

## PATENT ASSIGNMENT COVER SHEET

Electronic Version v1.1  
 Stylesheet Version v1.2

EPAS ID: PAT5314981

<b>SUBMISSION TYPE:</b>	NEW ASSIGNMENT
<b>NATURE OF CONVEYANCE:</b>	ASSIGNMENT
<b>CONVEYING PARTY DATA</b>	
<b>Name</b>	<b>Execution Date</b>
JUHA RANTALA	10/01/2017
<b>RECEIVING PARTY DATA</b>	
<b>Name:</b>	ILLUMIPURE CORP
<b>Street Address:</b>	14340 TORREY CHASE
<b>Internal Address:</b>	SUITE 250
<b>City:</b>	HOUSTON
<b>State/Country:</b>	TEXAS
<b>Postal Code:</b>	77014
<b>PROPERTY NUMBERS Total: 3</b>	
<b>Property Type</b>	<b>Number</b>
<b>Patent Number:</b>	9681515
<b>Patent Number:</b>	10104740
<b>Application Number:</b>	16134437
<b>CORRESPONDENCE DATA</b>	
<b>Fax Number:</b>	(281)601-1176
<i>Correspondence will be sent to the e-mail address first; if that is unsuccessful, it will be sent using a fax number, if provided; if that is unsuccessful, it will be sent via US Mail.</i>	
<b>Phone:</b>	281-601-1111
<b>Email:</b>	docketing@lewisreese.com
<b>Correspondent Name:</b>	LEWIS & REESE, PLLC (NEUTEX)
<b>Address Line 1:</b>	11625 SPRING CYPRESS RD.
<b>Address Line 2:</b>	SUITE A
<b>Address Line 4:</b>	TOMBALL, TEXAS 77377
<b>ATTORNEY DOCKET NUMBER:</b>	127-0004US/US1/US2
<b>NAME OF SUBMITTER:</b>	TERRIL LEWIS
<b>SIGNATURE:</b>	/Terril Lewis/
<b>DATE SIGNED:</b>	01/08/2019
<b>Total Attachments: 21</b>	
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# ASSETS PURCHASE AGREEMENT

This Asset Purchase Agreement (the "Agreement") is effective October 1, 2017,

**Lumichip, LTD** (the "Seller"), a company organized and existing under the laws of Hong Kong, with its head office located at:

1701 Tai Yau Building  
181 Johnson Road  
Wanchai, Hong Kong

**illumiPure Corp** (the "Purchaser"), a company organized and existing under the laws of the State of Nevada, with its head office located at:

14340 Torrey Chase, Suite 250  
Houston, TX 77014

WITNESSETH:

WHEREAS the Seller is the owner of certain intellectual property and listed in Exhibit "A"; and

AND WHEREAS the Seller has agreed to sell to the Purchaser and the Purchaser has agreed to purchase from the Seller the Assets listed in Exhibit A, upon and subject to the terms and conditions hereof,

NOW THEREFORE, IN CONSIDERATION OF THE PREMISES AND OF THE CONDITIONS AND COVENANTS HEREIN CONTAINED, THE PARTIES HERETO AGREE AS FOLLOWS:

## 1. DEFINITIONS

In this Agreement, unless specifically defined otherwise or the context otherwise requires, the following terms shall have the following meanings, and the terms elsewhere herein shall have the meaning there defined:

"Agreement" means this Asset Purchase Agreement including all schedules attached hereto, all of which are incorporated herein by reference and form part hereof and all amendments and supplements hereto and the terms "herein", "hereof", "hereto", "hereunder", and like terms refer to this Agreement;

"Closing" means the completion of the sale to and purchase by the Purchaser of the Assets under this Agreement by the transfer and delivery of documents of title thereto and the payment of the Purchase Price therefor in accordance with this Agreement;

"Person" means any individual, corporation, partnership, trustee or trust or unincorporated association;

"Assets" means accounts, deposit accounts, accounts receivable, instruments, chattel paper, documents, books and records of the business, general intangibles, inventory, Assets, furniture, fixtures, intellectual property, trademarks, licenses, contract rights and any and all other assets owned or acquired now or after the date hereof, all proceeds and insurance proceeds of the foregoing, and all of books and records

relating thereto, including computer-stored information and all software relating thereto, and all contract rights with third parties relating to the maintenance of any such books, records and information. in Schedule A hereto;

"Purchase Price" means the purchase price to be paid by the Purchaser to the Seller for the Assets as provided for in Section 2.1 hereof.

## **2. PURCHASE AND SALE**

- 2.1. The Seller hereby sells, conveys and transfers the Assets listed in Exhibit "A" attached to the Purchaser and the Purchaser, in specific reliance on each and every representation and warranty of the Seller herein contained, hereby purchases the Assets from the Seller for a total purchase price (the "Purchase Price") consisting of 22,000,000 shares of iLumiPure Corp common stock (valued at \$22,000,000) and \$\_\_\_\_\_ payable as hereinafter set forth. Amounts paid to Suma Inc for the extinguishing of Lumichip's debt and release of liens shall be deducted from the cash payable.
- 2.2. The Purchase Price is payable in in installments equal to 5% of all investment funds on the first \$5,000,000 and 10% on subsequent funds raised through sales of treasury subsequent to the execution of this Agreement and shall be paid by the Purchaser by certified check or wire transfer in trust to Lumichip. LTD to be distributed pro rata to the partners listed on Exhibit B in an amount equal to their respective partnership percentages.
- 2.3. The purchase price shall be paid within the timeline of capital raised or thirty months from of the execution of this document, whichever comes first.
- 2.4. In the event that the purchase price is not paid within the timeframe state in 2.3, the Purchaser agrees to relinquish title and interest in the Assets to the Seller. The Purchaser shall have thirty days to cure this default.
- 2.5. The Purchaser and the Seller acknowledge and agree that the Purchase Price includes all applicable taxes, including goods and services tax and sales taxes. The Seller hereby undertakes to remit all applicable taxes payable on the conveyance of the Assets to the appropriate government authorities within the legally prescribed time limits.
- 2.6. The Purchaser does not and shall not assume and shall be deemed not to assume any of the liabilities, debts or obligations of the Seller, whether present or future, and whether or not relating to the Assets.
- 2.7. The Seller shall execute and deliver to the Purchaser all such bills of sale, assignments, instruments of transfer, assurances, consents and other documents as shall be necessary effectively to transfer to Purchaser all Seller's rights, titles and interest in, to and under, or in respect of the Assets and shall effect such registrations, recordings and filings with public authorities as may be required in connection with the transfer of ownership to Purchaser of the Assets.
- 2.8. The Seller shall be subject to the attached Shareholder agreement (Exhibit C).

## **3. COVENANTS, REPRESENTATIONS AND WARRANTIES OF THE SELLER**

The Seller hereby covenants, represents and warrants to the Purchaser as follows:

- 3.1. The Seller is a limited partnership duly formed, properly organized and validly subsisting in good standing under the laws of Hong Kong. The Seller has the power, authority and capacity to own its property and to carry on its business in the manner and to the extent currently carried on in all jurisdictions in which it presently carries on business and to carry out the transaction contemplated hereby.

- 3.2. The execution and delivery by the Seller of and the performance of its obligations under this Agreement and the completion by the Seller of the transaction contemplated hereby will not result in the violation of any laws or regulation of Hong Kong, or any order or decree of any court or tribunal to which the Seller, the Purchaser or the Assets are subject.
- 3.3. This Agreement has been duly authorized, executed and delivered by the Seller and is a valid and binding obligation of the Seller enforceable in accordance with its terms except as such enforcement may be limited by bankruptcy, insolvency or other law of general application affecting the rights of creditors and except that specific performance is an equitable remedy which may only be awarded in the discretion of the court.
- 3.4. The Assets are owned by the Seller by good and marketable title thereto, free and clear of all liens, hypothecs, pledges, security interests or other encumbrances whatsoever.
- 3.5. Seller agrees to facilitate a name change for its partnership in order to transfer the rights to the name "Lumichip".

#### **4. COVENANTS, REPRESENTATIONS AND WARRANTIES OF THE PURCHASER**

The Purchaser hereby covenants, represents and warrants to the Seller as follows:

- 4.1. The Purchaser Seller is a corporation duly incorporated, properly organized and validly subsisting in good standing under the laws of the State of Nevada. The Purchaser has the corporate power, authority and capacity to own its property and to carry on its business in the manner and to the extent currently carried on in all jurisdictions in which it presently carries on business and to carry out the transaction contemplated hereby.
- 4.2. This Agreement has been duly authorized, executed and delivered by the Purchaser and is a valid and binding obligation of the Purchaser enforceable in accordance with its terms except as such enforcement may be limited by bankruptcy, insolvency or other law of general application affecting the rights of creditors and except that specific performance is an equitable remedy which may only be awarded in the discretion of the court.
- 4.3. No approval or consent of any public or private authority is required to purchase the Assets as provided for herein and the purchase of the Assets as provided for herein shall not conflict with or result in or cause the occurrence of an event or condition which after notice or lapse of time or both would constitute a breach of or default under the Purchaser's articles of incorporation, by-laws or under any agreement, instrument, order, judgment or decree to which the Purchaser is subject.

#### **5. SURVIVAL OF PURCHASER'S REPRESENTATIONS AND INDEMNIFICATION**

- 5.1. The covenants, representations and warranties of the Purchaser contained in this Agreement or contained in any document or certificate given pursuant thereto shall survive the Closing of the purchase and sale of the Assets provided for herein and, notwithstanding such Closing, or any investigation made by or on behalf of the Seller, shall continue in full force and effect for the benefit of the Seller for a period of three years from the date hereof. There shall be no limit on the representations and warranties of the Seller relating to title to the Assets.
- 5.2. The Seller shall indemnify and save harmless the Purchaser, its directors, shareholders, officers and employees from and against any loss whatsoever, including all claims, demands, costs and expenses, arising out of, resulting from or pursuant to any breach of any representation, warranty or covenant of the Seller contained in this Agreement.

## **6. POSSESSION OF ASSETS**

The Seller hereby agrees that the Purchaser shall have physical possession and ownership of the Assets as of and from the close of this business today.

## **7. NOTICES, REQUESTS, DEMANDS AND OTHER COMMUNICATIONS**

### **7.1. Notices**

All notices, requests, demands and other communications hereunder shall be in writing with specific reference to this Agreement and shall be deemed to have been duly delivered on the date of delivery, if by hand, with a signed acknowledgement of receipt of delivery; on the fifth business day after transmission, if sent by fax or on the tenth business day following the day on which it was mailed, sent by first class, certified or registered mail, if sent by mail, as follows:

#### **7.1.1. in the case of the Seller, addressed to:**

1701 Tai Yau Building  
181 Johnson Road  
Wanchai, Hong Kong  
Attention: Juha Rantaia

#### **7.1.2. in the case of the Purchaser, addressed to:**

14340 Torrey Chase Blvd  
Suite 250  
Houston, TX 77014,  
Attention: John C. Higgins

or such other address as the parties may from time to time advise the other party by notice in writing.

### **7.2. Binding Contract**

This Agreement shall enure to the benefit of and be binding upon the [COMPANY NAME] hereto and their respective heirs, executors, legal representatives, successors and assigns.

### **7.3. Entire Agreement**

This Agreement contains the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior negotiations, agreements and understandings, if any.

### **7.4. Further Documents**

The Seller and the Purchaser will each execute and deliver such further documents and instruments and do such acts and things after the Effective Date as may be reasonably required by the other to carry out the intent and meaning of this Agreement.

### **7.5. Headings**

This Agreement may be executed simultaneously in two or more counterparts each of which shall be deemed an original but all of which together shall constitute but one and the same instrument. The headings contained in this Agreement are for reference purposes only and shall not affect the meaning or interpretation of this Agreement.

7.6. Interpretation

Each Article and Section of this Agreement, and any part hereof, shall be interpreted separately and the nullity of any Article or Section or any part thereof shall not render the remaining parts of the Agreement null.

7.7. Preamble

The preamble forms an integral part of this Agreement.

7.8. Applicable Law

This Agreement shall be governed by and construed in accordance with the laws of the United States and the State of Texas. The two parties hereby irrevocably submit to the jurisdiction of the courts of the State of Texas in respect of all matters or disputes arising from this Agreement.

7.9. Costs

The Seller and the Purchaser shall each bear and be responsible for all of its own costs and expenses, including legal fees, incurred in connection with this Agreement and the transaction hereby contemplated.

7.10. Time of Essence

Time shall be of the essence of this Agreement.

IN WITNESS WHEREOF, each party to this agreement has caused it to be executed at Houston, TX on the date indicated above.

SELLER

Authorized Signature

Dr. Juha Rantala, Managing Partner  
Print Name and Title

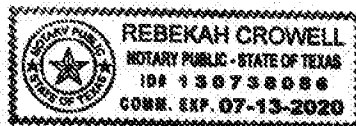
PURCHASER

Authorized Signature

John C. Higgins, President  
Print Name and Title

STATE OF TEXAS

COUNTY OF HARRIS



Given under my hand and official seal this \_\_\_\_\_ day of \_\_\_\_\_, 2017

NOTARY PUBLIC

# ASSETS PURCHASE AGREEMENT

This Asset Purchase Agreement (the "Agreement") is effective October 1, 2017,

Dr. Juha Rantala (the "Seller"), an individual with an office located at:

1701 Tai Yau Building  
181 Johnson Road  
Wanchai, Hong Kong

illumiPure Corp (the "Purchaser"), a company organized and existing under the laws of the State of Nevada, with its head office located at:

14340 Torrey Chase, Suite 250  
Houston, TX 77014

WITNESSETH:

WHEREAS the Seller is the owner of certain intellectual property and listed in Exhibit "A"; and

AND WHEREAS the Seller has agreed to sell to the Purchaser and the Purchaser has agreed to purchase from the Seller the Assets listed in Exhibit A, upon and subject to the terms and conditions hereof;

NOW THEREFORE, IN CONSIDERATION OF THE PREMISES AND OF THE CONDITIONS AND COVENANTS HEREIN CONTAINED, THE PARTIES HERETO AGREE AS FOLLOWS:

## 1. DEFINITIONS

In this Agreement, unless specifically defined otherwise or the context otherwise requires, the following terms shall have the following meanings, and the terms elsewhere herein shall have the meaning there defined:

"Agreement" means this Asset Purchase Agreement including all schedules attached hereto, all of which are incorporated herein by reference and form part hereof and all amendments and supplements hereto and the terms "herein", "hereof", "hereto", "hereunder", and like terms refer to this Agreement;



"Closing" means the completion of the sale to and purchase by the Purchaser of the Assets under this Agreement by the transfer and delivery of documents of title thereto and the payment of the Purchase Price therefor in accordance with this Agreement.

"Person" means any individual, corporation, partnership, trustee or trust or unincorporated association;

"Assets" means accounts, deposit accounts, accounts receivable, instruments, chattel paper, documents, books and records of the business, general intangibles, inventory, Assets, furniture, fixtures, intellectual property, trademarks, licenses, contract rights and any and all other assets owned or acquired now or after the date hereof, all proceeds and insurance proceeds of the foregoing, and all of books and records relating thereto, including computer-stored information and all software relating thereto, and all contract rights with third parties relating to the maintenance of any such books, records and information. In Schedule A hereto;

"Purchase Price" means the purchase price to be paid by the Purchaser to the Seller for the Assets as provided for in Section 2.1 hereof.

## **2. PURCHASE AND SALE**

- 2.1. The Seller hereby sells, conveys and transfers the Assets listed in Exhibit "A" attached to the Purchaser and the Purchaser, in specific reliance on each and every representation and warranty of the Seller herein contained, hereby purchases the Assets from the Seller for a total purchase price (the "Purchase Price") consisting \$\_\_\_\_\_ payable as hereinafter set forth.
- 2.2. The Purchase Price is payable with first installment of \$100,000 with 45 days of signing this agreement and thereafter in installments equal to 5% of all investment funds on the first \$5,000,000 and 15% on subsequent funds raised through sales of treasury subsequent to the execution of this Agreement and shall be paid by the Purchaser by wire transfer in trust to the Seller.
- 2.3. The purchase price shall be paid within the timeline of capital raised or thirty months from of the execution of this document, whichever comes first.
- 2.4. In the event that the purchase price is not paid within the timeframe state in 2.3, the Purchaser agrees to relinquish title and interest in the Assets to the Seller. The Purchaser shall have thirty days to cure this default.
- 2.5. The Purchaser and the Seller acknowledge and agree that the Purchase Price includes all applicable taxes, including goods and services tax and sales taxes. The Seller hereby undertakes to remit all applicable taxes payable on the conveyance of the Assets to the appropriate government authorities within the legally prescribed time limits.
- 2.6. The Purchaser does not and shall not assume and shall be deemed not to assume any of the liabilities, debts or obligations of the Seller, whether present or future, and whether or not relating to the Assets.
- 2.7. The Seller shall execute and deliver to the Purchaser all such bills of sale, assignments, instruments of transfer, assurances, consents and other documents as shall be necessary effectively to transfer to Purchaser all Seller's rights, titles and interest in, to and under, or in respect of the Assets and shall effect such registrations, recordings and filings with public authorities as may be required in connection with the transfer of ownership to Purchaser of the Assets.
- 2.8. The Seller shall be subject to the attached Shareholder agreement (Exhibit C).

## **3. COVENANTS, REPRESENTATIONS AND WARRANTIES OF THE SELLER**

The Seller hereby covenants, represents and warrants to the Purchaser as follows:

- 3.1. The Seller is a limited partnership duly formed, properly organized and validly subsisting in good standing under the laws of Hong Kong. The Seller has the power, authority and capacity to own its property and to carry on its business in the manner and to the extent currently carried on in all jurisdictions in which it presently carries on business and to carry out the transaction contemplated hereby.
- 3.2. The execution and delivery by the Seller of and the performance of its obligations under this Agreement and the completion by the Seller of the transaction contemplated hereby will not result in the violation of any laws or regulation of Hong Kong, or any order or decree of any court or tribunal to which the Seller, the Purchaser or the Assets are subject.
- 3.3. This Agreement has been duly authorized, executed and delivered by the Seller and is a valid and binding obligation of the Seller enforceable in accordance with its terms except as such enforcement may be limited by bankruptcy, insolvency or other law of general application affecting the rights of creditors and except that specific performance is an equitable remedy which may only be awarded in the discretion of the court.
- 3.4. The Assets are owned by the Seller by good and marketable title thereto, free and clear of all liens, hypothecs, pledges, security interests or other encumbrances whatsoever.
- 3.5. Concurrently with the execution hereof, the Seller has delivered the sworn statement of the Seller, signed by its Managing Partner, Dr. Juha Rantala.
- 3.6. Seller agrees to facilitate a name change for its partnership in order to transfer the rights to the name "Lumichip".

#### 4. COVENANTS, REPRESENTATIONS AND WARRANTIES OF THE PURCHASER

The Purchaser hereby covenants, represents and warrants to the Seller as follows:

- 4.1. The Purchaser Seller is a corporation duly incorporated, properly organized and validly subsisting in good standing under the laws of the State of Nevada. The Purchaser has the corporate power, authority and capacity to own its property and to carry on its business in the manner and to the extent currently carried on in all jurisdictions in which it presently carries on business and to carry out the transaction contemplated hereby.
- 4.2. This Agreement has been duly authorized, executed and delivered by the Purchaser and is a valid and binding obligation of the Purchaser enforceable in accordance with its terms except as such enforcement may be limited by bankruptcy, insolvency or other law of general application affecting the rights of creditors and except that specific performance is an equitable remedy which may only be awarded in the discretion of the court.
- 4.3. No approval or consent of any public or private authority is required to purchase the Assets as provided for herein and the purchase of the Assets as provided for herein shall not conflict with or result in or cause the occurrence of an event or condition which after notice or lapse of time or both would constitute a breach of or default under the Purchaser's articles of incorporation, by-laws or under any agreement, instrument, order, judgment or decree to which the Purchaser is subject.

#### 5. SURVIVAL OF PURCHASER'S REPRESENTATIONS AND INDEMNIFICATION

- 5.1. The covenants, representations and warranties of the Purchaser contained in this Agreement or contained in any document or certificate given pursuant thereto shall survive the Closing of the purchase and sale of

PATENT

REEL: 048032 FRAME: 0211

the Assets provided for herein and, notwithstanding such Closing, or any investigation made by or on behalf of the Seller, shall continue in full force and effect for the benefit of the Seller for a period of three years from the date hereof. There shall be no limit on the representations and warranties of the Seller relating to title to the Assets.

- 5.2. The Seller shall indemnify and save harmless the Purchaser, its directors, shareholders, officers and employees from and against any loss whatsoever, including all claims, demands, costs and expenses, arising out of, resulting from or pursuant to any breach of any representation, warranty or covenant of the Seller contained in this Agreement.

## 6. POSSESSION OF ASSETS

The Seller hereby agrees that the Purchaser shall have physical possession and ownership of the Assets as of and from the close of this business today.

## 7. NOTICES, REQUESTS, DEMANDS AND OTHER COMMUNICATIONS

### 7.1. Notices

All notices, requests, demands and other communications hereunder shall be in writing with specific reference to this Agreement and shall be deemed to have been duly delivered on the date of delivery, if by hand, with a signed acknowledgement of receipt of delivery; on the fifth business day after transmission, if sent by fax or on the tenth business day following the day on which it was mailed, sent by first class, certified or registered mail, if sent by mail, as follows:

#### 7.1.1. in the case of the Seller, addressed to:

1701 Tai Yau Building  
181 Johnson Road  
Wanchai, Hong Kong  
Attention: Juha Rantala

#### 7.1.2. in the case of the Purchaser, addressed to:

14340 Torrey Chase Blvd  
Suite 250  
Houston, TX 77014  
Attention: John C. Higgins

or such other address as the parties may from time to time advise the other party by notice in writing.

### 7.2. Binding Contract

This Agreement shall enure to the benefit of and be binding upon the [COMPANY NAME] hereto and their respective heirs, executors, legal representatives, successors and assigns.

### 7.3. Entire Agreement

This Agreement contains the entire agreement between the parties with respect to the subject matter hereof and supersedes all prior negotiations, agreements and understandings, if any.

#### 7.4. Further Documents

The Seller and the Purchaser will each execute and deliver such further documents and instruments and do such acts and things after the Effective Date as may be reasonably required by the other to carry out the intent and meaning of this Agreement.

#### 7.5. Headings

This Agreement may be executed simultaneously in two or more counterparts each of which shall be deemed an original but all of which together shall constitute but one and the same instrument. The headings contained in this Agreement are for reference purposes only and shall not affect the meaning or interpretation of this Agreement.

#### 7.6. Interpretation

Each Article and Section of this Agreement, and any part hereof, shall be interpreted separately and the nullity of any Article or Section or any part thereof shall not render the remaining parts of the Agreement null.

#### 7.7. Preamble

The preamble forms an integral part of this Agreement.

#### 7.8. Applicable Law

This Agreement shall be governed by and construed in accordance with the laws of the United States and the State of Texas. The two parties hereby irrevocably submit to the jurisdiction of the courts of the State of Texas in respect of all matters or disputes arising from this Agreement.

#### 7.9. Costs

The Seller and the Purchaser shall each bear and be responsible for all of its own costs and expenses, including legal fees, incurred in connection with this Agreement and the transaction hereby contemplated.

#### 7.10. Time of Essence

Time shall be of the essence of this Agreement.

IN WITNESS WHEREOF, each party to this agreement has caused it to be executed at Houston on the date indicated above.

SELLER

PURCHASER

Authorized Signature

Authorized Signature

**PATENT**  
**REEL: 048032 FRAME: 0213**

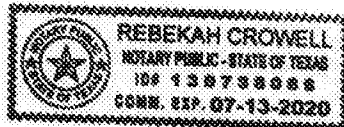
Dr. Juha Rantala

President

Print Name and Title

STATE OF TEXAS

COUNTY OF HARRIS



John C. Higgins

Print Name and Title

Given under my hand and official seal this \_\_\_\_\_ day of \_\_\_\_\_, 2017

Rebekah Crowell  
NOTARY PUBLIC

EXHIBIT A

EXHIBIT B

Exhibit A:

All past, present and future R&D for Lumichip

Patents as attached and R&D on products (toothbrush, bandaid):

Additional Assets:

1. Trade secret for phosphor mix.
2. Trade secret for computer programs for LED chip manufacturing related to Die bonder, wire bonder, and dispenser.
3. Office and Equipment in Hong Kong and Taiwan Lumichip locations to include:  
Ownership of Lumichip name and the books and intangibles of the business including inventory, furniture, fixtures, IP, trademarks, licenses, contract rights and other assets owned or acquired by Lumichip.

## Terril Lewis

---

**From:** John Higgins <jchiggins@neutexworld.com>  
**Sent:** Thursday, December 27, 2018 10:45 AM  
**To:** Terril Lewis  
**Cc:** MARK LEWIS  
**Subject:** FW: Patent cases to be transferred to Illumipure from JR.xls  
**Attachments:** LUMI6AUS\_2017-06-21\_reg\_certificate\_1014331.pdf; LUMI6BUS\_2017-09-07\_reg\_certificate\_1045315.pdf; LUMI6AUS\_2017-06-21\_reg\_certificate\_1014331[1].pdf; LUMI6BUS\_2017-09-07\_reg\_certificate\_1045315[1].pdf; surna note payoff[1].pdf

Terril,

This is the original email from Juha. Also the granted patent you worked on should also be assigned to IP.

Please see below with attachments. I have also attached the contracts. The Surna note is also attached. They were the first company to try and purchase.



John Higgins  
President & CEO, The NEUTEX Family of Companies  
t: 281.227.2208  
e: jchiggins@neutexworld.com | w: www.neutexled.com  
a: 14340 Torrey Chase Blvd, Suite 250  
Houston, Texas 77014



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Please consider your environmental responsibility. Before printing this e-mail message, ask yourself whether you really need a hard copy.

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**From:** Mark Lewis <mlewis@neutexworld.com>  
**Date:** Thursday, December 27, 2018 at 10:23 AM  
**To:** John Higgins <jchiggins@neutexworld.com>  
**Cc:** Mark Sam <msamcpa@neutexworld.com>  
**Subject:** FW: Patent cases to be transferred to Illumipure from JR.xls

John,

Please forward this email with attachments to Terril. It indicates what patents Juha intended to transfer in our purchase.



Mark Lewis  
Chief Operating Officer, The NEUTEX Family of Companies  
t: 281.227.2208  
e: mlewis@neutexworld.com | w: www.neutexled.com  
a: 14340 Torrey Chase Blvd, Suite 250  
Houston, Texas 77014



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Please consider your environmental responsibility. Before printing this e-mail message, ask yourself whether you really need a hard copy.

**From:** Mark Lewis  
**Sent:** Monday, October 1, 2018 2:06 PM  
**To:** Juha Rantala <juha.rantala@inkron.com>  
**Cc:** John Higgins <jchiggins@neutexworld.com>  
**Subject:** FW: Patent cases to be transferred to Illumipure from JR.xls

Juha,

I found the patents in the email from November 29<sup>th</sup>, 2017. I think the confusion started when I indicated that the patents came from Lumichip instead of you personally.



Mark Lewis  
Chief Operating Officer, The NEUTEX Family of Companies  
t: 281.227.2208  
e: [mlewis@neutexworld.com](mailto:mlewis@neutexworld.com) | w: [www.neutexled.com](http://www.neutexled.com)  
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**To:** Mark Sam <[msamcpa@neutexworld.com](mailto:msamcpa@neutexworld.com)>  
**Subject:** FW: Patent cases to be transferred to Illumipure from JR.xls

See Juha requests below



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**To:** John Higgins <[jchiggins@neutexworld.com](mailto:jchiggins@neutexworld.com)>; Mark Sam <[msamcpa@neutexworld.com](mailto:msamcpa@neutexworld.com)>; Mark Lewis <[mlewis@neutexworld.com](mailto:mlewis@neutexworld.com)>  
**Subject:** RE: Patent cases to be transferred to Illumipure from JR.xls

Patent certificates relating to my email below.



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**From:** Juha Rantala [<mailto:narantala@gmail.com>]  
**Sent:** Thursday, November 23, 2017 1:27 AM  
**To:** 'John Higgins'; 'Mark Sam'; 'Mark Lewis'  
**Subject:** Patent cases to be transferred to Illumipure from JR.xls

Hello Gents,

Here are the patents and applications cases to be transferred to Illumipure under the agreement between Juha Rantala and Illumipure.

Please amend this to the appendix.

Also can you also amend the agreement that Illumiure shall be responsible to maintain and cover all the cost the patents and applications from the effective date of the agreement. Also amend that if illumipure shall go to liquidation prior the full payments according to the agreement are fully paid that all rights of the these patents and patents shall return to back to me. Also illumipure shall not transfer the ownership or license these IPs prior the payments according to the agreement are fully paid.

I will now work on the Lumichip IP list to be transferred to illumipure.

Enjoy your Thanks Giving!

Best regards,  
Juha

p.s. reasonably good results from the DCW testing.

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a patent on the invention shall be granted  
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**PATENT**

**REEL: 048032 FRAME: 0219**

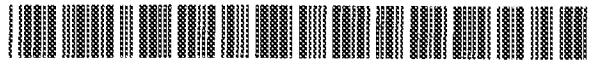
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*If this application was filed prior to June 8, 1995, the term of this patent begins on the date on which this patent issues and ends on the later of seventeen years from the date of the grant of this patent or the twenty-year term set forth above for patents resulting from applications filed on or after June 8, 1995, subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b) and any extension as provided by 35 U.S.C. 156 or any disclaimer under 35 U.S.C. 253.*



US009750105B2

(12) **United States Patent**  
**Rantala**

(10) **Patent No.:** **US 9,750,105 B2**  
(45) **Date of Patent:** **Aug. 29, 2017**

(54) **LED STRUCTURE WITH  
QUASI-CONTINUOUS SPECTRUM AND  
METHOD OF ILLUMINATION**

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(Continued)

(71) Applicant: **Juha Rantala, Bäch (CH)**

(72) Inventor: **Juha Rantala, Bäch (CH)**

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

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(Continued)

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Argyroudi-Akoyunoglou et al: Photoinduced Changes in the Chlorophyll a to Chlorophyll b Ratio in Young Bean Plants. Plant Physiology. 247-9, 1970.

(Continued)

(21) Appl. No.: **14/710,629**

(22) Filed: **May 13, 2015**

(65) **Prior Publication Data**

US 2016/0338169 A1 Nov. 17, 2016

(51) **Int. Cl.**

**H05B 37/02** (2006.01)

**H05B 33/08** (2006.01)

**H01L 25/075** (2006.01)

**H01L 33/50** (2010.01)

(52) **U.S. Cl.**

CPC ..... **H05B 33/0857** (2013.01); **H01L 25/0753** (2013.01); **H05B 33/0818** (2013.01); **H01L 33/504** (2013.01)

(58) **Field of Classification Search**

CPC . **H01L 25/0753**; **H01L 33/486**; **H01L 33/505**; **H01L 33/58**; **H01L 33/62**; **H01L 33/0818**; **H05B 33/0857**

IPC ..... **H01L 25/0753**

See application file for complete search history.

Primary Examiner — Tung X Le

Assistant Examiner — Raymond R Chai

(74) Attorney, Agent, or Firm — Seppo Laine Oy

(57)

#### ABSTRACT

A LED structure and a method of providing pulsed light energy synchronized with the photosynthesis process by an integrated LED structure. The LED structure comprises a substrate; a plurality of optically independent light emission areas on substrate; a light emitting semiconductor source of a first type mounted in part of the emission area(s); a light emitting semiconductor source of a second type mounted in part of the emission area(s); and wavelength conversion materials of at least two types. The first type is formed on the top of the said first type of light emitting semiconductor sources and the second type is formed on the top of the said second type of light emitting semiconductor sources.

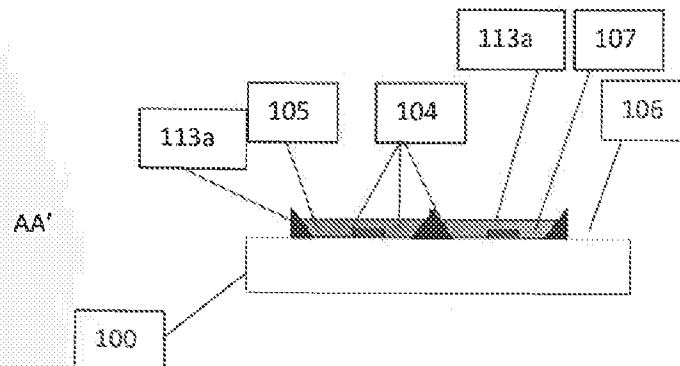
The LED structure suits grow light systems that require dynamic luminaires with adjustable spectrum, tunable intensity and controllable pulse mode operation.

1 Claim, 6 Drawing Sheets

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**PATENT**

**REEL: 048032 FRAME: 0221**

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*Has received an application for a patent for a new and useful invention. The title and description of the invention are enclosed. The requirements of law have been complied with, and it has been determined that a patent on the invention shall be granted under the law.*

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*If this application was filed prior to June 8, 1995, the term of this patent begins on the date on which this patent issues and ends on the later of seventeen years from the date of the grant of this patent or the twenty-year term set forth above for patents resulting from applications filed on or after June 8, 1995, subject to the payment of maintenance fees as provided by 35 U.S.C. 41(b) and any extension as provided by 35 U.S.C. 156 or any disclaimer under 35 U.S.C. 253.*

(12) **United States Patent**  
**Rantala**

(10) **Patent No.:** **US 9,681,515 B2**  
(45) **Date of Patent:** **Jun. 13, 2017**

(54) **LED STRUCTURE WITH A DYNAMIC SPECTRUM AND A METHOD**

(56) **References Cited**

**U.S. PATENT DOCUMENTS**

(71) Applicant: **Juha Rantala**, Bäch (CH)

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47/1.01 R

(72) Inventor: **Juha Rantala**, Bäch (CH)

(Continued)

(\*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 0 days.

**FOREIGN PATENT DOCUMENTS**

(21) Appl. No.: **14/710,627**

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CN 201797809 U 4/2011

(Continued)

(22) Filed: **May 13, 2015**

**OTHER PUBLICATIONS**

(65) **Prior Publication Data**

US 2016/0338168 A1 Nov. 17, 2016

Argyroudi-Akoyunoglu et al: Photoinduced Changes in the Chlorophyll a to Chlorophyll b Ratio in Young Bean Plants. Plant Physiology. 247-9, 1970.

(Continued)

(51) **Int. Cl.**

**G05F 1/00** (2006.01)  
**H05B 37/02** (2006.01)  
**H05B 39/04** (2006.01)  
**H05B 41/36** (2006.01)  
**H05B 33/08** (2006.01)  
**A01G 7/04** (2006.01)  
**A01G 9/20** (2006.01)  
**H01L 25/075** (2006.01)  
**H01L 33/50** (2010.01)

*Primary Examiner* — Anh Tran

(74) *Attorney, Agent, or Firm* — Seppo Laine Oy

(57) **ABSTRACT**

An integrated LED structure and a method of adjusting the emission spectrum of an integrated LED structure, for photobiological process. The structure comprises a substrate; a plurality of optically isolated and electrically non-independent light emission areas integrated on the substrate; a light emitting semiconductor source of a first type mounted in the emission area(s); a light emitting semiconductor source of a second type mounted in the emission area(s); an electrical circuit layer for connecting the said light emitting semiconductor sources in serial fashion for each emission area; and wavelength conversion materials. The emission areas are controlled with a common electrical drive current, and the emission output can be tuned by adjusting the common current value, to enable use of one luminaire for a large variety of biomass growing applications.

(52) **U.S. Cl.**

CPC ..... **H05B 33/0857** (2013.01); **A01G 7/045** (2013.01); **A01G 9/20** (2013.01); **H01L 25/0753** (2013.01); **H01L 33/504** (2013.01); **H01L 2933/0041** (2013.01)

(58) **Field of Classification Search**

None

See application file for complete search history.

**9 Claims, 3 Drawing Sheets**

