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TEST REPORT 190501-1225382

Report Date: May 1, 2019
Test Component: Stellar 1225382 18 LED Stop and Tail Lamp Bar – 12 inch
Devices Tested: Three (3) each submitted April 24, 2019

Test Summary (FMVSS-108)

Photometric Tests – Stop and Tail Lamp

FMVSS-108 Table VIII Tail Lamp (3 Sections)	PASSED
FMVSS-108 Table IX Stop Lamp (3 Sections)	PASSED

Mechanical Tests per SAE J575e

IP X7 Water Immersion	PASSED
Vibration	PASSED
Thermal	PASSED
Durability	PASSED
LED Life	PASSED
Color (SAE J578c)	PASSED
Dimensional Tests	PASSED
Socket Tests per SAE J567b	Not Applicable

Signature of responsible engineer:

Gary I. Robin

DESCRIPTION SHEET

Test Component: Stellar 1225382 18 LED Stop and Tail Lamp Bar – 12 inch

Markings:

Lens: DOT SAE ST 18
Housing: None

Lens Information:

Material: PC (Red transparent)

Housing:

Material: N/A

BULB	QUANTITY	VOLTAGE
LED	18	12.8/14V

Note: lens complies with SAE J576 JUL 91 requirements as specified in FMVSS 108.

TEST RESULT SHEET

Test Component: Stellar 1225382 18 LED Stop and Tail Lamp Bar – 12 inch

MECHANICAL TESTS: SAE J575e

Sample: 3

Vibration test (Shock test).

There was no evidence of material degradation, displacement or rupture of components. LEDs were not damaged.

PASSED

Moisture Test (IP X7):

Lamp had no moisture intrusion inside of its cavity

PASSED

Dust Test:

NOT REQUIRED

Corrosion Test:

NOT REQUIRED

Thermal Test:

PASSED

There was no evidence of reduced function, material degradation or discoloration

PASSED

Durability Test:

Lamp operation remains normal after testing

PASSED

LED Life Test:

Lamp is not blinking, blackening or shutting off after 1000 hrs.

PASSED

Tests reviewed by:

Gary I. Robin

TEST DATA SHEET

Test Component: Stellar 1225382 18 LED Stop and Tail Lamp Bar -12 inch

Test Item	Chroma Test per SAE J578C								
Test Date	4.25.19								
Equipment	power Supply, chroma Meter								
Test Condition: 1. 23~28° C 2. Voltage: 12.8 V									
Test Method : Mount specimen on tooling, chroma test at a distance of 1.5 M using CIE fixture.									
Determined Standard : $Y \leq 0.33$ (yellow boundary) $Y \geq 0.98 - X$ (purple boundary)									
Test Result : $X=0.702$ $Y=0.297$									
	<table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th>Color</th> <th>Function</th> </tr> </thead> <tbody> <tr> <td>Black</td> <td>TAIL</td> </tr> <tr> <td>Red</td> <td>STOP</td> </tr> <tr> <td>White</td> <td>GND</td> </tr> </tbody> </table>	Color	Function	Black	TAIL	Red	STOP	White	GND
Color	Function								
Black	TAIL								
Red	STOP								
White	GND								

Result: PASSED SAE J578C color test

By:

Gay / Rubin

PHOTOMETRIC TEST DATA SHEET

Test Component: Stellar 1225382 18 LED Stop and Tail Lamp Bar – 12 inch

Sample: 1
 Specification: FMVSS 108 Table VIII Tail Lamp (3 or more sections)
 Test Distance: 3.16M
 Test Voltage: 14.00 Volts
 Test Current: 0.03 Amps
 Test Power: 0.42 Watts

LUMINOUS INTENSITY, CANDELLA

<u>TEST POINT</u>	<u>MIN</u>	<u>MAX</u>	<u>MEASURED</u>	<u>H-REAIM</u>	<u>V-REAIM</u>
10U-5L	1	25	5.74	-5	+10
10U-5R	1	25	5.85	+5	+10
5U-20L	.7	25	6.09	-20	+5
5U-10L	2	25	10.34	-10	+5
5U-V	4.5	25	14.02	0	+5
5U-10R	2	25	7.72	+10	+5
5U-20R	.7	25	3.47	+20	+5
H-10L	2	25	11.84	-10	0
H-5L	5	25	16.54	-5	0
H-V	5	25	15.61	0	0
H-5R	5	25	12.33	+5	0
H-10R	2	25	7.15	+10	0
5D-20L	.7		5.66	-20	-5
5D-10L	2		8.56	-10	-5
5D-V	4.5		11.93	0	-5
5D-10R	2		7.26	+10	-5
5D-20R	.7		3.59	+20	-5
10D-5L	1		5.08	-5	-10
10D-5R	1		7.01	+5	-10
GROUP 1	3.5		22.58		
GROUP 2	6		30.74		
GROUP 3	24		70.43		
GROUP 4	6		22.12		
GROUP 5	3.5		19.92		

Device meets requirements at all points.

PHOTOMETRIC TEST DATA SHEET

Test Component: Stellar 1225382 18 LED Stop and Tail Lamp Bar – 12 inch

Sample: 1
 Specification: FMVSS 108 Table IX Stop Lamp (3 or more sections)
 Test Distance: 3.16M
 Test Voltage: 12.80 Volts
 Test Current: 0.28 Amps
 Test Power: 3.58 Watts

LUMINOUS INTENSITY, CANDELLA

<u>TEST POINT</u>	<u>MIN</u>	<u>MAX</u>	<u>MEASURED</u>	<u>H-REAIM</u>	<u>V-REAIM</u>
10U-5L	22	420	61.83	-5	+10
10U-5R	22	420	62.09	+5	+10
5U-20L	15	420	65.11	-20	+5
5U-10L	40	420	109.35	-10	+5
5U-V	95	420	148.68	0	+5
5U-10R	40	420	82.17	+10	+5
5U-20R	15	420	36.63	+20	+5
H-10L	55	420	125.66	-10	0
H-5L	110	420	174.00	-5	0
H-V	110	420	165.34	0	0
H-5R	110	420	130.23	+5	0
H-10R	55	420	75.56	+10	0
5D-20L	15	420	60.16	-20	-5
5D-10L	40	420	90.11	-10	-5
5D-V	95	420	126.01	0	-5
5D-10R	40	420	76.62	+10	-5
5D-20R	15	420	37.76	+20	-5
10D-5L	22	420	53.68	-5	-10
10D-5R	22	420	54.95	+5	-10
GROUP 1	70		240.78		
GROUP 2	135		325.12		
GROUP 3	520		744.26		
GROUP 4	135		234.36		
GROUP 5	70		191.42		

Device meets requirements at all points.

Reviewed and approved for submittal by:

A handwritten signature in black ink that reads "Gary I. Robin". The signature is written in a cursive style with a prominent initial "G".

Gary I. Robin
Responsible Engineer

May 1, 2019