Vartest Laboratories

Quality Assurance & Compliance Testing
Utilizing Textile & Related Technologies

19 West 36 Street, Tenth Floor
New York, NY 10018
tel: 212 947 8391 fax: 212 947 8719

www.vartest.com

Third Party Certification
(ANSI/ISEA 107-2020)
HIGH VISIBILITY COMPLIANCE CERTIFICATE

Submitted by: UTON Textile Technology Co., Ltd.
Name: Retro-Reflective Material
Style: Heat Transfer Reflective Tape
Model #: UT-LYR4
Color Silver

Date: September 29, 2021 Report #: OTCCHI.A081221A-R1

The submitted retroreflective trim **MEETS** all performance requirements of retroreflective material PRIOR to test exposure per ANSI/ISEA 107-2020.

The submitted retroreflective trim **MEETS** all performance requirements of retroreflective material AFTER test exposure per ANSI/ISEA 107-2020.

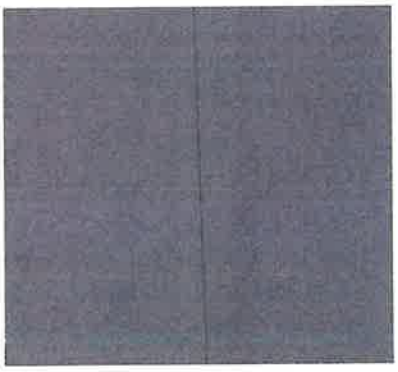
All of the above tests and evaluations were performed in accordance with ISO/IEC 17025 Quality Systems.

Certifications of background and other garment material characteristics are not implied by this certificate or by the original report.

Certificate authorized by:

Joseph Lin/AW

Joseph Lin
Laboratory Manager



A2LA ACCREDITED
Testing Cert #2180.01

*This certification applies to the particular sample tested and to the specific tests carried out as dated and detailed in the report referenced above. It does not signify any measure of approval, control, supervision, or surveillance by Vartest Laboratories Inc. to this or any related product.

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ANSI/ISEA 107-2020 Retroreflective Trim Test Results Summary

Submitted by: UTON Textile Technology Co., Ltd.
Name: Retro-Reflective Material
Style: Heat Transfer Reflective Tape
Model #: UT-LYR4
Color Silver

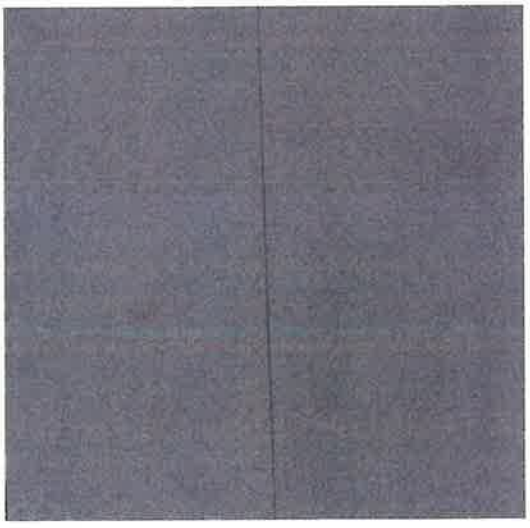
Date: September 29, 2021 Report #: OTCCHI.A081221A-R1

The submitted material **MEETS** all Photometric performance requirements of retroreflective material prior to test exposure per ANSI/ISEA 107-2020 clause 9.1 for minimum coefficient of retroreflection for retroreflective trim.

The submitted material **MEETS** all photometric performance requirements of retroreflective material after test exposure per ANSI/ISEA 107-2020 clause 9.2 for minimum coefficient of retroreflection for retroreflective trim after abrasion, flexing, folding at cold temperatures, temperature variation, washing per ISO 6330 6N, (Lay Flat to Dry) (50 cycles), and rainfall.

Retroreflective Material

Retroreflective, Performance, Initial	Passed
Abrasion	Passed
Flexing	Passed
Folding at Cold Temperatures	Passed
Exposure to Temperature Variation	Passed
Washing Per ISO 6330 6N, (Lay Flat to Dry) (50X)	Passed
Retroreflective Performance in Rainfall	Passed



Signed For The Company By

Joseph Lin

Joseph Lin
Laboratory Manager

ACCREDITED
Testing Cert #2180.01

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ISO/IEC 17025 Third Party Test Report

DATE : September 29, 2021 **FILE:** OTCCHI.A081221A-R1

CLIENT: UTON Textile Technology Co., Ltd.
No. 789 Kening Road, Jiangning District,
Nanjing City, Jiangsu Providence, China

ATTN: Eden Gao

SAMPLE IDENTIFIED BY CLIENT AS:

Reflective Tape Submitted
Per ANSI/ISEA 107-2020 Specification
Name: Retro-Reflective Material
Style: Heat Transfer Reflective Tape
Model #: UT-LYR4
Color Silver

TEST PROCEDURES: **TEST RESULTS:**

Retroreflective Material Testing Report

PHOTOMETRIC PERFORMANCE:

Take Measurements at $\varepsilon_1 = 0°$ and $\varepsilon_2 = 90°$. Record maximum value on left side of test result column and the other value on right side of test result column.

ANSI/ISEA 107 REQUIREMENT Section 9.1, Table 4			Test Result cd/(lx.m²)		Pass/Fail
Observation Angle	Entrance Angle	Minimum cd/(lx.m²)			
12' (0.2°)	5°	330 / 248	523	523	Pass
	20°	290 / 218	537	536	Pass
	30°	180 / 135	541	539	Pass
	40°	65 / 47	470	493	Pass
20' (0.33°)	5°	250 / 188	357	357	Pass
	20°	200 / 150	371	370	Pass
	30°	170 / 128	370	370	Pass
	40°	60 / 45	345	352	Pass
1.0°	5°	25 / 18.8	55.1	54.8	Pass
	20°	15 / 11.3	51.2	50.7	Pass
	30°	12 / 9	53.8	52.9	Pass
	40°	10 / 7.5	41.9	46.0	Pass
1.5°	5°	10 / 7.5	24.7	24.6	Pass
	20°	7 / 5.25	23.5	23.7	Pass
	30°	5 / 3.75	24.1	24.3	Pass
	40°	4 / 3	27.2	24.6	Pass

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ISO/IEC 17025 Third Party Test Report

FILE: OTCCHI.A081221A-R1
SAMPLE IDENTIFIED BY CLIENT AS:
Reflective Tape Submitted
Per ANSI/ISEA 107-2020 Specification
Name: Retro-Reflective Material
Style: Heat Transfer Reflective Tape
Model #: UT-LYR4
Color Silver

Retroreflective Material Testing Report

PHYSICAL PERFORMANCE:

Take Measurements at $\varepsilon_1 = 0°$ and $\varepsilon_2 = 90°$.

Test	Section	ANSI/ISEA 107 Requirement	Test Result	Pass/Fail
Retroreflection, after abrasion	9.2, 10.4.1	R_A (0.2°/5°) > 100 cd/(lx.m^2) at ε_1 R_A (0.2°/5°) > 75 cd/(lx.m^2) at ε_2	ε_1: 496 ε_2: 493	Pass Pass
Retroreflection, after flexing	9.2, 10.4.2	R_A (0.2°/5°) > 100 cd/(lx.m^2) at ε_1 R_A (0.2°/5°) > 75 cd/(lx.m^2) at ε_2	ε_1: 514 ε_2: 513	Pass Pass
Retroreflection, after folding at cold temperatures **Observation**: No Cracks	9.2, 10.4.3	R_A (0.2°/5°) > 100 cd/(lx.m^2) at ε_1 R_A (0.2°/5°) > 75 cd/(lx.m^2) at ε_2	ε_1: 535 ε_2: 535	Pass Pass
Retroreflection, after exposure to temperature variation	9.2, 10.4.4	R_A (0.2°/5°) > 100 cd/(lx.m^2) at ε_1 R_A (0.2°/5°) > 75 cd/(lx.m^2) at ε_2	ε_1: 548 ε_2: 547	Pass Pass
Retroreflection, after washing per ISO 6330-2012, 6N, Lay Flat to Dry, 50 cycles	9.2, 10.4.5.1	R_A (0.2°/5°) > 100 cd/(lx.m^2) at ε_1 R_A (0.2°/5°) > 75 cd/(lx.m^2) at ε_2	ε_1: 350 ε_2: 350	Pass Pass
Retroreflection, in rainfall	9.2, 10.4.6	R_A (0.2°/5°) > 100 cd/(lx.m^2) at ε_1 R_A (0.2°/5°) > 75 cd/(lx.m^2) at ε_2	ε_1: 456 ε_2: 455	Pass Pass

This report has been revised to amend Client Information. This report replaces report # OTCCHI.A081221A dated September 17, 2021.

Signed For The Company By
Joseph Lin
Laboratory Manager

VARTEST LABORATORIES Tested & Evaluated CF

Stacy Sadowy
Quality Assurance Manager

CF/09