

Third Party Certification (CSA Z96-2015 (R2020)) 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.A081221A1-R1

The submitted retroreflective trim **MEETS** all Level 2 performance requirements of retroreflective material PRIOR to test exposure per CSA Z96-2015 (R2020).

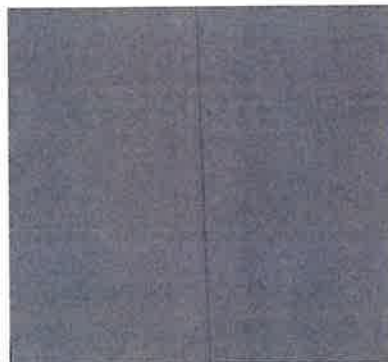
The submitted retroreflective trim **MEETS** all Level 2 performance requirements of retroreflective material AFTER test exposure per CSA Z96-2015 (R2020).

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
Laboratory Manager



*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.

CSA Z96-2015 (R2020) Retroreflective Trim Test Results Summary

Submitted by: UTON Textile Technology Co., Ltd.

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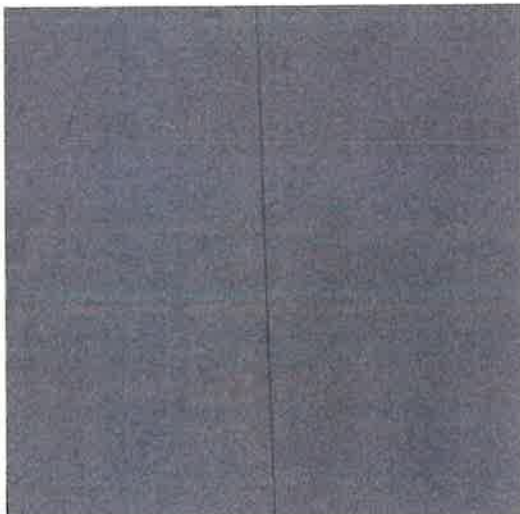
Report #: OTCCHI.A081221A1-R1

The submitted material **MEETS** all Level 2 Photometric performance requirements of retroreflective material prior to test exposure per CSA Z96-2015 (R2020) clause 6.1 for minimum coefficient of retroreflection for retroreflective trim.

The submitted material **MEETS** all Level 2 photometric performance requirements of retroreflective material after test exposure per CSA Z96-2015 (R2020) clause 6.2 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, Level 2

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 / JSL

Joseph Lin
Laboratory Manager



Testing Cert #2180.01

ISO/IEC 17025 Third Party Test Report

DATE : September 29, 2021

FILE: OTCCHI.A081221A1-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 CSA Z96-2015 (R2020) 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 $\varepsilon_1 = 0^\circ$ and $\varepsilon_2 = 90^\circ$. Record maximum value on left side of test result column and the other value on right side of test result column.

CSA Z96-2015 REQUIREMENT Section 6.1, Table 5			Test Result cd/(lx.m ²)		Pass/Fail
Observation Angle	Entrance Angle	Minimum cd/(lx.m ²)			
12' (0.2°)	5°	330 / 247.5	523	523	Pass
	20°	290 / 217.5	537	536	Pass
	30°	180 / 135	541	539	Pass
	40°	65 / 48.75	470	493	Pass
20' (0.33°)	5°	250 / 187.5	357	357	Pass
	20°	200 / 150	371	370	Pass
	30°	170 / 127.5	370	370	Pass
	40°	60 / 45	345	352	Pass
1.0°	5°	25 / 18.75	55.1	54.8	Pass
	20°	15 / 11.25	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

ISO/IEC 17025 Third Party Test Report

FILE: OTCCHI.A081221A1-R1

SAMPLE IDENTIFIED BY CLIENT AS:

Reflective Tape Submitted
Per CSA Z96-2015 (R2020) Specification
Name: Retro-Reflective Material
Style: Heat Transfer Reflective Tape
Model #: UT-LYR4
Color Silver

Retroreflective Material Testing Report

PHYSICAL PERFORMANCE:

Take Measurements at $\epsilon_1 = 0^\circ$ and $\epsilon_2 = 90^\circ$.				
Test	Section	CSA Z96-2015 Requirement	Test Result	Pass/Fail
Retroreflection, after abrasion	6.2, 7.4.1	$R_A (0.2^\circ/5^\circ) > 100 \text{ cd/(lx.m}^2\text{) at } \epsilon_1$ $R_A (0.2^\circ/5^\circ) > 75 \text{ cd/(lx.m}^2\text{) at } \epsilon_2$	ϵ_1 : 496	Pass
			ϵ_2 : 493	Pass
Retroreflection, after flexing	6.2, 7.4.2	$R_A (0.2^\circ/5^\circ) > 100 \text{ cd/(lx.m}^2\text{) at } \epsilon_1$ $R_A (0.2^\circ/5^\circ) > 75 \text{ cd/(lx.m}^2\text{) at } \epsilon_2$	ϵ_1 : 514	Pass
			ϵ_2 : 513	Pass
Retroreflection, after folding at cold temperatures Observation: No Cracks	6.2, 7.4.3	$R_A (0.2^\circ/5^\circ) > 100 \text{ cd/(lx.m}^2\text{) at } \epsilon_1$ $R_A (0.2^\circ/5^\circ) > 75 \text{ cd/(lx.m}^2\text{) at } \epsilon_2$	ϵ_1 : 535	Pass
			ϵ_2 : 535	Pass
Retroreflection, after exposure to temperature variation	6.2, 7.4.4	$R_A (0.2^\circ/5^\circ) > 100 \text{ cd/(lx.m}^2\text{) at } \epsilon_1$ $R_A (0.2^\circ/5^\circ) > 75 \text{ cd/(lx.m}^2\text{) at } \epsilon_2$	ϵ_1 : 548	Pass
			ϵ_2 : 547	Pass
Retroreflection, after washing per ISO 6330-2012, 6N, Lay Flat to Dry, 50 cycles	6.2, 7.4.5.1, 7.4.6	$R_A (0.2^\circ/5^\circ) > 100 \text{ cd/(lx.m}^2\text{) at } \epsilon_1$ $R_A (0.2^\circ/5^\circ) > 75 \text{ cd/(lx.m}^2\text{) at } \epsilon_2$	ϵ_1 : 350	Pass
			ϵ_2 : 350	Pass
Retroreflection, in rainfall	6.2, 7.4.8	$R_A (0.2^\circ/5^\circ) > 100 \text{ cd/(lx.m}^2\text{) at } \epsilon_1$ $R_A (0.2^\circ/5^\circ) > 75 \text{ cd/(lx.m}^2\text{) at } \epsilon_2$	ϵ_1 : 456	Pass
			ϵ_2 : 455	Pass

This report has been revised to amend Client Information. This report replaces report # OTCCHI.A081221A1 dated September 17, 2021.

Signed For The Company By


Joseph Lin
Laboratory Manager




Stacy Sadowy
Quality Assurance Manager

CF/09