United Arab Emirates
Ministry of interior
Civil Defense G.H.Q
Fire intentional Lab & House
Of Expertise & Training Center
Approval Committee

لة الامارات العربية المتحدة
ارة الداخلية
يادة العامة للدفاع المدني
نة اعتماد المختبرات العالمية
يوت الخبرة ومعاهد التدريب

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Northbrook, IL US
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Date: 2018-10-16

CERTIFICATE OF COMPLIANCE

This certificate of compliance validates the following			
TEST REPORT NUMBER 'Assessment Reports' are not acceptable	S3406-20100619	**CERTIFICATE NUMBER**	UVAV.S35913
DATE OF ISSUE	2010-06-19	**DATE OF ISSUE**	2017-06-13
DATE OF EXPIRY	Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service.	**DATE OF EXPIRY**	Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service.
Manufacturer details (TO BE COMPLETED BY CLIENT)			
NAME OF FACTORY/ MANUFACTURER	GENTEX CORP	**NAME OF THE BRAND**	Avenger Systems LLC
FACTORY ADDRESS / REGION (STREET / TOWN / CITY / COUNTRY)	10985 CHICAGO DR ZEELAND, MI 49464-8101 USA	**MODEL / NO**	AS4000-10, AS4001-10, AS4006-10, AS4002-10, AS4007-10.
WEBSITE	http://www.gentex.com	**LOGO ON THE PRODUCT**	AVENGER
TEL	616.931.3521	**EMAIL**	sales@avengersystems.com

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Product Details From Test Report		Reference Test Report page NO
DESCRIPTION OF THE PRODUCT (TECHNICAL DETAILS FROM TEST REPORT, SUCH AS ACTUAL FIRE RATINGS/DIMENSIONS/THICKNESS/ SENSITIVITY ETC)	Visual-signal Appliances for Fire-protective Signaling Systems – This category covers visual-signal appliances and accessories investigated for fire-protective signaling applications, and are intended for use with certified compatible fire alarm control units or control unit accessories. Horn, Model AS4000-10. Strobe, Models AS4001-10, AS4006-10. Horn/Strobe, Models AS4002-10, AS4007-10.	S3406-20100619
TEST STANDARD (SUCH AS ASTM/BS EN/ DN ETC)	UL 1638 – Visible Signaling Devices for Fire Alarm and Signaling Systems, Including Accessories 1.1 This standard applies to visual signaling devices intended for indoor and/or outdoor installation: a) In Canada, in accordance with CSA C22.1, Canadian Electrical Code, Part I, Safety Standard for Electrical Installations; and with CAN/ULC S524, Standard for Installation of Fire Alarm Systems. Refer to CAN/ULC S525, Audible Signaling Devices for Fire Alarm and Signaling Systems, Including Accessories, CAN/ULC-S541, Speakers for Fire Alarm and Signaling Systems, Including Accessories, for requirements pertaining to audible devices and speakers. b) In the United States in accordance with the National Electrical Code, NFPA 70, and the National Fire Alarm and Signaling Code, NFPA 72. 1.2 These requirements cover visible signal devices for use in ordinary (non-hazardous) indoor locations and outdoor locations. This includes: a) Flashing visual devices used for fire alarm or emergency signaling in both public mode and private mode as defined in the glossary b) Emergency warning used to notify occupants that an emergency exists.	S3406-20100619

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	c) Informative type visual signaling devices connected to or controlled by fire alarm or other emergency signaling system equipment, or both. 1.3 This standard also applies to protective covers and accessories used with visible signals. 1.4 This standard does not apply to visual signaling devices not intended for emergency signaling applications and intended for operation on Class 2 signal circuits as defined in a) In Canada, CSA C22.1, Canadian Electrical Code, Part I, Safety Standard for Electrical Installations, b) In the United States, the National Electrical Code, NFPA 70. 1.5 Visible signaling devices for use in hazardous or corrosive locations shall comply with the requirements of this Standard and the applicable requirements of: a) In Canada, CSA C22.1, Canadian Electrical Code, Part I, Safety Standard for Electrical Installations, with respect to the location hazard. b) In the United States, the National Electrical Code, NFPA 70. Note: In the United States, general signaling appliances are covered by UL 464A. 1.6 A supplementary audible signal, incorporated as part of a visible signaling device which is intended for fire alarm application shall comply with the requirements of this Standard and the applicable requirements of: a) In Canada, CAN/ULC-S525, Audible Signaling Devices for Fire Alarm and Signaling Systems, Including Accessories, and CAN/ULC-S541, Speakers for Fire Alarm and Signaling Systems, Including Accessories, b) In the United States, Standard for Audible Signal Appliances for Fire Alarm and Signaling Systems, Including Accessories, UL 464, and Standard for Speakers for Fire Alarm and Signaling Systems, Including Accessories, UL 1480.	

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TEST DESCRIPTION

The following tests from the referenced standard(s), as applicable to the products submitted, were conducted:

UL 1638, Test Name	Section
Electrical Measurements	12
Light Output and Flash Rate/Duration Between Pulses Test	13
Variable Voltage Operation Test (General and Informative Type Appliances)	14
Temperature Test	15
Endurance Test	16
Component Failure Test	17
Abnormal Operation and Burnout Test	18
Dielectric Voltage-Withstand Test	19
Rain Test	20
Variable Ambient Tests	21
Transient Tests - Supply line transients	22.2
Transient Tests - Internally induced transients	22.3
Vibration Test	23
Jarring Test	24
Corrosion Tests	25
Tests on Polymeric Materials	26
High-Temperature Exposure Test	27
Flame Test	28
Impact Test	29
Infrared Analysis	30
Ultraviolet Light and Water Exposure Test	31
Marking Permanency Tests	34

The results of this investigation including evaluation and testing indicate that the products are complied with applicable requirements of the Standard ANSI/UL 1638, "Standard for Safety for Visible Signaling Devices for Fire Alarm and Signaling

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	Systems, Including Accessories" and therefore, such products are judged eligible to bear UL's Mark.	
SPECIFICATION OF TEST SPECIMEN	The samples used for testing and evaluation were considered representative of the submitted products.	S3406-20100619
TEST RESULT **(SUCH AS PASSED CRITERIA___/ COMPLIED TO___/ DURATION___/OBSERVATION___/ETC)**	Pass – Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service	S3406-20100619
PRODUCT APPLICATION GUIDELINE (END USE) **(CLEARLY STATE THE END USE WITH SPECIFIC APPLICATION, SUCH AS EXACT FIRE RATING/TO BE INSTALLED IN___/TO BE INSTALLED AT____/TO BE CONNECTED WITH____/TO BE INSTALLED WITH___ ETC ALONG WITH ANY WARNINGS SUCH AS NOT TO BE USED IN___/NOT TO BE INSTALLED AT___/ NOT TO BE INSTALLED WITH___ETC.**	This category covers visual-signal appliances and accessories investigated for fire-protective signaling applications, and are intended for use with certified compatible fire alarm control units or control unit accessories. Accessories, such as enclosures and back boxes, and the products with which they are compatible are identified in the individual certifications. Where multiple parts are employed to form a complete unit, the specific parts are identified in the individual certifications. The marking on each part references installation instructions which show assembly and installation of the parts to form a certified product. All products covered under this category are intended for indoor use only unless otherwise specifically marked. Visual-signal appliances have been investigated for light output measured at a distance of 10 ft. on-axis. The units are marked with a range of light output and flash rate.	S3406-20100619

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Laboratory and Certification body details			
NAME OF CERTIFICATION BODY	UL LLC	**NAME OF TEST FACILITY**	UL LLC Facility
CERTIFICATION BODY ADDRESS / REGION (STREET / TOWN / CITY / COUNTRY)	333 Pfingsten Road Northbrook, IL 60062 USA	**TEST FACILITY ADDRESS / REGION** (STREET / TOWN / CITY / COUNTRY)	333 Pfingsten Road Northbrook, IL 60062 USA
WEBSITE	www.ul.com	**WEBSITE**	www.ul.com
TEL	1-877-854-3577	**TEL**	1-877-854-3577
EMAIL	FireandSecurity@ul.com	**EMAIL**	FireandSecurity@ul.com
ACCREDITED BY (NAME OF ACCREDITATION BODY WHICH ISSUED ACCREDITATION TO THE CERTIFICATION BODY, ALONG WITH WEBSITE)	American National Standards Institute (ANSI) as a product certification body www.ansi.org	**ACCREDITED BY** (NAME OF ACCREDITATION BODY WHICH ISSUED ACCREDITATION TO THE LABORATORY, ALONG WITH WEBSITE)	International Accreditation Services (IAS) www.iasonline.org
AS PER (STANDARD TO WHICH THE CERTIFICATION BODY IS ACCREDITED TO)	ISO/IEC Guide 65	**AS PER** (STANDARD TO WHICH YOUR ORGANIZATION IS ACCREDITED TO)	ISO 17025
VALIDITY (EXPIRY DATE OF CERTIFICATION BODY ACCREDITATION)	Active as of date of issuance of this certificate	**VALIDITY** (EXPIRY DATE OF LABORATORY ACCREDITATION)	Active as of date of issuance of this certificate
REFERENCE NUMBER: (CERTIFICATION BODY ACCREDITATION REFERENCE NUMBER TO VERIFY ON THE ACCREDITOR'S WEBSITE)	Accreditation ID #0198	**REFERENCE NUMBER:** (THE LABORATORY ACCREDITATION REFERENCE NUMBER TO VERIFY ON THE ACCREDITOR'S WEBSITE)	Accreditation ID# TL-157
CERTIFICATION MARK	UL		

(ENDORSEMENT) TO BE SIGNED BY MANUFACTURER (TO BE COMPLETED BY CLIENT)			
NAME OF MANUFACTURER'S SIGNATORY	Scott Ryan	**SIGNATURE**	
EMAIL / TEL	scott.ryan@gentex.com legal.notification@gentex.com +1 (616) 772-1800	**FACTORY OFFICIAL SEAL**	GENTEX CORPORATION CORPORATE SEAL MICHIGAN
NOTES: I Undertake that all data and information provided are genuine and accurate			

(ENDORSEMENT) TO BE SIGNED BY CERTIFICATION BODY			
NAME OF CERTIFICATION BODY SIGNATORY	Gilberto Astacio	**SIGNATURE**	Gilberto Astacio
EMAIL / TEL	Gilberto.Astacio@ul.com (847) 664-1341	**CERTIFICATION BODY OFFICIAL SEAL**	UL Building & Life Safety Technologies Northbrook, IL US For UAE Certificate of Compliance use only.
NOTES: I Undertake that all data and information provided are genuine and accurate			

ATTACHMENTS:

- **COPY OF 'CERTIFICATE OF COMPLIANCE' ISSUED BY CERTIFICATION BODY (OLD OR NEW)**