

<b>1.0 Reference and Address</b>			
Report Number	104836010COL-001	Original Issued: 28-Mar-2022	Revised: 14-Jun-2022
Standard(s)	Commercial Electric Cooking Appliances [UL 197:2010 Ed.10+R:10Jul2020] Commercial Cooking Appliances [CSA C22.2#109:2017 Ed.3]		
Applicant	Lightfry USA, LLC	Manufacturer 1	<b>Catalytic Combustion Corporation</b>
Address	1801 N. Elder Street Nampa, ID 83687	Address	311 Riggs Street Bloomer, WI 54724
Country	USA	Country	USA
Contact	Keith Raymond Beau Guthrie	Contact	John Robinson Simon Bath
Phone	(609) 529-9870	Phone	(715) 568-2882
FAX	NA	FAX	NA
Email	<a href="mailto:Kraymondusa@lightfryusa.com">Kraymondusa@lightfryusa.com</a> <a href="mailto:bguthrie@hbspecialtyfoods.com">bguthrie@hbspecialtyfoods.com</a>	Email	<a href="mailto:jrobinson@catalyticcombustion.com">jrobinson@catalyticcombustion.com</a> <a href="mailto:sbath@catalyticcombustion.com">sbath@catalyticcombustion.com</a>

<b>2.0 Product Description</b>	
Product	Lightfry Vent System
Brand name	EcoFry
Description	The product covered by this report is a vent system that contains a catalytic converter and heater to reduce emissions from LightFry 12U. This product is cord connected and intended for commercial use.
Models	LF1036166-1
Model Similarity	NA
Ratings	120V, 60 Hz, 12A.
Other Ratings	NA
Conditions of Acceptability	The products covered in this Report are limited in performance capabilities and are intended for use on Lightfry 12U Airfryers. Leakage current was tested on the 120V circuit. Determination of the acceptability of risk in conjunction to leakage current to be made when mounted to end product.

**3.0 Product Photographs**

**Photo 1 - External Front View**

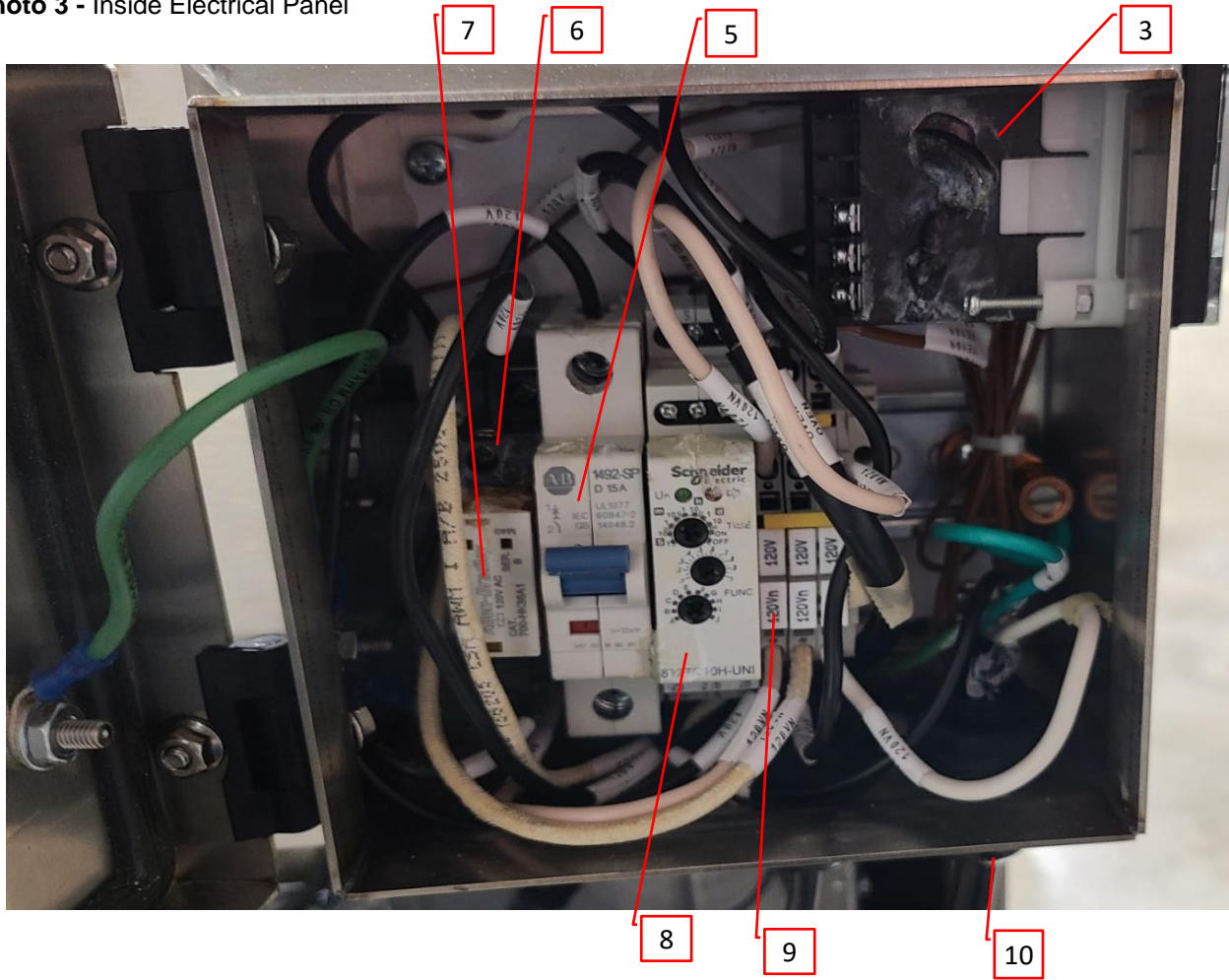


**Photo 2 - External Back View**



**3.0 Product Photographs**

**Photo 3 - Inside Electrical Panel**



4.0 Critical Components						
Photo #	Item no. <sup>1</sup>	Name	Manufacturer/ trademark <sup>2</sup>	Type / model <sup>2</sup>	Technical data and securement means	Mark(s) of conformity <sup>3</sup>
1	1	Enclosure	Various	Various	Stainless steel minimum 1 mm thick.	NR
2	2	Power Cord	McMaster-Carr	9570T3	125VAC, 15A, 60°C, SJTOW, length 2.5m	cULus
3	3	Temperature Controller	Automation Direct	SLB4848 Series	100-240VAC, 5VA Max. Relay - SPST output to be used.	cULus
			Watlow	PM Plus	100-240VAC, 5A.	cULus
3	4	Heater (Not shown)	Watlow	2179-8810 R3	120V, 1250W. See Illustration 1 for dimensions.	cURus
3	5	Circuit Breaker	Allen Bradley	1492-SP1D150	277VAC, 15A, Single Pole.	cURus
3	6	SPDT Relay Base	Allen Bradley	700-HN121	Single pole, for use with 700-HK relays only.	cURus
3	7	SPDT Relay	Allen Bradley	700-HK36A1	120V coil voltage, 1-pole, 16 A.	cURus
3	8	Timer Relay	Schneider Electric	822TD10H-UNI	240VAC, 24VDC, 15A.	cULus
3	9	Terminal Block	Allen Bradley	1492-LD3	600VAC, 12-30 AWG, 20A.	cURus
3	10	Strain Relief	Bimed	BSPBX-22-W	NPT 1/2", clamping range 0.24 - 0.47 in	UL, CSA
			Thomas & Betts	CC-NPT-12-G-2	MNPT 1/2", clamping range 0.19 - 0.25 in	
			McMaster-Carr	69915K52	NPT 3/8", clamping range 0.08 - 0.24 in	

NOTES:

1) Not all item numbers are indicated (called out) in the photos, as their location is obvious.

2) "Various" means any type, from any manufacturer that complies with the "Technical data and securement means" and meets the "Mark(s) of conformity" can be used.

3) Indicates specific marks to be verified, which assures the agreed level of surveillance for the component. "NR" - indicates Unlisted and only visual examination is necessary. "See 5.0" indicates Unlisted components or assemblies to be evaluated periodically refer to section 5.0 for details.

## **5.0 Critical Unlisted CEC Components**

No Unlisted CEC components are used in this report.

## 6.0 Critical Features

Recognized Component - A component part, which has been previously evaluated by an accredited certification body with restrictions and must be evaluated as part of the basic product considering the restrictions as specified by the Conditions of Acceptability.

Listed Component - A component part, which has been previously Listed or Certified by an accredited Certification Organization with no restrictions and is used in the intended application within its ratings.

Unlisted Component - A part that has not been previously evaluated to the appropriate designated component standard. It may also be a Listed or Recognized component that is being used outside of its evaluated Listing or component recognition.

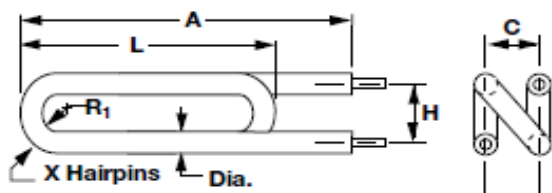
Critical Features/Components - An essential part, material, subassembly, system, software, or accessory of a product that has a direct bearing on the product's conformance to applicable requirements of the product standard.

Construction Details - For specific construction details, reference should be made to the photographs and descriptions. All dimensions are approximate unless specified as exact or within a tolerance. In addition to the specific construction details described in this Report, the following general requirements also apply.

1. Spacing - In primary circuits, 6.4 mm minimum spacing are maintained through air and over surfaces of insulating material between current-carrying parts of opposite polarity and 12.7 mm minimum between such current-carrying parts and dead-metal parts or low voltage isolated circuits.
2. Mechanical Assembly - Components such as switches, fuseholders, connectors, wiring terminals and display lamps are mounted and prevented from shifting or rotating by the use of lockwashers, starwashers, or other mounting format that prevents turning of the component.
3. Corrosion Protection - All ferrous metal parts are protected against corrosion by painting, plating or the equivalent.
4. Accessibility of Live Parts - All uninsulated live parts in primary circuitry are housed within a metal enclosure constructed with no openings other than those specifically described in Sections 4 and 5.
5. Grounding - All exposed dead-metal parts and all dead-metal parts within the enclosure that are exposed are connected to the grounding lead of the power supply cord or the equipment grounding terminal.
6. Internal Wiring - Internal wiring is routed away from sharp or moving parts. Internal wiring leads terminating in soldered connections are made mechanically secure prior to soldering. Recognized Component separable (quick disconnect) connectors of the positive detent type, closed loop connectors, or other types specifically described in the text of this report are also acceptable as internal wiring terminals. At points where internal wiring passes through metal walls or partitions, the wiring insulation is protected against abrasion or damage by plastic bushings or grommets. All wiring is minimum 14 AWG, with a minimum rating of 600V, 60°C.
7. Markings - The product is marked as follows:  
Applicant's name or brand names;  
model number;  
date of manufacturer;  
electrical ratings.

**7.0 Illustrations**

**Illustration 1 - Heater Dimensions**



$X = \text{number of outside hairpins}$   
 $SL = 2A + 3.42R_1 - 1.29 \text{ Dia.} + 2L$

A:	5.75"
C:	6"
L:	3.5"
R1:	0.5"
X:	8
H:	1.3125"



<b>8.0 Test Summary</b>			
Evaluation Period	11/18/2021 - 3/28/2022		Project No. G104836010
Sample Rec. Date	22-Oct-2021	Condition Production	Sample ID. COL2110221132-001
Test Location	1717 Arlingate Lane, Columbus, OH 43228, USA		
Test Procedure	Testing Lab		
Determination of the result includes consideration of measurement uncertainty from the test equipment and methods. The product was tested as indicated below with results in conformance to the relevant test criteria.			
The following tests were performed:			
Test Description	UL 197:2010 Ed.10+R:10Jul20 20	CSA C22.2#109:201 7 Ed.3	
Endurance	--	6.11.4	
Overload Test (Automatic controls)	--	6.11.3	
Power Input Test	47	6.2	
Leakage Current Test	46	6.14	
Normal Temperature	50	6.4	
Dielectric Voltage-Withstand	51	6.7	
Grounding and Bonding Test	54	--	
Abnormal Heating Test	56	6.5	
Strain Relief Test	60	6.13	
Push-Back Relief Test	61	6.13	
Stability	55	6.8	
Static force test	63.2	6.18.1	
Impact test – frames, guards, and metal enclosures	63.3	6.18.3	

<b>8.1 Signatures</b>			
A representative sample of the product covered by this report has been evaluated and found to comply with the applicable requirements of the standards indicated in Section 1.0.			
Completed by:	Connor Blair	Reviewed by:	Joel Valdes
Title:	Engineer	Title:	Engineer Team Leader
Signature:	<i>Signature on file</i>	Signature:	<i>Signature on file</i>

**9.0 Correlation Page For Multiple Listings**

The following products, which are identical to those identified in this report except for model number and Listee name, are authorized to bear the ETL label under provisions of the Intertek Multiple Listing Program.

<b>BASIC LISTEE</b>	Lightfry USA, LLC
Address	1801 N. Elder Street Nampa, ID 83687
Country	USA
Product	Lightfry Vent System

<b>MULTIPLE LISTEE 1</b>	None	
Address		
Country		
Brand Name		
<b>ASSOCIATED MANUFACTURER</b>		
Address		
Country		
<b>MULTIPLE LISTEE 1 MODELS</b>		<b>BASIC LISTEE MODELS</b>

<b>MULTIPLE LISTEE 2</b>	None	
Address		
Country		
Brand Name		
<b>ASSOCIATED MANUFACTURER</b>		
Address		
Country		
<b>MULTIPLE LISTEE 2 MODELS</b>		<b>BASIC LISTEE MODELS</b>

<b>MULTIPLE LISTEE 3</b>	None	
Address		
Country		
Brand Name		
<b>ASSOCIATED MANUFACTURER</b>		
Address		
Country		
<b>MULTIPLE LISTEE 3 MODELS</b>		<b>BASIC LISTEE MODELS</b>

## 10.0 General Information

The Applicant and Manufacturer have agreed to produce, test and label ETL Listed products in accordance with the requirements of this Report. The Manufacturer has also agreed to notify Intertek and to request authorization prior to using alternate parts, components or materials.

### COMPONENTS

Components used shall be those itemized in this Intertek report covering the product, including any amendments

### LISTING MARK

The ETL Listing mark applied to the products shall either be separable in form, such as labels purchased from Intertek, or on a product nameplate or other media only as specifically authorized by Intertek. Use of the mark is subject to the control of Intertek.

The mark must include the following four items:

- 1) applicable country identifiers "US" and/or "C" or "US", "C" and "EU"
- 2) the word "Listed" or "Classified" or "Recognized Component" (whichever is appropriate)
- 3) a control number issued by Intertek
- 4) a product descriptor that identifies the standards used for certification. Example:

**For US standards**, the words, "Conforms to" shall appear with the standard number along with the word, "Standard" or "Std." Example: "Conforms to ANSI/UL Std. XX."

**For Canadian standards**, the words "Certified to CAN/CSA Standard CXX No. XX." shall be used, or abbreviated, "Cert. to CAN/CSA Std. CXX No. XX."

Can be used together when both standards are used.

**If all standards on the ATM have the same standard title**, the shared title or its abbreviation may be used in place of the examples above. Example: "Medical Electrical Equipment" or "MEE"; "Information Technology Equipment" or "ITE"; "Audio/Video Information And Communication Technology Equipment" or "A/V ICTE".

**Note: A facsimile must be submitted to Intertek, Attn: Follow-up Services for approval prior to use.**

The facsimile need not have a control number. A control number will be issued **after signed Certification Agreements** have been received by the Follow-up Services office, approval of the facsimile of your proposed Listing Mark, satisfactory completion of the Listing Report, and scheduling of a factory assessment in your facility.

### MANUFACTURING AND PRODUCTION TESTS

Manufacturing and Production Tests shall be performed as required in this Report.

### FOLLOW-UP SERVICE

Periodic unannounced audits of the manufacturing facility (and any locations authorized to apply the mark) shall be scheduled by Intertek. An audit report shall be issued after each visit. Special attention will be given to the following:

1. Conformance of the manufactured product to the descriptions in this Report.
2. Conformance of the use of the ETL mark with the requirements of this Report and the Certification Agreement.
3. Manufacturing changes.
4. Performance of specified Manufacturing and Production Tests.

In the event that the Intertek representative identifies non-conformance(s) to any provision of this Report, the Applicant shall take one or more of the following actions:

1. Correct the non-conformance.
2. Remove the ETL Mark from non-conforming product.
3. Contact the issuing product safety evaluation center for instructions.

### **10.1 Evaluation of Unlisted Components**

Because Unlisted Components are uncontrolled, and they do not fall under a third party follow up program, Intertek may require these components to be tested and/or evaluated at least once annually, more often for certain components, as part of the independent certification process. The Unlisted Components in Section 5.0 require testing and/or evaluation as indicated.

**The Applicant will be notified, in writing, via the applicable contact methods, as defined in Section 1.0, when these components must be selected and sent to Component Evaluation Center (CEC) for re-evaluation.**

**Due to particular testing requirements, some components may be requested to be shipped to specific labs. Thus, specific shipment destination(s) for each sample will be provided in the written notification.**

Managing CEC Location:  
Intertek Testing Services NA Inc.  
ETL Component Evaluation Center  
1717 Arlingate Ln.  
Columbus, Ohio 43228 USA  
Attn: CEC Safety

Sample Disposition: Due to the destructive nature of the testing, all samples will be discarded at the conclusion of testing unless, the manufacturer specifically requests the return of the samples. The request for return must accompany the initial component shipment.

**11.0 Manufacturing and Production Tests**

The manufacturer agrees to conduct the following Manufacturing and Production Tests as specified:

**Required Tests**

Dielectric Voltage Withstand Test, Grounding Continuity Test

**11.1 Dielectric Voltage Withstand Test**

Method

One hundred percent of production of the products covered by this Report shall be subjected to a routine production line dielectric withstand test.

The test shall be conducted on products, which are fully assembled. Prior to applying the test potential, all switches, contactors, relays, etc., should be closed so that all primary circuits are energized by the test potential. If all primary circuits cannot be tested at one time, then separate applications of the test potential shall be made.

The test voltage specified below shall be applied between primary circuits and accessible dead-metal parts. The test voltage may be gradually increased to the specified value but must be maintained at the specified value for one second or one minute as required.

Test Equipment

The test equipment shall incorporate a transformer with an essentially sinusoidal output, a means to indicate the applied test potential, and an audible and/or visual indicator of dielectric breakdown.

The test equipment shall incorporate a voltmeter in the output circuit to indicate directly the applied test potential if the rated output of the test equipment is less than 500VA.

If the rated output of the test equipment is 500VA or more, the applied test potential may be indicated by either:

- 1 - a voltmeter in the primary circuit;
- 2 - a selector switch marked to indicate the test potential; or
- 3 - a marking in a readily visible location to indicate the test potential for test equipment having a single test potential output.

In cases 2 and 3, the test equipment shall include a lamp or other visual means to indicate that the test potential is present at the test equipment output. All test equipment shall be maintained in current calibration.

**Products Requiring Dielectric Voltage Withstand Test:**

<u>Product</u>	<u>Test Voltage</u>	<u>Test Time</u>
All products covered by this Report.	1000 VAC	60 s
	or	
	1200 VAC	1 s

**11.2 Grounding Continuity Test**

Method

Each product listed below shall be subjected to a test to determine that there is continuity between accessible dead-metal parts of the product and the grounding pin or blade of the attachment plug.

If all accessible dead metal is connected, only a single test need be performed. A visual or audible device (ohmmeter, buzzer, etc.) may be used to indicate grounding continuity.

**Products Requiring Grounding Continuity Test:**

All products covered by this Report.



<b>12.0 Revision Summary</b>				
The following changes are in compliance with the declaration of Section 8.1:				
Date/ Proj # Site ID	Project Handler/ Reviewer	Section	Item	Description of Change