



AUTOMOTIVE MANUFACTURERS EQUIPMENT
COMPLIANCE AGENCY, INC.

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This notice verifies that the item described below has been tested by an accredited laboratory and has been found to be in compliance with the jurisdictional standard(s) listed below where applicable. The issuance of this AMECA Notice of Equipment Compliance™ does not denote or imply any endorsement or recommendation of the item described below.

Notification Number: 181561

Test Report Date: October 16, 2018

Expiration Date: January 1, 2022

Item: "20-CV009S/20-CV010S" - Combination Headlamp, Turn Signal and Parking Lamp - White And Yellow In Color

Use: On 2005-2013 Model Years Chevrolet Corvette Motor Vehicles

Jurisdictional Compliance Standard(S)

Identical To: United States FMVSS 571.108 Photometric Only

Item Markings: Lens: MORIMOTO (Morimoto Logo) DOT SAE I5 P HL VOR 05 20-
CV-010S
Housing: 12V

Lightsource: Headlamp:: 2 LED'S, 12.8V
Turn Signal Lamp: 6 LED'S, 12.8V
Parking Lamp: 12 LED'S, 12.8V

Test Lab: ISOQA Technical Service Co., Ltd.

Report Number: ISOQA-18-0577


Executive Director



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Report No. : ISOQA-18-0577

Test Component : 20-CV009S/ 20-CV010S

Applicant : Morimoto Lighting



SAFETY COMPLIANCE TESTING FOR FMVSS 108

Lamps, Reflective Devices, and Associated Equipment

* * * * *

ISOQA Technical Service Co., Ltd.

60, Yong Long Road,
Da-Li, Taichung, 41257
Taiwan

TEST REPORT

A handwritten signature in black ink that reads 'Archer Chang'.

October 16, 2018

Signature of Responsible Laboratory Official
Title: Laboratory Manager

Approval Date

Report No. : ISOQA-18-0577

Test Component : 20-CV009S/ 20-CV010S

Applicant : Morimoto Lighting

TABLE OF CONTENTS

Contents	Number of page in each report
Cover Page	1
Contents	1
Product information	1
Front Turn Signal Lamp	4
Parking Lamp	4
Headlamp - Lower Beam	5
Headlamp - Upper Beam	5
Drawing	1
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Total Pages	17


Report Prepared By : Lisa Liu
 Review By : Julie Wu
 Approval By : Arthur Chang

Report No. : ISOQA-18-0577

Test Component : 20-CV009S/ 20-CV010S

Applicant : Morimoto Lighting

PRODUCT INFORMATION

Test Component	20-CV009S/ 20-CV010S
Applicant	Morimoto Lighting
Manufacturer	same as Applicant
Trade Mark	MORIMOTO
Lens Material	Chimei WONDERLITE PC-110L Polycarbonate N-102 Clear \$
Coating of Exterior Lens	UVHC3000
Inner Lens Material	Glass
Reflex Reflector Material	-
Applicable Vehicle	CHEVROLET CORVETTE 2005-2013
Rated Voltage	12 V
Marking on Lens	 DOT SAE I5 P HL VOR 05 20-CV010S
Marking on Housing	None
Method of Mounting to Vehicle	bolted

* Above-mentioned information is provided by the applicant

Functions	Front Turn Signal Lamp	Parking Lamp	Headlamp - Lower Beam	Headlamp - Upper Beam		
Requirements	FMVSS 108 SAE J588	FMVSS 108 SAE J222	FMVSS 108	FMVSS 108		
Identification Code of SAE J759	I5	P	HL	HL		
Number of Compartments or Lamps	1	1	1	1		
Color of Lens	Clear	Clear	Clear	Clear		
Color of Light Emitted	Yellow	White	White	White		
Light Source Designation	LED × 6	LED × 12	LED × 2	LED × 2		
Design Voltage	12.8 V	12.8 V	12.8 V	12.8 V		
Rated Mean Spherical Candlepower	-	-	-	-		
Effective projected illuminated area of lens (mm ²)	3600	N/A	N/A	N/A		
Method of determination	Projected	N/A	N/A	N/A		
Test Item	Inspector	Date	Number of Tested			
Physical Inspection	Bo Yang Lee	2018/7/12	2	2	2	2
Photometry Test	Bo Yang Lee	2018/7/12	2	2	2	2
Color Test	Bo Yang Lee	2018/7/12	2	2	2	2

Report No. : ISOQA-18-0577

Test Component : 20-CV009S/ 20-CV010S

Applicant : Morimoto Lighting



TURN SIGNAL LAMP TEST REPORT

Test Component	20-CV009S/ 20-CV010S
Applicant	Morimoto Lighting
Test Laboratory	ISOQA Technical Service Co., Ltd.
Test Date	2018/7/12
Report Number	ISOQA-18-0577
Number of devices tested	See below
Light source Designation	LED × 6

SUMMARY

Test Description	Test Results	
	Number Passed	Number Failed
- Physical Inspection	2	-
- Photometry Test	2	-
- Color Test	2	-

Remarks : _____

Signature of Responsible Laboratory Official

Title : Laboratory Manager

Date: : October 16, 2018


Report No. : ISOQA-18-0577

Test Component : 20-CV009S/ 20-CV010S

Applicant : Morimoto Lighting

**PHYSICAL INSPECTION**

Inspection Performed by : Bo Yang Lee Date : 2018/7/12

Marking on Lens	 DOT SAE I5 P HL VOR 05 20-CV010S	
Marking on Housing	None	
Lens Material	Chimei WONDERLITE PC-110L Polycarbonate N-102 Clear \$	
Coating of External Lens	UVHC3000	
Light Sources Used	Trade No/ Designation	LED
	Quantity	6
	Rated Voltage	12 V

Remarks : _____

EFFECTIVE PROJECTED LUMINOUS LENS AREA

Test Performed by : Bo Yang Lee Date : 2018/7/12

Vehicle Type	Passenger cars, multipurpose passenger vehicles, trucks, trailers, and buses of less than 2032 mm in overall width		
Method of determination	Projected		
Effective projected illuminated area of lens (mm ²)	Requirement	Value	Result
	2200	3600	PASSED

Remarks : _____

Report No. : ISOQA-18-0577

Test Component : 20-CV009S/ 20-CV010S

Applicant : Morimoto Lighting

PHOTOMETRY TEST

Test Performed by : Bo Yang Lee Date : 2018/7/12
 Test distance(m) : 3.167 m Light Source Designator : LED × 6
 Tested Voltage : 12.8 V Lighted Sections : 3

Steady Burning at H-V (according to SAE J1889)	Sample 1			Sample 2		
	1 min.	Steady	Ratio	1 min.	Steady	Ratio
	815.6	798.7	1.02	844	830	1.02

Test Points	Zone	Rto.	Minimum (cd)	Maximum (cd)	Sample 1		Sample 2	
		-			Rto	Measured ⁽¹⁾	Rto	Measured ⁽¹⁾
5U - 20L	1	-	87.5	-	-	77.80	-	103.80
5D - 20L	1	-	87.5	-	-	62.05	-	68.49
10U - 5L	1	-	137.5	-	-	341.70	-	360.40
10D - 5L	1	-	137.5	-	-	290.50	-	427.60
5U - 10L	2	-	250	-	-	294.00	-	301.50
H - 10L	2	-	350	-	-	352.10	-	376.10
5D - 10L	2	-	250	-	-	286.60	-	356.70
5U - V	3	-	587.5	-	-	745.00	-	677.00
H - 5L	3	-	687.5	-	-	536.90	-	666.60
H - V	3	-	687.5	-	-	798.70	-	830.00
H - 5R	3	-	687.5	-	-	788.80	-	642.20
5D - V	3	-	587.5	-	-	570.70	-	718.40
5U - 10R	4	-	250	-	-	492.30	-	283.70
H - 10R	4	-	350	-	-	515.30	-	378.30
5D - 10R	4	-	250	-	-	376.20	-	353.40
10U - 5R	5	-	137.5	-	-	626.90	-	309.90
10D - 5R	5	-	137.5	-	-	282.30	-	444.00
5U - 20R	5	-	87.5	-	-	160.00	-	100.00
5D - 20R	5	-	87.5	-	-	61.30	-	83.00
Visibility			0.3	-	-	(0.93)	-	(1.09)
						-		-

Zone Total Luminous Intensity

Zone	Minimum (cd)	Sample 1	Sample 2
1	450	772.05	960.29
2	850	932.70	1034.30
3	3237.5	3440.10	3534.20
4	850	1383.80	1015.40
5	450	1130.50	936.90

(1) The measured values at each individual test point shall not be less than 60% of the required minimum value shown for that individual test point location. The sum of the luminous intensity measurements at each test point within a zone shall not be less than the Zone Total Luminous Intensity shown.

Report No. : ISOQA-18-0577

Test Component : 20-CV009S/ 20-CV010S

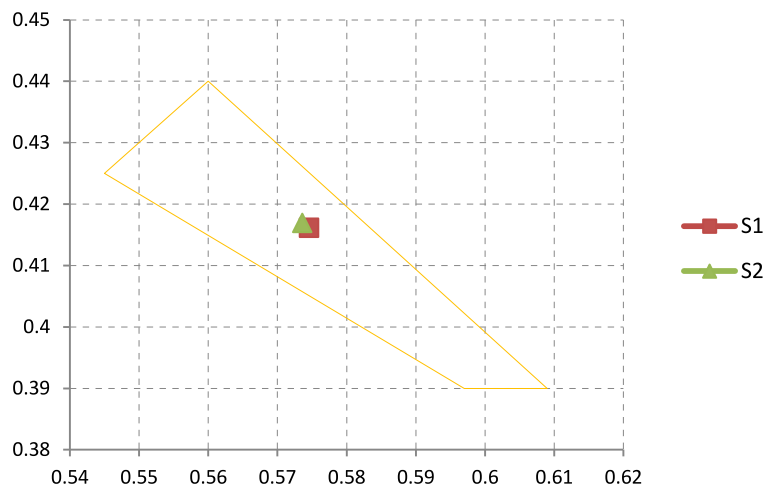
Applicant : Morimoto Lighting



COLOR TEST

Test Performed by : Bo Yang Lee Date : 2018/7/12
Test distance(m) : 3.073 m Light Source Designator : LED × 6
Color of Light Emitted : Yellow

Color emitted from HV point		Sample 1	Sample 2
	x=	0.5746	0.5736
	y=	0.4161	0.4169



Remarks : _____

Report No. : ISOQA-18-0577

Test Component : 20-CV009S/ 20-CV010S

Applicant : Morimoto Lighting



PARKING LAMP TEST REPORT

Test Component	20-CV009S/ 20-CV010S
Applicant	Morimoto Lighting
Test Laboratory	ISOQA Technical Service Co., Ltd.
Test Date	2018/7/12
Report Number	ISOQA-18-0577
Number of devices tested	See below
Light source Designation	LED × 12

SUMMARY

Test Description	Test Results	
	Number Passed	Number Failed
- Physical Inspection	2	-
- Photometry Test	2	-
- Color Test	2	-

Remarks : _____

Signature of Responsible Laboratory Official

Title : Laboratory Manager

Date: : October 16, 2018

Report No. : ISOQA-18-0577


Test Component : 20-CV009S/ 20-CV010S

Applicant : Morimoto Lighting



PHYSICAL INSPECTION

Inspection Performed by : Bo Yang Lee Date : 2018/7/12

Marking on Lens	 DOT SAE I5 P HL VOR 05 20-CV010S	
Marking on Housing	None	
Lens Material	Chimei WONDERLITE PC-110L Polycarbonate N-102 Clear \$	
Coating of External Lens	UVHC3000	
Light Sources Used	Trade No/ Designation	LED
	Quantity	12
	Rated Voltage	12 V

Remarks : _____

Report No. : ISOQA-18-0577

Test Component : 20-CV009S/ 20-CV010S

Applicant : Morimoto Lighting

**PHOTOMETRY TEST**

Test Performed by : Bo Yang Lee Date : 2018/7/12
 Test distance(m) : 3.167 m Light Source Designation : LED × 12
 Tested Voltage : 12.8 V

Steady Burning at H-V (according to SAE J1889)	Sample 1			Sample 2		
	1 min.	Steady	Ratio	1 min.	Steady	Ratio
	93	92.7	1.00	81.1	80.6	1.01

Test Points	Zone	Minimum (cd)	Maximum (cd)	Sample 1	Sample 2
				Measured ⁽¹⁾	Measured ⁽¹⁾
5U - 20L	1	0.4	125	20.64	18.04
5D - 20L	1	0.4	250	13.78	6.43
10U - 5L	1	0.8	125	67.90	68.77
10D - 5L	1	0.8	250	23.62	15.09
5U - 10L	2	0.8	125	62.73	55.08
H - 10L	2	1.4	125	59.31	39.40
5D - 10L	2	0.8	250	35.99	20.05
5U - V	3	2.8	125	107.00	107.80
H - 5L	3	3.6	125	84.80	62.20
H - V	3	4	125	92.70	80.60
H - 5R	3	3.6	125	85.90	86.90
5D - V	3	2.8	250	54.43	41.91
5U - 10R	4	0.8	125	76.63	93.10
H - 10R	4	1.4	125	65.30	75.62
5D - 10R	4	0.8	250	37.40	40.56
10U - 5R	5	0.8	125	74.33	89.40
10D - 5R	5	0.8	250	23.35	20.79
5U - 20R	5	0.4	125	28.38	36.11
5D - 20R	5	0.4	250	12.61	18.74
Visibility above HH		0.05	125	(0.89) 108.31	(1.09) 113.02
Visibility under HH		0.05	250	(0.26) 92.91	(0.28) 86.81

Zone Total Luminous Intensity

Zone	Minimum (cd)	Sample 1	Sample 2
1	2.4	125.94	108.33
2	3.0	158.03	114.53
3	16.8	424.83	379.41
4	3.0	179.33	209.28
5	2.4	138.67	165.04

(1) The measured values at each individual test point shall not be less than 60% of the required minimum value shown for that individual test point location. The sum of the luminous intensity measurements at each test point within a zone shall not be less than the Zone Total Luminous Intensity shown.

Report No. : ISOQA-18-0577

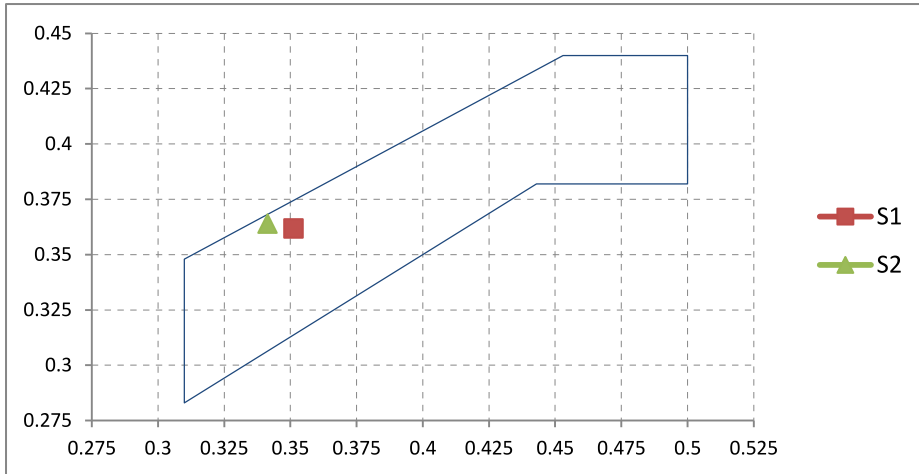
Test Component : 20-CV009S/ 20-CV010S
Applicant : Morimoto Lighting



COLOR TEST

Test Performed by : Bo Yang Lee Date : 2018/7/12
Test distance(m) : 3.073 m Light Source Designation : LED × 12
Color of Light Emitted : White

Color emitted from HV point	Sample 1		Sample 2
	x=	0.3512	0.3414
	y=	0.3617	0.364



Remarks : _____

Report No. : ISOQA-18-0577

Test Component : 20-CV009S/ 20-CV010S

Applicant : Morimoto Lighting



HEADLAMP TEST REPORT

Test Component	20-CV009S/ 20-CV010S
Applicant	Morimoto Lighting
Test Laboratory	ISOQA Technical Service Co., Ltd.
Test Date	2018/7/12
Report Number	ISOQA-18-0577
Number of devices tested	See below
Light source Designation	Upper Beam - LED × 2 Lower Beam - LED × 2

SUMMARY

Test Description	Test Results	
	Number Passed	Number Failed
- Physical Inspection	2	-
- Photometry Test	2	-
- Color Test	2	-

Remarks : _____

Signature of Responsible Laboratory Official

Title : Laboratory Manager

Date: : October 16, 2018

Report No. : ISOQA-18-0577


Test Component : 20-CV009S/ 20-CV010S

Applicant : Morimoto Lighting



PHYSICAL INSPECTION

Inspection Performed by : Bo Yang Lee Date : 2018/7/12

Marking on Lens	 DOT SAE I5 P HL VOR 05 20-CV010S		
Marking on Housing	None		
Lens Material	Chimei WONDERLITE PC-110L Polycarbonate N-102 Clear \$		
Coating of External Lens	UVHC3000		
Light Sources Used	Function	Upper Beam	Lower Beam
	Trade No/ Designation	LED	LED
	Quantity	2	2
	Rated Voltage	12 V	12 V

Remarks : _____

Report No. : ISOQA-18-0577

Test Component : 20-CV009S/ 20-CV010S

Applicant : Morimoto Lighting

**PHOTOMETRY TEST**

Test Performed by : Bo Yang Lee Date : 2018/7/12
 Test distance(m) : 25.002 m Test Voltage : 12.8 V
 Light Source Designation : Upper Beam - LED × 2 / Lower Beam - LED × 2

Steady Burning at H - V (according to SAE J2650)	Sample 1			Sample 2		
	1 min.	Steady	Ratio	1 min.	Steady	Ratio
	44950	42400	1.06	49980	47920	1.04

UB2 - Upper Beam Photometric Test Point Values

Test Points	Minimum (cd)	Maximum (cd)	Sample 1	Sample 2
			Measured	Measured
2U - V	1500	-	12780.00	11690.00
1U - 3L	5000	-	8480.00	7146.00
1U - 3R	5000	-	9250.00	9910.00
H - V	40000	75000	42400.00	47920.00
H - 3L	15000	-	16010.00	15620.00
H - 3R	15000	-	16430.00	16820.00
H - 6L	5000	-	6154.00	7369.00
H - 6R	5000	-	7125.00	7805.00
H - 9L	3000	-	5239.00	6427.00
H - 9R	3000	-	6557.00	7133.00
H - 12L	1500	-	4598.00	5746.00
H - 12R	1500	-	6051.00	6665.00
1.5D - V	5000	-	38500.00	32240.00
1.5D - 9L	2000	-	6410.00	7496.00
1.5D - 9R	2000	-	6878.00	6875.00
2.5D - V	2500	-	17340.00	12130.00
2.5D - 12L	1000	-	5564.00	5405.00
2.5D - 12R	1000	-	5162.00	5379.00
4D - V	-	12000	8370.00	6945.00

Report No. : ISOQA-18-0577

Test Component : 20-CV009S/ 20-CV010S

Applicant : Morimoto Lighting



Steady Burning at 1.5D - 2R (according to SAE J2650)	Sample 1			Sample 2		
	1 min.	Steady	Ratio	1 min.	Steady	Ratio
	25450	25010	1.02	24940	24110	1.03

LB2V - Lower Beam Photometric Test Point Values

Test Points	Minimum (cd)	Maximum (cd)	Sample 1	Sample 2
			Measured	Measured
10U to 90U	-	125	118.45	105.18
4U - 8L	64	-	104.30	94.50
4U - 8R	64	-	138.90	99.20
2U - 4L	135	-	198.60	184.70
1.5U - 1R to 3R	200	-	837.53	505.86
1.5U - 1R to R	-	1400	1043.32	958.84
1U - 1.5L to L	-	700	568.51	537.18
0.5U - 1.5L to L	-	1000	838.04	586.35
0.5U - 1R to 3R	500	2700	1449.30	987.05
			2476.07	2281.01
H - 4L	135	-	511.90	334.40
H - 8L	64	-	388.60	223.60
0.6D - 1.3R	10000	-	36130.00	40930.00
0.86D - V	4500	-	33350.00	35320.00
0.86D - 3.5L	1800	12000	7241.00	8260.00
1.5D - 2R	15000	-	25010.00	24110.00
2D - 9L	1250	-	6118.00	6610.00
2D - 9R	1250	-	6353.00	6220.00
2D - 15L	1000	-	4693.00	4953.00
2D - 15R	1000	-	5079.00	5330.00
4D - 4R	-	12500	5379.00	5592.00
4D - 20L	300	-	2272.00	1807.00
4D - 20R	300	-	2128.00	2303.00

Report No. : ISOQA-18-0577

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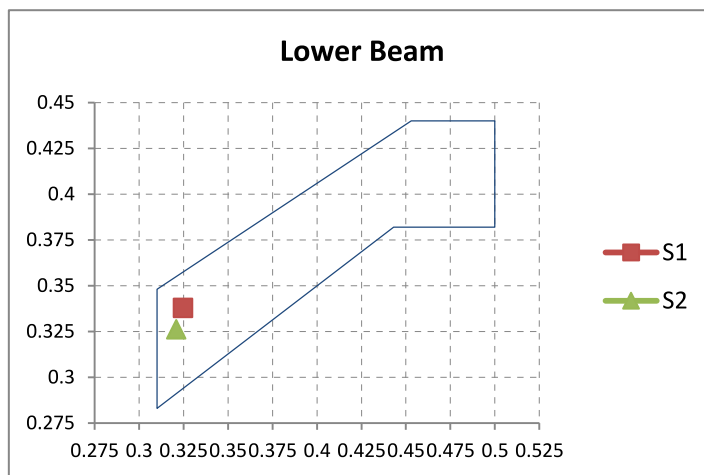
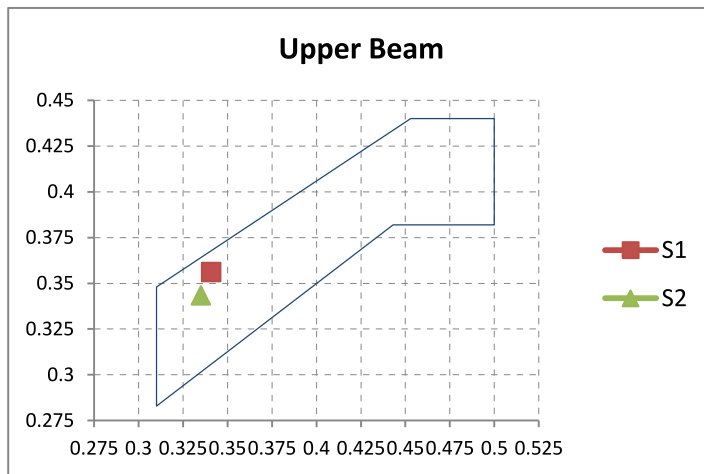
Applicant : Morimoto Lighting



COLOR TEST

Test Performed by : Bo Yang Lee Date : 2018/7/12
Test distance(m) : 3.073 m Color of Light Emitted : White

Color emitted from HV point		Sample 1	Sample 2
Upper Beam	x=	0.3410	0.3352
	y=	0.3562	0.3434
Lower Beam	x=	0.3247	0.3210
	y=	0.3377	0.3260



Remarks : _____

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Applicant : Morimoto Lighting



Front View



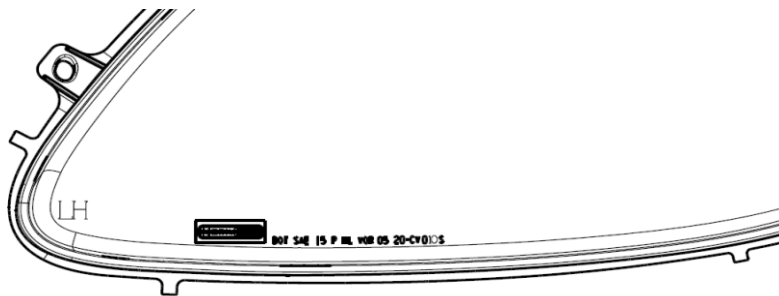
Side View



Top View



Rear View



DOT SAE J5 P HL VOR 05 20-CV010S



DOT SAE J5 P HL VOR 05 20-CV010S

Marking