



**APPLICATION FOR MATERIALS LICENSE**

Estimated burden per response to comply with this mandatory collection request: 4.3 hours. Submittal of the application is necessary to determine that the applicant is qualified and that adequate procedures exist to protect the public health and safety. Send comments regarding burden estimate to the FOIA, Privacy, and Information Collections Branch (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to [Infocollects.Resource@nrc.gov](mailto:Infocollects.Resource@nrc.gov), and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0120), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

**INSTRUCTIONS: SEE THE CURRENT VOLUMES OF THE NUREG-1556 TECHNICAL REPORT SERIES ("CONSOLIDATED GUIDANCE ABOUT MATERIALS LICENSES") FOR DETAILED INSTRUCTIONS FOR COMPLETING THIS FORM: <http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1556/>. SEND TWO COPIES OF THE COMPLETED APPLICATION TO THE NRC OFFICE SPECIFIED BELOW.**

**APPLICATION FOR DISTRIBUTION OF EXEMPT PRODUCTS FILE APPLICATIONS WITH:**

MATERIALS SAFETY LICENSING BRANCH  
DIVISION OF MATERIAL SAFETY, STATE, TRIBAL AND RULEMAKING PROGRAMS  
OFFICE OF NUCLEAR MATERIALS SAFETY AND SAFEGUARDS  
U.S. NUCLEAR REGULATORY COMMISSION  
WASHINGTON, DC 20555-0001

**ALL OTHER PERSONS FILE APPLICATIONS AS FOLLOWS:**

**IF YOU ARE LOCATED IN:**

ALABAMA, CONNECTICUT, DELAWARE, DISTRICT OF COLUMBIA, FLORIDA, GEORGIA, KENTUCKY, MAINE, MARYLAND, MASSACHUSETTS, NEW HAMPSHIRE, NEW JERSEY, NEW YORK, NORTH CAROLINA, PENNSYLVANIA, PUERTO RICO, RHODE ISLAND, SOUTH CAROLINA, TENNESSEE, VERMONT, VIRGINIA, VIRGIN ISLANDS, OR WEST VIRGINIA,

**SEND APPLICATIONS TO:**

LICENSING ASSISTANCE TEAM  
DIVISION OF NUCLEAR MATERIALS SAFETY  
U.S. NUCLEAR REGULATORY COMMISSION, REGION I  
2100 RENAISSANCE BOULEVARD, SUITE 100  
KING OF PRUSSIA, PA 19406-2713

**IF YOU ARE LOCATED IN:**

ILLINOIS, INDIANA, IOWA, MICHIGAN, MINNESOTA, MISSOURI, OHIO, OR WISCONSIN, SEND APPLICATIONS TO:

MATERIALS LICENSING BRANCH  
U.S. NUCLEAR REGULATORY COMMISSION, REGION III  
2443 WARRENVILLE ROAD, SUITE 210  
LISLE, IL 60532-4352

ALASKA, ARIZONA, ARKANSAS, CALIFORNIA, COLORADO, HAWAII, IDAHO, KANSAS, LOUISIANA, MISSISSIPPI, MONTANA, NEBRASKA, NEVADA, NEW MEXICO, NORTH DAKOTA, OKLAHOMA, OREGON, PACIFIC TRUST TERRITORIES, SOUTH DAKOTA, TEXAS, UTAH, WASHINGTON, OR WYOMING,

**SEND APPLICATIONS TO:**

NUCLEAR MATERIALS LICENSING BRANCH  
U.S. NUCLEAR REGULATORY COMMISSION, REGION IV  
1600 E. LAMAR BOULEVARD  
ARLINGTON, TX 76011-4511

**PERSONS LOCATED IN AGREEMENT STATES SEND APPLICATIONS TO THE U.S. NUCLEAR REGULATORY COMMISSION ONLY IF THEY WISH TO POSSESS AND USE LICENSED MATERIAL IN STATES SUBJECT TO U.S. NUCLEAR REGULATORY COMMISSION JURISDICTIONS.**

**1. THIS IS AN APPLICATION FOR (Check appropriate item)**

- A. NEW LICENSE  
 B. AMENDMENT TO LICENSE NUMBER \_\_\_\_\_  
 C. RENEWAL OF LICENSE NUMBER \_\_\_\_\_

**2. NAME AND MAILING ADDRESS OF APPLICANT (Include ZIP code)**

Top shelf LED INC BBA Grower's choice  
1500 S. Milliken Ave. Unit B.  
Ontario, CA. 91761

**3. ADDRESS WHERE LICENSED MATERIAL WILL BE USED OR POSSESSED**

1500 S. Milliken Ave. Unit B.  
Ontario, CA. 91761

**4. NAME OF PERSON TO BE CONTACTED ABOUT THIS APPLICATION**

Leonardo Day

**BUSINESS TELEPHONE NUMBER**

909-972-8419

**BUSINESS CELLULAR TELEPHONE NUMBER**

858-408-5338

**BUSINESS EMAIL ADDRESS**

SUBMIT ITEMS 5 THROUGH 11 ON 8-1/2 X 11" PAPER. THE TYPE AND SCOPE OF INFORMATION TO BE PROVIDED IS DESCRIBED IN THE LICENSE APPLICATION GUIDE.

**5. RADIOACTIVE MATERIAL**

a. Element and mass number; b. chemical and/or physical form; and c. maximum amount which will be possessed at any one time.

**6. PURPOSE(S) FOR WHICH LICENSED MATERIAL WILL BE USED.**

**8. TRAINING FOR INDIVIDUALS WORKING IN OR FREQUENTING RESTRICTED AREAS.**

**7. INDIVIDUAL(S) RESPONSIBLE FOR RADIATION SAFETY PROGRAM AND THEIR TRAINING AND EXPERIENCE.**

**10. RADIATION SAFETY PROGRAM.**

**9. FACILITIES AND EQUIPMENT.**

**12. LICENSE FEES (Fees required only for new applications, with few exceptions\*) (See 10 CFR 170 and Section 170.31)**

\*Amendments/Renewals that increase the scope of the existing license to a new or higher fee category will require a fee.

FEE CATEGORY **3I**

AMOUNT ENCLOSED \$

**3400.00**

**13. CERTIFICATION. (Must be completed by applicant) THE APPLICANT UNDERSTANDS THAT ALL STATEMENTS AND REPRESENTATIONS MADE IN THIS APPLICATION ARE BINDING UPON THE APPLICANT.**

THE APPLICANT AND ANY OFFICIAL EXECUTING THIS CERTIFICATION ON BEHALF OF THE APPLICANT, NAMED IN ITEM 2, CERTIFY THAT THIS APPLICATION IS PREPARED IN CONFORMITY WITH TITLE 10, CODE OF FEDERAL REGULATIONS, PARTS 30, 32, 33, 34, 35, 36, 37, 39, AND 40, AND THAT ALL INFORMATION CONTAINED HEREIN IS TRUE AND CORRECT TO THE BEST OF THEIR KNOWLEDGE AND BELIEF.  
WARNING: 18 U.S.C. SECTION 1001 ACT OF JUNE 25, 1948 62 STAT. 749 MAKES IT A CRIMINAL OFFENSE TO MAKE A WILLFULLY FALSE STATEMENT OR REPRESENTATION TO ANY DEPARTMENT OR AGENCY OF THE UNITED STATES AS TO ANY MATTER WITHIN ITS JURISDICTION.

**CERTIFYING OFFICER - TYPED/PRINTED NAME AND TITLE**

Leonardo Day

**SIGNATURE**

*(Handwritten signature)*

**DATE**

8/31/2017

**FOR NRC USE ONLY**

TYPE OF FEE	FEE LOG	FEE CATEGORY	AMOUNT RECEIVED	CHECK NUMBER	COMMENTS
APPROVED BY			\$	DATE	



August 30,2017

Mr. Hipolito Gnzalez, Chief  
Materials Safety Licensing Branch  
Divison of Materials Safety, State, Tribal, and Rulemaking Programs  
Office of Nuclear Material Safety and Safeguards  
U.S Nuclear Regulatory Commission  
Mail Stop: T-8E 18  
Washington DC 20555

Dear Mr. Hipolito:

Attached is an application for Top Shelf LED, Inc., DBA Grower's Choice, requesting a new E-Distribution License. In the meantime, We also sent out California Radioactive Material License application. Please expedite the application, because our company operation is affected by lacking of the E-Distribution license.

If you have question or concerns regarding this application, please contact our CEO, Leonardo Day,

at 858-381-7234, or at [info@growersc.com](mailto:info@growersc.com) .

Sincerely,

Leonardo Day

CEO

## ITEM 5: RADIOACTIVE MATERIAL

Krypton-85

Physical Form:Gas

Maximum Activity Per Item: 5 Micro Curies

## ITEM 6: PURPOSE FOR WHICH LICENSED MATERIAL WILL USED

As a constituent of the fill gas in electron tubes, called arc tubes, which provide the light source for high intensity (HID) metal halide lamps

a. The following are the imported metal halide lamp types (families) which contain arc tubes with Krypton-85 gas:

MH1000W,MH600W

b. The following are the imported ceramic metal halide lamp types (families) which contain arc tubes with Krypton-85 gas: CMH-630W,CMH-315W

The following pages contain technical information, including drawings,regarding the above described glow switch, arc tubes and typical lamps and lamp starter containing them.

LABELLING: We wish to use our exempt distribution license number on the immediate container for customers who receive lamps from us requesting that their name appear on those containers (commonly called private label packaging). We also wish an exemption to 10CFR32.15 (d) as they apply to individual tubes or switches provided that each lamp container is labeled in accordance with 10CFR32.15(d). More detail on this is covered in the pages showing technical information, reference above.

## WAREHOUSE POSSESSION LICENSES

State of California: Pending

## ITEM 7: INDIVIDUAL RESPONSIBLE FOR RADIATION SAFETY AND THEIR TRAINING AND EXPERIENCE

The person responsible for the E-Distribution license is Leonardo Day. He is the CEO for Top Shelf LED,Inc. This individual does not require to

have radiation safety training as this license does not authorize possession of radioactive materials. This license does require knowledge of management of radiation safety program and requirement to maintain licenses in accordance with regulatory statutes. The person in his position is ideal for this type of role.

#### ITERM 8: TRAINING FOR INDIVIDUAL FREQUENTING RESTRICTED AREA

All of the warehouse staff need to wear requirement safe vest to handling all the radioactive materials. Handle radioactive materials with special training would be hold by Leonardo Day,CEO. Employees should not sign in and sign out on the enter form of the frequenting restricted area.

#### ITERM 9: FACILITY AND EQUIPMENT

All product distribution will be held at our warehouse which is located in 1500 S Milliken Ave. Unit B, Ontario, CA 91761. Possession license is pending under State of California Department of Public Health Radiologic Health Branch.. The warehouse is only distribute and possess the radioactive materials, we do not have any equipment in the warehouse.

#### ITERM 10: RADIATION SAFETY PROGRAM:

##### **Radiation Safety Program Guid line**

The use of radioactive materials and radiation producing machines is essential for many instructional and research endeavors. At Top Shelf LED,Inc., all activities related to the acquisition, use, disposal, and shipping of radioactive materials or machines which produce ionizing radiation are overseen by the Radiation Safety Office.

With guidance and oversight provided by the Radiation Safety Office, the Radiation Safety Program is designed to assure compliance with with all state, federal, and local laws, regulations and guidelines.

Operationally, the Radiation Safety Program is administered with a "customer focused" approach. Through continuous improvement initiatives Radiation Safety strives for goals of facilitating research, minimizing costs, maximizing safety of personnel, and minimizing potential impact to the environment while assuring the highest level of compliance with all applicable laws and regulations.

### Exposure Monitoring Program

The Nuclear Regulatory Commission, (NRC), along with various other federal and state agencies governs the use of radioactive materials, including exposure monitoring. Top Shelf LED, Inc., is required to comply with all regulations set forth by the various state and federal agencies.

The guiding operational principle of radiation safety is to maintain exposures "as low as reasonably achievable. Exposure to Kr-85 radiation at Top Shelf LED, Inc., warehouse will likely occur from routine handling of radioactive material during prepare the package of the inventory. Exposure may also occur during the process of responding to unexpected events such as contamination in the warehouse.

The company exposure-monitoring program is managed using a risk-based approach. Only individuals using radioactive materials possessing sufficient energy to actually cause an exposure to be recorded receive badges to monitor exposure. Thus individuals working in office area selling related inventory will not be monitored for exposure. Appropriate monitoring, including whole body dosimetry and finger dosimetry.

Special considerations are taken for employees handling radioactive who become pregnant. However, an employee must declare their pregnancy in writing in order for the Radiation Safety Office to respond.

### Declared Pregnant Worker

As a matter of practice, all "occupational exposures" at this facility should not exceed 1/10th of the above limits. In the event that an employee received any exposure above this internal action limit, the Radiation Safety Office will conduct an investigation into the causes of the abnormal exposure results.

### Quarterly Inventory Count

The warehouse is for possession and storage only, quarterly inventory count is required for the radioactive products. Excel sheet should contains information for total Kr-85 inventory count, each possession limit per item, total possession limit for all the inventory. The maximum possession limit can not exceed the NRC standard.

### Aware Sign and Special Storage Area

Warehouse should put up contain Kr-85 product sign to aware all the warehouse employee . All of the Kr-85 products should be arrange in a designed location of the warehouse, normal operation staff would not have access to certain area.

#### ITERM 11: WASTE MANAGEMENT

Normally we do not have any radioactive waster need to be handle. However, our CEO would be available to assist the warehouse in procuring a method of disposing of broken or otherwise damaged lamps.

## ITEMS CONTAINING KRYPTON-85

### ARC TUBE TECHNICAL DATA

MANUFACTURER: Hangzhou Hanguang Illumination Co.,Ltd, China, Huangzhou

CONSTRUCTION: 1.Quartz

2. Ceramic Poly crystalline alumina (PCA)

CONTAINMENT: 1. Sealed quartz bulb

2. Sealed PCA tube

CHEMICAL FORM: Krypton/Argon mixture

RADIOACTIVE CONTENT: Krypton-85

MAXIMUM ACTIVITY PER ARC TUBE : 1.Less than 0.1 microcuries

2. Less than 0.1microcuries

### PROTOTYPE TESTS:

Prototype testing to demonstrate that byproduct material is not released to the environment under the most sever conditions of normal use is not necessary because in the unlikely event of the breakage of both the lamp and arc tube, the resultant release of the very small quantity Krypton-85 would quickly dissipate to an air concentration of less than 1 microcuries.

### QUANLITY CONTROL:

1. After manufacture, all quartz arc tubes are tested for electrical function. A quartz arc tube failing this test is considered a possible leaker and discarded. Each tank of the Argon-Krypton-85 mixture received from the supplier comes with certification as to the Krypton-85 concentration. The quantity of Krypton-85 in an arc tube is a function of the volume of the tube and the specific activity of the gas. These parameters are set at the factory and strictly monitored during production. Krypton-85 is the only radioactive gas used at the production facility, eliminating the possible use of any other radioactive material.

2. Each tank of the Argon-Krypton-85 mixture received from the supplier comes with a certification as to the Krypton-85 concentration. During manufacture, the mixture is injected into the arc tubes so a specified

pressure. The arc tube production output from each of three ovens is checked for proper pressure on an ongoing basis. The sampling rate is 18 arc tubes per every 5,000 manufactured. A destructive test is performed of each selected arc tube in a sealed chamber and the resultant pressure gradient measured. If the pressure is not within specification, the production run since the last successful QC test of the oven in question is withheld from further production and the necessary adjustments made to the oven, prior to any further production.

#### RADIATION LEVEL:

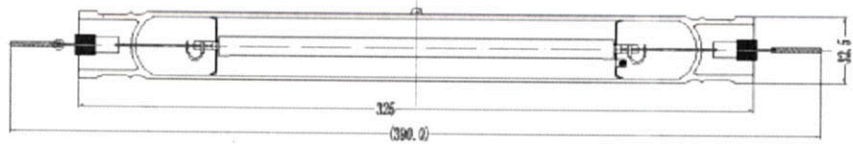
At one centimeter from the surface of the lamp through 7 milligrams per square centimeter of absorber (by calculation, with no account taken for inherent shielding):

1. Less than 0.1 microrad/hr
2. Less than 0.1 microrad/hr

Typical Quartz Arc Tube:

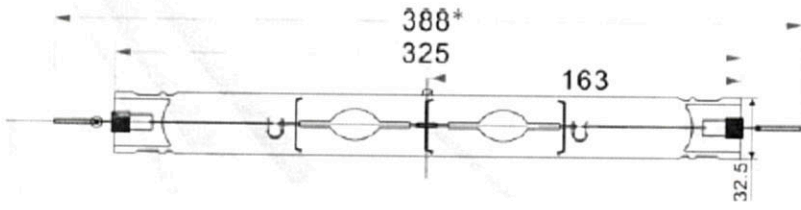
Measurement in mm





Typical PCA Arc Tube:

Measurement in mm



**NRC FORM 526**  
(07-2016)  
10 CFR 171



U.S. NUCLEAR REGULATORY COMMISSION

**CERTIFICATION OF SMALL ENTITY STATUS FOR THE PURPOSES OF  
ANNUAL FEES IMPOSED UNDER 10 CFR PART 171  
(Effective August 23, 2016)**

If you have **QUESTIONS**, e-mail them to: [SmallEntity.Resource@nrc.gov](mailto:SmallEntity.Resource@nrc.gov)

**SEE IMPORTANT INSTRUCTIONS FOR NRC FORM 526 -- PLEASE READ CAREFULLY  
DO NOT COMPLETE OR RETURN THIS FORM IF YOU DO NOT QUALIFY AS A SMALL ENTITY  
A Licensee that is a subsidiary of a large entity, including foreign entities, does NOT qualify as a small entity.**

NAME AND ADDRESS OF LICENSEE (as it appears on the invoice): <i>Top Shelf LED INC DBA Grower's choice</i> <i>1500 S. Milliken Ave. Unit B.</i> <i>Ontario, CA, 91761</i>		INVOICE NUMBER	BUSINESS TELEPHONE NUMBER <i>909-972-8419</i>
EMAIL ADDRESS <i>info@growersc.com</i>		COMPANY WEBSITE ADDRESS <i>www.growersc.com</i>	CONTACT TELEPHONE NUMBER <i>858-381-7234</i>
DOCKET NUMBER		CONTACT NAME <i>Leonardo Day</i>	

SIZE STANDARDS (Check only 1 box below).	MAXIMUM ANNUAL FEE PER LICENSED CATEGORY (See Items 2 and 3 on back)
<b>1. SMALL BUSINESS</b> A for-profit concern that is not engaged in manufacturing with average <b>GROSS</b> receipts of \$7.0 million or less over its last 3 completed fiscal years. For further information see 1a and 1b of attached instructions.	<input checked="" type="checkbox"/> A. \$485,000 TO \$7,000,000      \$ 3,400 <input type="checkbox"/> B. LESS THAN \$485,000                      \$ 700
<b>2. MANUFACTURING INDUSTRY</b> A manufacturing concern with an average number of 500 or fewer employees based upon employment during each pay period for the preceding 12 calendar months.	<input type="checkbox"/> A. 35 to 500 EMPLOYEES                      \$ 3,400 <input type="checkbox"/> B. LESS THAN 35 EMPLOYEES                      \$ 700
NAICS BUSINESS CODE (See 1b and 1e of attached instructions): _____	
<b>3. SMALL ORGANIZATION</b> A not-for-profit organization that is independently owned and operated and has annual <b>GROSS</b> receipts of \$7.0 million or less. For further information see 1a and 1b of attached instructions.	<input type="checkbox"/> A. \$485,000 TO \$7,000,000                      \$ 3,400 <input type="checkbox"/> B. LESS THAN \$485,000                              \$ 700
<b>4. SMALL GOVERNMENTAL JURISDICTION (INCLUDING PUBLICLY SUPPORTED EDUCATIONAL INSTITUTIONS)</b> A government of a city, county, town, township, village, school district, or special district with a population of less than 50,000. For further information see 1f of attached instructions.	<input type="checkbox"/> A. 20,000 TO 49,999 POPULATION OF JURISDICTION                      \$ 3,400 <input type="checkbox"/> B. LESS THAN 20,000 POPULATION OF JURISDICTION                      \$ 700
<b>5. SMALL EDUCATIONAL INSTITUTION THAT IS NOT STATE OR PUBLICLY SUPPORTED</b> Only applicable to such small educational institutions if they have 500 or less employees. For further information see 1b and 1f of attached instructions.	<input type="checkbox"/> A. 35 to 500 EMPLOYEES                              \$ 3,400 <input type="checkbox"/> B. LESS THAN 35 EMPLOYEES                              \$ 700

**CERTIFICATION**

*This certification MUST be signed by the owner of the entity named above or an official empowered to act on behalf of the entity.*

I certify that the above named NRC licensee qualifies as a small entity under the size standards established by the NRC for its licensees in 10 CFR 2.810. The licensee qualifies as a small entity under the specific size standard indicated above.

**WARNING:** 18 U.S.C. Section 1001, Act of June 25, 1948, 62 Stat. 749, makes it a **criminal offense** to make a willfully false statement or representation to any Department or Agency of the United States as to any matter within its jurisdiction. The submittal of willful false statements is punishable by fine or imprisonment, or both, and for purposes of this certification, may result in revocation or suspension of the license.

I CERTIFY UNDER PENALTY OF PERJURY THAT THE FOREGOING IS TRUE AND CORRECT.	TYPED OR PRINTED NAME AND TITLE <i>Leonardo Day</i> <i>CEO</i>	SIGNATURE 	DATE <i>08/30/2017</i>
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