S2 ±10% for categories S3 & S4
Right ocular (%)	1.35	

(b) Wide angle scattering after irradiation

Wide angle scattering	Left ocular (%)	Right ocular (%)	Requirement (%)
	0.36	0.47	≤ 3

(c) Solar ultraviolet transmittance

Range	Measured value (%)		Requirement (%)	
	Left ocular	Right ocular	Left	Right
280 - 315nm (τ_{SUVB})	0.00	0.01	≤ 0.03 $\tau_{v\ D65}$ (2.33)	≤ 0.03 $\tau_{v\ D65}$ (2.33)
315 - 380nm ($\tau_{SUVA\ 380}$)	0.01	0.02	≤ 0.30 $\tau_{v\ D65}$ (23.38)	≤ 0.30 $\tau_{v\ D65}$ (23.25)
380 - 400nm ($\tau_{m380-400}$)	0.01	0.02	≤ 0.75 $\tau_{v\ D65}$ (58.46)	≤ 0.75 $\tau_{v\ D65}$ (58.13)

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12 Field of view

Field of view	Left ocular (°)	Right ocular (°)	Requirement (°)
Temporal	>65	>65	≥ 60
Nasal	>35	>35	≥ 30
Superior	>35	>35	≥ 30
Inferior	>35	>35	≥ 30

14.2 Resistance to fogging

Time of remain free from fogging	Left ocular (s)	Right ocular (s)	Requirement (s)
	>35	>35	≥ 30

Remarks:

#1 – All markings should be clear and sufficiently durable to remain legible throughout the intended lifetime of the product. The marking shall be fully visible when the complete goggles are assembled. The marking shall not encroach into the minimum field of view.

#2 – The frame shall be marked with:

a) The manufacturer's identifying mark or manufacturer's trade mark;
b) The number of this document, i.e. ISO 18527-1;

The lenses shall be marked with:

a) Manufacturer's identifying mark or manufacturer's trade mark;
b) Lens tint category or, in the case of photochromic lenses, tint categories.

Where the goggles comprise lens(es) and frame manufactured in one piece, the information may be on either the len(es) or the frame.

#3 – The manufacturer shall provide information for the user with the goggles. This information shall be in the form of markings on the frame or separate information on labels, packaging, etc. that accompanies the goggles at the point of sale. Where pictograms are used, an explanation of the significance of these pictograms shall also be available.

This information shall include:

a) An identification as goggles for downhill skiing and snowboarding(S);
b) An identification of model;
c) The identifying mark or trade mark and the address of the manufacturer or supplier;
d) The applicable headform(s) and size(s) according to ISO 18526-4;
e) The minimum temperature of us (-10℃ see 8.1) or lower, if claimed, see 14.1;
f) Type of lens if photochromic and/or polarizing;
g) The number of the claimed tint category (in both the faded and darkened states for photochromic lenses), preferably on the frame, or on the lens;
h) The description of the claimed tint category in form of a symbol and/or verbal designation as given in Table 7;
i) The number of this document (EN ISO 18527-1:2022);
j) The Instructions for care and cleaning; warning(s) about cleaning or other products that might damage the eyewear; list of damaging products not suitable for cleaning;
k) The restrictions on use, which shall include at least the following warings.
   1) "Not for driving or road use." And/or one of the graphical symbols in Figure 2 at least 5mm high.
   2) "Not for direct observation of the sun."

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3) "Not for protection against artificial light sources e.g. solaria."
4) "Not for protection against mechanical hazards such as impact." This may be omitted if the goggles meet the impact level C requirements of ISO 16321-1
5) Any other restrictions deemed appropriate by the manufacturer,

#4 – The following information shall be available from the manufacturer or supplier on request:

a) An explanation of the marking and of the trademarks that are not universally recognized or foreseen by the users of this document;
b) The position of the reference point when this is different from the one defined in this document;
c) The country of origin (Made in …);
d) The nominal value of luminous transmittance;
e) The transmittance requirements applicable to this product (Table 1);
f) The polarization efficiency in the case of polarizing lense;
g) The base material of lenses and frame.

2 UV400

Assessment was made against a level of 100% UV protection, in which the spectral transmittance was examined within a range of 280nm - 400nm to ensure that transmittance value of 0.5% was not exceeded.

Number of samples tested: One (1) pair

Result:

Wavelength (nm)	Transmittance (%)	
	Left Ocular	Right Ocular
280	<0.10	<0.10
285	<0.10	<0.10
290	<0.10	<0.10
295	<0.10	<0.10
300	<0.10	<0.10
305	<0.10	<0.10
310	<0.10	<0.10
315	<0.10	<0.10
320	<0.10	<0.10
325	<0.10	<0.10
330	<0.10	<0.10
335	<0.10	<0.10
340	<0.10	<0.10
345	<0.10	<0.10
350	<0.10	<0.10
355	<0.10	<0.10
360	<0.10	<0.10
365	<0.10	<0.10

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	Transmittance (%)	
370	<0.10	<0.10
375	<0.10	<0.10
380	<0.10	<0.10
385	<0.10	<0.10
390	<0.10	<0.10
395	<0.10	<0.10
400	<0.10	<0.10

Remark : < = Less Than

Comment: The submitted sample was considered acceptable to make a claim of "UV-400" protection, the criteria of which was mentioned above.

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End of report

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