



**SUPRA<sup>®</sup>**  
TECHNOLOGIES

**986 Salvador Avenue  
Napa, CA 94558**

Solar Planet Inc., a California Corporation

October 16, 2007

Mr. Anthony Kirkwood, Health Physicist  
Nuclear Materials Licensing Section  
US Nuclear Regulatory Commission, Region IV  
Mailstop T – 8F3  
Washington D.C. 20555-0001

Regarding: Solar Planet Inc., dba Supra Technologies, CA License # 7669-28  
Osram/Sylvania NRC license number 20-30024-02E

Dear Mr. Kirkwood,

**Information requested by the NRC**

We have enclosed in this mail drawings of the 400 watt lamp produced by Radium. The drawings shows the typical arc tube, quartz burner and the lamp with a socket, the 400 watt 230 v R7s. This lamp is sold in the USA under the Supra and Radiance brand. It is available as follows: 4500SI (R7s), 4500WL (Wire lead) and 3520PIJK (GY9.5), the parenthesis depicting the type of lamp socket used.

1) Dimensions and thickness of the quartz arc tube and dimensions of the lamp:

The Technical Drawing Radium 400 watt, which also states that the lamp contains Kr-85.

Please note that all dimensions on all drawings are in metric in millimetres (mm).

2) How is the arc tube attached to the lamp body?

The lamp consists of the burner (sealed arc tube) and socket (fixed with cement) only. There is no lamp body, because there is no outer bulb.

### 3) Tests performed:

After the filling process the lamp voltages of all lamps are monitored. A burner which is not within the limits of the specification is regarded as a possible "leaker" and is discarded. After putting the socket on the burner all lamps are burnt in. A lamp passing this test is considered to be o.k. because a leaking lamp would not start up.

### 4) Labels

Sample labels are enclosed, new October 16, 2007. Labelling consists of:

1. Etching: On the ceramic lamp ends, brand and model as well as 3 digit manufacturing code to trace lamp manufacturing. The symbol Kr-85 will also be etched on all lamps, except the R7s 400 watt lamp, on all new production effective December 1, 2007.
2. Individual Box Labels:
  - New Production in Germany will utilize a label such as supplied with this letter, stating: Contains Kr-85.
  - Lamps produced and in stock in Germany will be stamped with the symbol Kr-85 on box end next to model #, prior to shipment from Germany.
  - Lamps in stock in our warehouse in Napa, CA will be stamped with the symbol Kr-85 on box end next to model #, prior to shipment from Napa. This will be performed by Leif Vasstrom.
  - User Instructions inside the box for all new production, effective December 1, 2007, will have state: Contains Kr-85 – on the bottom left corner of all three labels forwarded to you with this letter.
  - There are no lamps in transit at this time.
3. Labels are also attached to the outside shipping box. All lamps are packed 25 to a box when shipped from Germany. The symbol Kr-85 will be listed on the outside box label. Current boxes in Germany and Napa, CA will be stamped with the symbol Kr-85.

### 5) Measurements

The filling devices are tested and controlled once a week. This is done by controlling the filling pressure of a burner, one that is actually being produced. The quantity of Kr-85 in the arc tube is a function of the specific activity of the filling gas and the volume of the arc tube. Each tank of the Argon-Krypton-85-mixture received from the supplier, comes with a certification concerning the Krypton-85 concentration. The determining parameter for the volume with a given diameter, is the pinching distance. This value is controlled twice every shift for each different type of product produced. No lamp contains more than 4,440 Bq (= 120 nanocuries).

### 6) Quality control

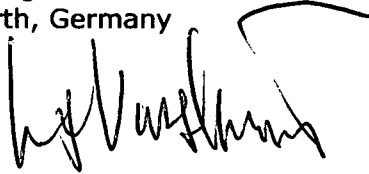
After pinching, every burner is checked visually. Burners with cracks or channels in the pinch are discarded.  
After the filling every burner is lit and the lamp voltage is monitored. Burners not within the specified parameters are destroyed.  
After putting the socket on every lamp is burnt in. Lamps failing this test are being destroyed.

Throughout production, life and reliability tests are performed on a regular basis, e.g. 3 lamps per type and day are tested for electrical parameters and UV-output.

This information has been supplied to us by:

Mr. Uwe Kalmbach,  
Radium Lampenwerk GmbH  
Development UV/IR  
Dr.-Eugen-Kersting-Straße 6  
51688 Wipperfürth, Germany

Leif Vasstrom  
Principal  
Solar Planet Inc., dba Supra Technologies

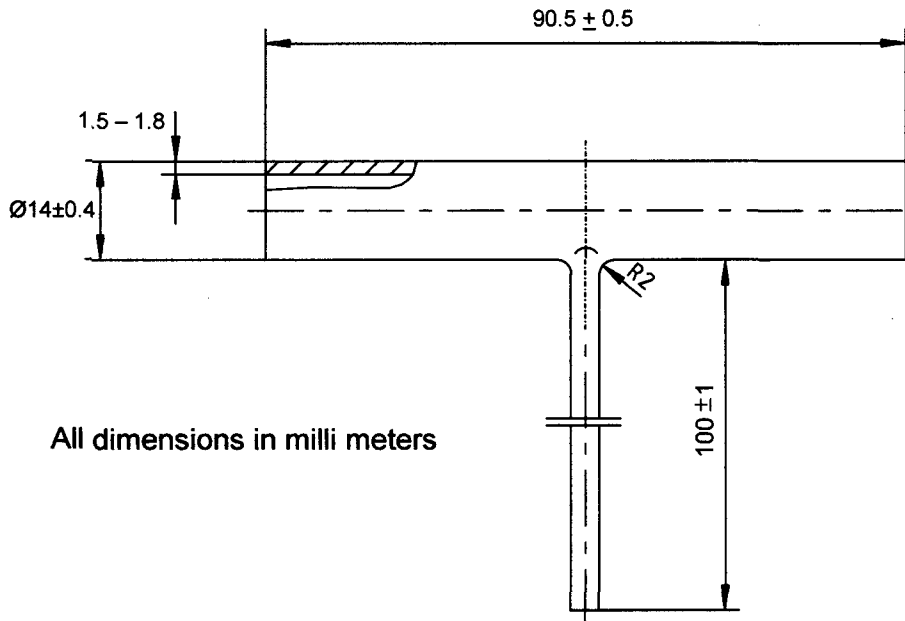


c.c. Linda Gersey, NRC Region IV

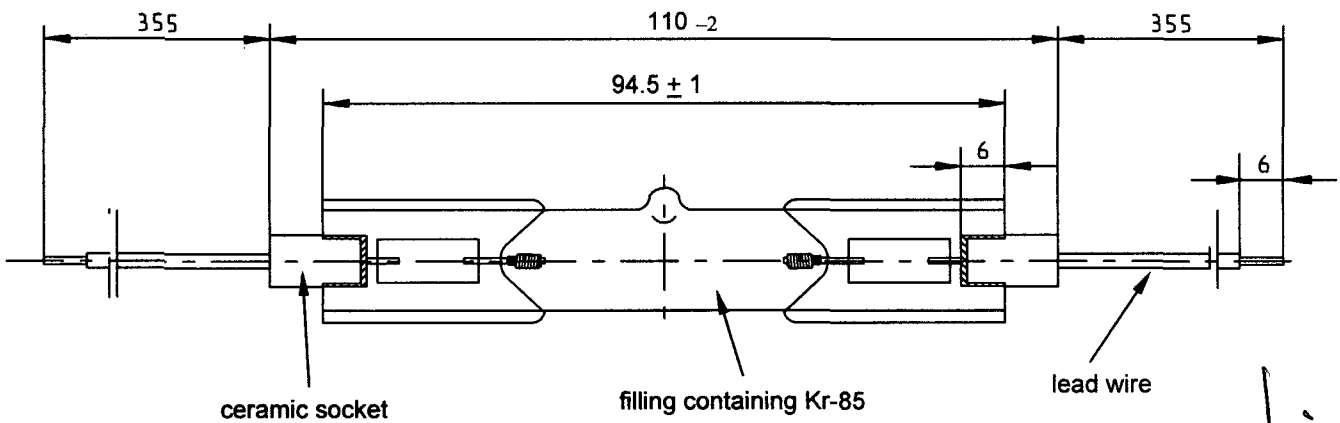
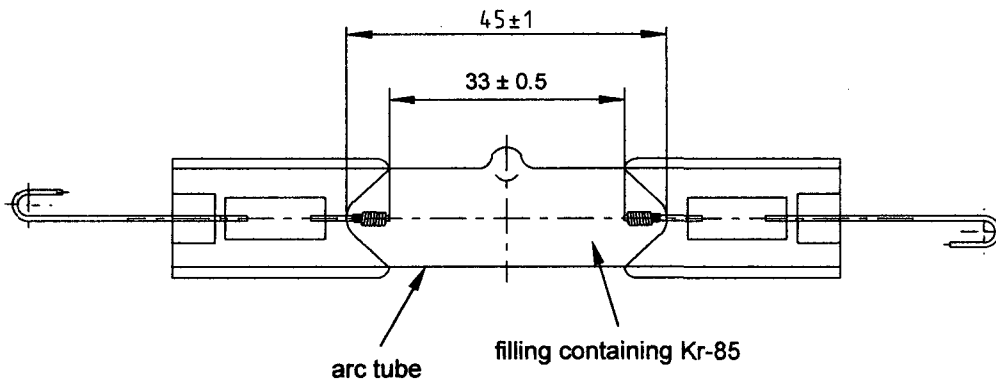
Enclosures: Technical Drawing Radium 400 watt  
Sample Label Print Outs, Instructions and Box with label,

**Radium Lampenwerk, Wipperfürth, Germany October 16, 2007**

This document shows a typical arc tube, quartz burner and lamp with socket (R7s in 400W/230 v.). This lamp is sold in the USA and Canada under the brands Supra and Radiance. This lamp contains Kr 85. Lamps sockets used: R7s, WL & GY9.5.

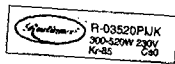


All dimensions in millimeters



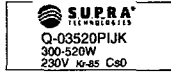
*big*

**lamp etch - original size**



by

**lamp etch - original size**



ly

**25 Pieces**



**SUPRA<sup>®</sup>**  
TECHNOLOGIES

**Q-04500SI**

**400-500W**

**230V**

**Made in Germany**

**contains Kr-85**

**323 14412**

*WJ*

**25 Pieces**



**R-04500SI**

**400-500 W**

**230V**

**SKU # 03060**

**Made in Germany  
contains Kr-85**

**323 14446**

*W*



## USER INSTRUCTIONS

**"Sunlamp -DANGER – Ultraviolet radiation.** Follow instructions. Avoid overexposure. As with natural sunlight, overexposure can cause eye and skin injury and allergic reactions. Repeated exposure may cause premature aging of the skin and skin cancer. **WEAR PROTECTIVE EYEWEAR; FAILURE TO MAY RESULT IN SEVERE BURNS OR LONG-TERM INJURY TO THE EYES.**

Medications or cosmetics may increase your sensitivity to the ultraviolet radiation. Consult physician before using a sunlamp if you are using medications or have a history of skin problems or believe yourself especially sensitive to sunlight. If you do not tan in the sun, you are unlikely to tan from the use of this product."

- Disconnect fixture before removing and installing lamp.
- Use ONLY in fixture equipped with a timer and appropriate filters.
- Use only in equipment originally designed for this product.
- Consult and follow instructions for lamp installation provided in equipment manual.
- Avoid overexposure. Always wear protective eyewear!
- Do not touch the lamp with bare fingers. Remove any spots with clean, lint-free cloth and alcohol.
- Handle with care to avoid breakage or any mechanical damages. Manufacturer and authorized importers cannot be held responsible for any personal injury and damages that may result from improper installation and/or use of this lamp.



Call Supra Technologies LLC at 800-959-1255 or your local distributor for more information.

A handwritten signature in black ink, appearing to be "Lij", located in the bottom left corner of the page.

# Supra<sup>®</sup> HID Quartz Lamp Q-04500SI

**400-500 Watt, 230 Volt High Intensity Discharge Lamp  
For use in sunlamp products.**

This product conforms to the amended performance  
standard for sunlamp products under 21 CFR 1040.20.

**"Sunlamp-DANGER-Ultraviolet radiation. Follow instructions."  
"Use ONLY in fixture with equipped with a timer."**

FDA number: 8720182-10

Manufactured: September 2007

Call Supra Technologies LLC at 800-959-1255  
or your local distributor for more information.

contains Kr-85

Made in Germany.

323 14412



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For use in sunlamp products.**

This product conforms to the amended performance  
standard for sunlamp products under 21 CFR 1040.20.

**"Sunlamp-DANGER-Ultraviolet radiation. Follow instructions."  
"Use ONLY in fixture with equipped with a timer."**

FDA number: 8720182-13

Manufactured: September 2007

Made in Germany.

contains Kr-85

323 14446





**SUPRA**<sup>®</sup>  
TECHNOLOGIES

**The Supra<sup>®</sup> Collection**

*Highest Output of mw/cm<sup>2</sup> in the Industry.™*

*Model Q-04500SI / 230 v. 400-500 w.*

*Made in Germany - FDA #8720182-10*

**Supra<sup>®</sup>**  
**Q-04500SI**  
**400-500W**  
**230V**  
contains Kr-85

inf



Radiance™ HP

Highest HP output in the industry!

R-04500SI  
400-500W  
230V  
SKU # 03060  
contains Kr-85