TANGIBLE IP LLC
Aligning IP With Business ™

REVISED EXECUTIVE SUMMARY FOR THE PATENT SALE OF

Beyond Edison
(as of September 15, 2014)

17 Issued patents on LED Systems for Replacement Lighting and Other Illuminated Devices

Patent Number	Title	Priority Date	Issue Date	Exp. Date *extended	B/F Citations
~~US Pat. No. 7,114,830~~ SOLD!	~~LED replacement for fluorescent lighting~~	~~Jul 17, 2002~~	~~Oct 3, 2006~~	~~Jul 17, 2022.~~	~~26/46~~
~~US Pat. No. 6,860,628~~ SOLD!	~~LED replacement for fluorescent lighting~~	~~Jul 17, 2002~~	~~Mar 1, 2005~~	~~Jul 17, 2022~~	~~23/121~~
US Pat. No. 5,400,225	Optical fiber illumination device	Oct 6, 1993	Mar 21, 1995	Oct 6, 2013	17/43
US Pat. No. 5,491,617	Illuminated fluid tap	May 12, 1993	Feb 13, 1996	May 12, 2013	8/28
US Pat. No. 5,495,400	Optical fiber illumination device **(See EoU Section for claim charts)**	Oct 6, 1993	Feb 27, 1996	Oct 6, 2013	16/37
US Pat. No. 5,602,948	Fiber optic illumination device	Apr 9, 1996	Feb 11, 1997	Apr 9, 2016	22/19
US Pat. No. 6,577,794	Compound optical and electrical conductors, and connectors therefor	Sep 27, 1999	Jun 10, 2003	Sep 27, 2020	21/20
US Pat. No. 6,802,635	Illuminated translucent devices	Jan 17, 2002	Oct 12, 2004	Sep 6, 2022 *91 days	9/9
US Pat. No. 6,916,103	Illuminated guard rail	Mar 12, 2002	Jul 12, 2005	Mar 12, 2022	4/5
US Pat. No. 6,926,426	Cordless LED light driving wall module and night light	Oct 8, 2002	Aug 9, 2005	Oct 8, 2022 *104 days	13/8
US Pat. No. 6,974,239	Compound optical and electrical conductors, and connectors therefor	Sep 27, 2000	Dec 13, 2005	Sep 27, 2020	1/8
US Pat. No. 7,011,422	Illuminated power strip and electrical outlet	Oct 16, 2002	Mar 14, 2006	Oct 16, 2022 *39 days	15/12

TANGIBLE IP LLC
Aligning IP With Business ™

Patent Number	Title	Priority Date	Issue Date	Exp. Date *extended	B/F Citations
US Pat. No. 7,021,808	Illuminated rope	Oct 8, 2002	Apr 4, 2006	Oct 8, 2022 *15 days	3/6
US Pat. No. 7,114,821	Cordless LED light driving wall module and night light	Oct 8, 2002	Oct 3, 2006	Oct 8, 2022	26/3
US Pat. No. 7,121,707	Illuminated electrical cords and outlets	Feb 14, 2002, 2004	Oct 17, 2006	Feb 14, 2022, *41 days	23/20
US Pat. No. 7,172,314	Solid state electric light bulb **(One company already under license)**	Jul 29, 2003	Feb 6, 2007	Jul 29, 2023	4/6
US Pat. No. 7,249,865	Combination fluorescent and LED lighting system	Sep 7, 2005	Jul 31, 2007	Sep 7, 2025	29/19
US Pat. No. 7,478,924	Combination fluorescent and LED lighting system	Sep 7, 2005	Jan 20, 2009	Sep 7, 2025	7/4
US Pat. No. 7,512,300	Compound optical and electrical conductors, and connectors therefor	Oct 21, 2002	Mar 31, 2009	Oct 21, 2022 *61 days	7/4

EoU: 2 claim charts (**Ford Motor Company**, **Chrysler**)

Encumbrances: **One operating firm licensee for patent '314 only.**

Revised Pricing Guidance: **$USD ~~mid-high to high six figures~~ low to mid six figures.** The seller is also open to alternative deal structures.

About Tangible IP, LLC. *Tangible IP specializes in the brokerage of high quality patent portfolios and related IP strategic advisory services. Tangible IP has now brokered over 2000 patents since its inception in year 2011 and has quickly established itself as one of the leading patent brokerage and IP advisory firms.*

Important Disclaimer: *This document includes information regarding the sale of a valuable patent portfolio. The information, data, and charts are provided only for each prospective buyers use in independently evaluating the portfolio. The discussion of the use or applicability of the portfolio is only for illustrative purposes. This document and any documents exchanged during the sales process are not intended to be, and should not be interpreted as being, a notice of infringement, any form of accusation of infringement, or any opinion regarding the actual use of the patent portfolio.*

TANGIBLE IP LLC
Aligning IP With Business ™

Contents

TANGIBLE IP LLC

Aligning IP With Business ™

EXECUTIVE SUMMARY

1. The Opportunity

Tangible IP, LLC is a leading patent brokerage firm focusing on high value, high quality portfolios with over 2000 assets sold since its inception. We recently closed on a transaction regarding a small subset (2 patents) of this portfolio (see Press Release) and we are resending this offering to prospective buyers with substantial new EoU and more attractive pricing guidance as a result of said transaction, despite the fact that most of the initial assets remain available for sale. With this portfolio, we offer a unique opportunity for buyers wanting to acquire a strategic (offensive and defensive) position in the key LED area, or for institutional buyers wanting to monetize the portfolio through licensing programs. Patents in LED lighting are particularly valuable now as they are a key part of commercial strategies of large and small LED players alike.

The US LED market will exceed reached $4.8 billion in 2012, and is projected to surpass **$49 billion** in 2019, at an annual growth rate of 45%. It is well-known that the energy-saving benefits from replacing standard incandescent light bulbs with LEDs comes from the elimination of wasted infrared energy, i.e. heat. The longer lifetime of LEDs versus incandescent lamps is also recognized even by consumers.

The benefits of replacing fluorescent lights by LEDs are becoming well known but are worth repeating: If just 25% of fluorescent lighting fixtures in the U.S. were converted to LEDs, we could:

- Prevent the release of green house gases equal to 10 million cars.
- Save $15 billion in electricity costs annually.
- Decommission 133 coal burning power plants.
- Reduce carbon emissions by 158 metric tons.
- Avoid releasing 5,700 pounds of airborne mercury.
- Realize average energy saving of 50-80%.
- Benefit from the 70% efficacy point of LED, 50,000 hours, compared to 8,000 hours for fluorescent lighting.

LEDs require no maintenance on re-lamping. They emit no low-level radiation or damaging UV rays. They have an average lifetime 6.2 times longer than fluorescents and an average lifetime return on investment value of 300-500% or more. LEDs have better light quality over their lifetime and are not

prone to flickering. Finally, studies have shown that they can cure Seasonal Affective Disorder as well as increase productivity by 3% or 1 hour a week.

In March 2013 the US Department of Energy's CALiPER program released a study benchmarking the potential for LED lighting to offer continued energy and environmental benefits over traditional lighting. The study found that by comparison "*LED products performed as well as or better than fluorescent products*." (pg 9). Due to such government assessments, the advancement of LED technology will follow a trajectory that can ensure continued LED lighting quality and performance.

The energy and replacement cost savings realized in replacing standard incandescent bulbs and fluorescent tubes with LEDs for general illumination also have benefits in specialty lighting applications. The small size of LEDs compared to these older technologies provides new flexibility in providing not only smaller and more robust luminaire design; they also provide a simpler path to tuning the color of lighting. This has application in changing the spectral content for specific tasks, but also in providing the capability for the addition of lighting relatively inexpensively for aesthetic reasons in automotive and other transportation industries and a broad range of industrial and consumer products. Often these new applications employ fiber optic waveguides or light pipes to provide a colorful glow where desired over an element physically much larger than the LED source.

2. The Patent Portfolio

The patent portfolio consists of 17 issued US patents and one pending application centered around three main families. The portfolio provides excellent protection and broad scope of coverage against invalidity findings.

The potential licensing market for the portfolio is enormous. For instance, estimated licensing royalties from the portfolio in the combined factory installed and add-on accessories interior LED market, solely for some select models of Ford cars and pickup trucks, may yield in past damages:

- Assuming a 3% Royalty Rate- **$31,484,210**
- Assuming a 5% Royalty Rate- **$52,473,684**
- Assuming a 7% Royalty Rate- **$73,463,157**

Access our **Excel XLS** for detailed calculations of reasonable royalties.

3. Detailed Portfolio Analysis

The portfolio comprises US patents that relate to novel lighting systems that generally include LEDs. Although there are numerous overlapping applications, the patents in the portfolio can fall into three main categories:

- Solid state lighting replacements for conventional incandescent and fluorescent bulbs.
- Vehicular applications of light pipes.
- Other niche LED applications for home and commercial environments.

The categories will be considered in turn below.

FAMILY #1- SOLID STATE LIGHTING REPLACEMENTS FOR CONVENTIONAL INCANDESCENT AND FLUORESCENT BULBS

A. US Patent No. 7,172,314 Solid state electric light bulb

This patent refers to an LED replacement bulb for a standard Edison-type screw socket. The replacement bulb includes one or more LEDs and a light diffuser characterized by a conical inner wall which optionally includes circular facets and an end cap that may be a diffuser or a lens. There are 5 independent claims plus 8 dependent claims.

The patent claims the benefit of 2 provisional applications, each filed Jul 29, 2003. The non-provisional app was filed Jul 29, 2004.

B. US Patent Appl. No. 12/361,349 LED Replacement Light Tube for Fluorescent Light Fixture

This patent application deals with an LED fluorescent tube replacement sized to fit within the envelope of a conventional fluorescent tube of the form of a translucent cylinder in which an upper portion has been removed to provide space for the LEDs and a heat sink. There are 20 claims including 2 independent claims. The application was abandoned accidentally and is in the process of being reinstated by the seller.

FAMILY #2- VEHICULAR APPLICATIONS OF LIGHT PIPES

C. US Patent No. 5,400,225 Optical fiber illumination device

This patent refers to an optical fiber system for use around a motor vehicle window in which different light source emissions are injected into the fiber under different conditions, for example, to distinguish between parking lights and braking lights. There is one independent and 15 dependent claims. A control circuit turns the light sources on and off. The patent predates the widespread use of LEDs, so it may be used with conventional automotive bulbs.

Patent '400 is a continuation in part of US Pat. 5,400,225. Date of parent patent filing is Oct 6, 1993. Patent '400 was filed Feb 24, 1995.

D. US Patent No. 5,495,400 Optical fiber illumination device (See EoU Section)

Although this patent expired in October of 2013, damages for infringing activities are available to the patent owner up to 6 years prior to said expiration, thus covering the entirety of the relevant time period since the introduction of the infringing devices in 2009.

This is a continuation-in-part of 5,400,335. It has 20 claims, including 2 independent claims. The patent covers a fiber optic illumination device for motor vehicles. It includes optical fibers that receive light from sources at both ends, and emits light through the sides of the optical fiber. The scattered light may be used for auxiliary functional indications such as turn signals, parking lights and brake depression, or may be used for decoration. Using light sources of different colors on the two ends or a multicolor light source allows the color of the light emitted from the sides of the fiber optic to display different states.

Although the detailed specification includes halogen lamps as light sources, the independent claims use the general term "light source". Dependent claims 9 and 19 specify that the "light sources" are "halogen lamps". As a result, the claims are sufficiently broad to cover LED light sources. The increase in brightness of LEDs and their high reliability and life time compared to vehicles makes for increased future applications of this patent.

E. US Patent No. 5,602,948 Fiber optic illumination device

This patent refers to a fiber optic cable accessory that is detachable from a light source to provide an emergency warning light emission radially from the side of the cable and work light emanating axially from the end of the fiber optic cable. Potential applications for this dual functionality may be as a motor vehicle accessory, maritime, aviation or mining

situations where low visibility benefits from use of a personal work light and an extended visible light source for others. There are 20 claims including 3 independent ones.

F. US Patent No. 6,916,103 Illuminated guard rail

This patent refers to a conventional guard rail (for roads or bridges) that is covered with a light reflective cover that can be illuminated. There are 19 claims total including 4 independent claims. The reflective cover may be made out of an acrylic material that has LED light injected into it analogously to the edge or area LED backlights used with the latest high-definition LCD displays. Some of the claims deal with controlling the illumination and others deal with the mechanical and optical structures and fastening methods.

The patent claims benefit of provisional app dated Mar 12, 2002. Non-provisional app filed Mar 12, 2003.

FAMILY # 3- OTHER NICHE LED APPLICATIONS FOR HOME AND COMMERCIAL ENVIRONMENTS

G. US Patent No. 5,491,617 Illuminated fluid tap

This patent refers to a fiber optic illumination device for use, for example, with a water faucet. The switching between illumination of the handle and the fluid outlet may make it more desirable for use with a beer tap in a bar. It has 17 claims total including 3 independent claims.

Patent '617 is a continuation of an abandoned patent. The parent patent was filed May 12, 1993. Patent '617 filed Aug 4, 1994.

H. US Patent No. 6,577,794 Compound optical and electrical conductors, and connectors therefor

This patent refers to a fiber optic cable or light pipe that includes one or more electrical conductors and connectors for combining them. The electrical conductors may be used to power additional light sources to compensate for optical loss and may have benefit in emergency lighting strips by restricting the emission area. There are 30 claims total including 4 independent ones.

Patent '794 claims the benefit of a provisional patent app dated Sep 27, 1999. The non-provisional app was filed Sep 27, 2000.

I. US Patent No. 6,802,635 Illuminated translucent devices

This patent refers to a rigid, translucent light pipe lit at both ends that contains an opaque channel that contains electrical wiring. Such a device could be used as a glowing floor lamp post or ceiling fan hanging pipe, glowing automotive trim, etc. Since many of these applications benefit from launching light from both ends, the electrical wiring can be beneficial in just powering the LED on the far end of a light pipe. There is one independent claim plus 19 dependent claims.

The patent claims the benefit of 3 provisional apps, dated: Jan 17, 2002; Jan 18, 2002 and Mar 6, 2002.

J. US Patent No. 6,926,426 Cordless LED light driving wall module and night light

This patent covers an LED nightlight that has an acrylic light pipe with a hollow and a reflector that can rotate to direct light to different orientations. The rotation is a mechanical function that does not depend upon a rotating electrical connection. This patent includes 1 independent claim and 7 dependent claims dealing with specifics of the reflector, cap, electrical characteristics and LED color.

The patent claims the benefit of multiple provisional apps dated Oct 8, 2002, Oct 16, 2002 and Oct 15, 2002. Filing of non-provisional app was Oct 8, 2003.

K. US Patent No. 6,974,239 Compound optical and electrical conductors, and connectors therefor

This patent is a continuation-in-part of both 6577794 and 6916103, both included in this portfolio. It deals with a combined optical and electrical wiring structure that has light emanating from a line along the length of the structure. There are 24 claims total including 2 independent claims. This configuration may be useful for safety or aesthetic applications.

The patent is a continuation in part of an issued patent filed Sep 27, 2000 and a continuation of a patent app filed Mar 12, 2003. The patent also claims the benefit of a provisional patent app filed Mar 12, 2002. The non-provisional filing date for the patent was Jun 2, 2003.

L. US Patent No. 7,011,422 Illuminated power strip and electrical outlet

This patent refers to a replacement electrical outlet cover plate that includes LEDs to make the cover plate glow. Some claims deal with the structure of the plate and switching of colors, while others deal with how the unit is powered by main power. There are 19 claims including 2 independent ones.

The patent claims the benefit of a provisional app filed Oct 16, 2002 and another provisional app filed Nov 4, 2002. The non-provisional app was filed Oct 16, 2003.

M. US Patent No. 7,021,808 Illuminated rope

This patent deals with a translucent rope that is illuminated by a light source located at the end of a fiber optic strand included in the rope to make it glow uniformly. There are 19 claims including 3 independent claims. The end feeding of the light and structure of translucent fibers around it may provide additional applications beyond purely decorative elements in night fishing on boats where strength of the glowing rope would be important.

The patent claims the benefit of a provisional app dated Oct 8, 2002. The provisional app was filed Sep 30, 2003.

N. US Patent No. 7,114,821 Cordless LED light driving wall module and night light

This is a divisional patent of 6,926,426 included in this portfolio. It deals with the illumination by LEDs of a fluid within or exiting a pipe in which the color changes based upon a sensing of the filter's condition. For example, if a filter needs replacing, the color of the liquid inside a translucent pipe or coming out of the end of a faucet or hose could change color (or start or stop being colored). There is 1 independent claim plus 3 more dependent claims.

The patent stems from a divisional app of a patent app filed Oct 8, 2003 (that has issued), and also claims the benefit of provisional apps filed Oct 8, 2002, Oct 16, 2002 and Oct 15, 2002. The non-provisional app was filed Jul 1, 2005.

O. US Patent No. 7,121,707 Illuminated electrical cords and outlets

This patent relates to illuminated electrical cords. It has 20 claims total including 3 independent claims. A common convenience feature of electrical extension cords is a light source in the female plug end which indicates that the plug is energized. This patent extends this utility by illuminating the length of the cord with a translucent cover. In this

way, verification of an energized state and a warning not to step on an energized cord are provided. The claimed light source is not restricted to LEDs, which allows the use of other lamp types that run directly off of mains power. The light source may alternately be included in the outlet to which the electrical cord is plugged.

P. US Patent No. 7,249,865 Combination fluorescent and LED lighting system

This patent broadly claims applications in which LEDs are included within or attached to the outside of a conventional (i.e. gaseous discharge) fluorescent tube. There are 21 claims total including 4 independent claims. By adding LEDs to a conventional fluorescent tube, the color of the combined light output can be changed or the LEDs can be used to indicate various emergency conditions.

Q. US Patent No. 7,478,924 Combination fluorescent and LED lighting system

This is a continuation of 7249865 above which adds one independent claim and 3 dependent claims. These claims are directed to emergency indication by LEDs built into the conventional fluorescent tube and powered by the pin contacts of the tube.

The patent is a continuation of a now issued patent that was filed Sep 7, 2005. The patent was filed Jul 30, 2007.

4. Power Rankings

A. Detectability of EoU

[Excellent]. It is extremely easy to detect infringement for the patents on offer given the nature of the technology at stake. There is no need to perform even basic reverse engineering as the main features of the products that pertain to the portfolio are readily observable.

B. Lack of Prior Art

[Excellent]. The patents on offer have priority dates dating back to the late 1990s to early 2000s, well before widespread commercialization, patenting and monetization of LED related technology assets.

C. Commercial Maturity

[Very good]. LED lighting has developed into a relatively mature area of technology. Adoption of LED lighting has skyrocketed in recent years due to lower cost, quicker ROI and

reverse compatibility with traditional lighting fixtures. Consequently, the industry has and will continue to increasingly infringe on claims covered by the patents on offer.

D. Available Alternatives

[Excellent]. The number of patent assets, their priority dates and forward citations indicate that manufacturers would need to walk an extremely fine line to avoid infringing on the relevant assets in the portfolio.

E. Claim Interpretation Breadth

[Excellent]. The sheer number of assets in the portfolio provides opportunities to capture a wide range of future niche applications in addition to the significant current LED tube retrofit market.

5. Encumbrances

One operating company has taken a voluntary license to patent '314. Said license does not allow for any sublicensing. More information can be made available under NDA.

6. Market Trends

Rapid growth in the LED market is driven by demand for high performing, efficient displays, fixtures and lighting. Global governments play a role in the proliferation of LEDs, with regulations on energy consumption and incentives for adoption of efficient, environmentally friendly lighting deployment. Consumers are realizing that LED lighting leads to "green cost savings." Improving technology and aggressive price reductions in LED technology now allow LED lighting adopters to enjoy ROI much sooner.

LED technology is also an attraction for venture capital firms, as they "see the light" by investing $174 million in LED lighting in 2012. Recently LatticePower gained an additional $80 million in funding, bringing its total financing to over $200 million. Alan Salzman, CEO and managing partner at VantagePoint Capital Partners, explained:

> "By 2020, you're not going to be able to buy a light source other than an LED. You're on a learning curve of cost reduction, quality improvement and efficacy improvement. Today, 2013, is the first year you're going to be able to buy an exact clone of a regular 60-watt incandescent bulb at a reasonable price point—meaning

> a one-year payback to consumers. This year it's a $10 product. We're looking at it being a $5 product within 24 months, $2.50 within 48 months. So, by the time you get to 2020, it would be the equivalent cost to today's regular light bulb, last 25 years and use 85% less energy."

LED lighting technology can reduce global energy consumption by 20%, leading to savings of $100 billion in energy cost in the next 5 years. Major segments in the lighting market are general lighting, automotive lighting, signs and billboard lighting. General LED lighting may account for 80% of the total lighting market by 2020. According to McKinsey, the market is on a "clear transition path from traditional lighting technologies to LED." Major retailers like Starbucks and Walmart have already transitioned to LED lighting at locations worldwide.

The following section summarizes firms that may practice or benefit from patents in the portfolio.

Aleddra is a business unit of Lightel Technologies. In Jun 2013, the Auburn, WA Supermall chose Aleddra to supply LED tube lamps to modernize its energy consumption. Aleddra will help reduce the SuperMall's energy consumption by an estimated 52% with LED T8 tube lamps.

Alpine LED is a division of Alpine Electronics that develops and sells LED lighting in over 80 countries around the world. In operation since 1982, Alpine LED is a veteran LED developer and manufacturer. The firm's offerings include LED bulbs and T8 replacement fluorescent tubes.

ATG Electronics enjoys revenue upwards of $10 million annually. ATG counts among its successes the fitting of 1900 iBright LED T8 tubes at the Los Angeles Marriot, that may help the hotel save 50% on energy costs.

Clean Light Green Light is a 10 year old firm that manufactures a full range of commercial and industrial LED lighting solutions.

EarthLED, a division of Advanced Lumonics, specializes in LED replacement bulbs and fluorescent tubes. From 2007-2011, EarthLED enjoyed 860% revenue growth, hitting $3 million revenue in 2011. The firm's clients include IBM, Microsoft and BP. In 2012, EarthLED joined the Inc. 500 list of the fastest growing private firms in the US.

Energy Owl makes LED bulbs and tubes for commercial use. The firm is part of the R.G. Underwood conglomerate that makes commercial facility equipment.

GE Lighting Solutions is the LED lighting subsidiary of GE, with operations worldwide. Total US revenue for GE lighting products approached $1.6 billion in 2010, with LED the firm's primary commercial lighting initiative. In the US, GE Lighting offers replacement LED lamps and bulbs. In APAC, GE makes available LED replacement tubes as well as lamps and bulbs.

Green Ray LED Lighting was founded in 2012. Within one year the Department of Energy labeled Green Ray LED T8 tube one of the most efficient LED solutions in the world. Green Ray also commercializes LED bulbs.

JS LED Power draws estimated annual revenue of $1 million after forming in 2006. The firm develops, manufactures and sells LED fluorescent tubes, among other offerings. JS LED also does business in China.

Kumho Electric is a global lighting company based in Seoul, South Korea. In 2007, Kumho established a distribution center in California to sell to consumers directly rather than through American OEMs. Kumho commercializes LED T8 replacement tubes and bulb lamps.

LED Global Supply offers a vast selection of LED T8 tubes and replaceable bulbs. Customers include the US Coast Guard, US Navy, Homeland Security and Los Alamos National Laboratory.

LED Optics has an estimated annual revenue of $150k. The firm specializes in R&D for LED T8 replacement tubes and other retrofit bulbs that it sells through distributors.

LEDdynamics undertakes development and manufacturing of its flagship EverLED T8 replacement tubes.

LEDtronics has developed LED lighting products since 1983. Estimates of annual revenue range $15-17.5 million. The firm offers replaceable LED tubes and bulbs.

Light Efficient Design is the LED division of TADD that commercializes LED T8/T10 tubes, as well as retrofit lamps. The division has designed and supplied customers with LED tub lighting solutions, including the US Air Force, Illinois Wesleyan College and Lockheed Martin.

Lumena SSL sells retrofit LED lamp and tube replacements for commercial and residential purposes. The firm is based in the US, with manufacturing facilities in China.

Lumenor makes LED T8 replacement tubes and fixtures. The company also offers retrofit consulting services to implement its products.

Neptun Light is a manufacturer of retrofit LED for commercial, industrial and municipal applications. Offerings include bulbs, T8 tubes and retrofit kits.

Orbit Industries manufactures LED bulbs and tubes for the wholesale distribution market.

Panasonic is a global technology giant that is rolling out a comprehensive LED lighting campaign. The firm wants to expand its LED product lineup by 500%, estimating that the LED replacement market will double between 2012 and 2015 (see presentation by Panasonic executive Kuniaki Matsukage.)

Philips is one of the powerhouses in the LED market, boasting a broad selection of LED tubes and bulbs. LED revenue grew by 50% in third quarter 2012 to account for 24% of all lighting revenue, an estimated $650 million. In addition to extensive LED products, the company has a successful LED patent licensing program.

RedBird almost exclusively commercializes LED tubes. The company draws annual revenue of roughly $500,000.

Seesmart develops and manufactures LED replaceable tubes and bulbs. Notable clients include the LA Mall, for which Seesmart replaced traditional lighting with retrofit LED tube lights. In late 2012 US Capital Partners issued an accounts receivable $1 million line of credit for Seesmart.

Sorenson manufactures LED tubes and bulbs, as well as custom LED light assemblies. The firm has been in business for 50 years, with principle operations in North America as well as joint ventures in Asia.

Sylvania is leading provider of residential and commercial LED replacement bulbs and tubes. Sylvania offers a strong **LED product line**. In June 2013, Sylvania announced a **partnership** with Comcast to offer LED lighting for the Xfinity home technology platform.

Toggled (formerly ilumisys) is a spinoff of Altair Engineering that specializes in LED fluorescent tube and T8 replacement devices. The firm draws an estimated $530,000 annual revenue that may

include patent royalties (see Related Patent Assertion). In recent years, Toggled has invested over $7.4 million in LED manufacturing.

Toshiba LED Lighting Division has gone on a buying spree to ramp up US LED commercialization. In 2013, Toshiba acquired the LED R&D assets of venture back start-up Bridgelux for a multiple of $10 million; and bought GreenStar Products, a producer of LED luminaires. Toshiba may be arming itself with an LED patent arsenal as it deploys its E-Core replacement LED replacement bulbs and tubes.

Vivid LEDs manufactures retrofit LED tubes and bulbs for commercial and residential markets. Product offerings include many form factors aimed to suit customers' existing installations.

7. Evidence of Use

Ford Motor Company is a major US car manufacturer that produces some of the best-selling models in the world. Since 2009, Ford has offered interior LED ambient light as a standard feature in the high end models of nearly a dozen car lines, including a LED lit cup holder which appears to practice patent '400 on offer.

These car lines include the F-Series, Escape, Fusion and many others. Estimates are that Ford may have shipped over 8.5 million vehicles with standard interior LED ambient lighting since 2009. The total estimated royalties for the Ford LED features are, with assumed royalty rates are: **$31,484,210 (3%), $52,473,684 (5%) and $73,463,157 (7%)** respectively based on sales of the above device since

its introduction in 2009. Please refer to the following spreadsheet for more detailed calculations. *See corresponding claim chart for US Patent 5,495,400*

Chrysler is one of the top three car manufacturers in the US, making over **$65 billion** per year in revenue. In some car models, Chrysler offers illuminated interior LED lights for use such as in cup holders. The use of LED lighting in cars is "part of a bold new concept in automotive interior lighting" that takes advantage of advances in LED lighting quality and efficiency. Chrysler cars with interior LED lights include the popular Jeep models.
See corresponding claim chart for US Patent 5,495,400

Subaru Motors. Many other car manufacturers such as **Subaru** appear to use similar LED lit cup holder in several of their models. See their installation guide here for the OEM device, as well as some pictures of the actual assembly parts (scroll to mid page).

Federal Mogul (NASDAQ FDML) is a large automotive parts manufacturer with reported sales close to $7 billion in 2013 as per their most recent annual report. It appears that most of the car manufacturers listed above are procuring their LED cup holders assembly from Federal Mogul. The company actually put out a press release in 2012 confirming the offering of many LED lighting product for cars, including cup holders. Furthermore, patents issued to Federal Moguls display designs extremely similar to the cup holders being offered by Ford, Chrysler and others. US patent 6,234,439 for an *Illuminated Cup Holder Assembly* shows a design identical to the one being sold to Ford Motors and covered by the EoU above. Similarly, US patent 8,616,740 for a *Distributed Lighting Assembly* show a similar design. Finally, US patent 6.594, 417 for an *Waveguide Assembly For Laterally Directed Illumination In A Vehicle Lighting System* shows how the LEDs are being guided through a cavity as taught by the Beyond Edison patent on offer. These 3 patents were filed years after the patents on offer and are all issued to Federal Mogul.

8. Other Potential Licensing Opportunities

In addition to firms referenced above, the following companies may benefit from leveraging the patent assets on offer.

Bluestone Innovations LLC
electronic lighting systems LED TECHNOLOGY
NexusLED
Cooper Lighting
Honeywell
FEIT Electric
relume
CREE
Lexington Luminance LLC
LightingScience
Light Transformation Technologies LLC
SEOUL SEMICONDUCTOR

9. Related Patent Assertion

LED is an area of high activity in patent assertion. In 2012-2013, large and small LED players have been involved in patent litigation, signifying that patents are a key strategic asset in the overall LED market. Analysts from GreenTech Patent Edge predict that as the big players will seek market power through patent assertion as smaller players will leverage patents to carve out niche markets.

The major LED firms do not hold back on asserting or defending themselves from patents suits. LED heavyweight Osram Sylvania is the defendant in 2 patent suits filed in the past year. The firm is still entangled in litigation with Samsung from cases filed in 2011. In 2012, Osram was the real target of LG, which sued BMW and Audi in Korea for carrying LED ambient lighting technology by Osram. Also in 2012, a US District Court let Samsung substitute for Bluestone Innovations Texas as plaintiff against Osram in asserting a patent initially asserted by Bluestone. Philips has an extensive LED patent licensing program that includes 300 agreements. Licensees Seoul Semiconductor, Lighting Science Group and Nexxus were once Philips' LED patent litigation adversaries. Cree has been involved in 17 patent lawsuits since 2005. The firm has sparred back and forth with Cooper Lighting, SemiLEDS and Bridgelux in LED litigation. GE Lighting Solutions has asserted patents against at least 5 defendants in the past 2 years.

Smaller LED entities, including NPEs, also seek competitive advantage and play defense in patent assertion. After filing 7 LED patent lawsuits to carve out market position, Toggled has an impressive line-up of outbound licensing arrangements with major LED firms. Toggled holds a total of over 75 LED patent assets. Light Transformation Technologies, an NPE subsidiary of Acacia Research, holds 10 patents and has asserted them against over 15 LED operating firms. Relume Corporation Trust, an NPE, has asserted a patent in 3 lawsuits. The NPE may have access to 11 other patent assets held by parent firm, Relume Technologies. Lighting Science Group filed for 71 LED related patent applications in 2012, and is involved in over 12 patent lawsuits, including a half a dozen against Philips. Lexington Luminance is an NPE, filing 5 patent lawsuits in 2012 over a single patent.

By all observations, the patent monetization market is on a continued upswing in LED technologies. Entities without patents may find themselves at a severe disadvantage in the market.

10. Targeted Price

In light of the number of assets involved, early priority date of the most relevant assets, wide scope of applications and substantial evidence of use of the patent portfolio, we offer a pricing guidance in the **low to mid six figures** in an all cash sale. The seller is also open to alternative deal structures.

11. Sale Structure and Submission Deadline

The portfolio is only offer to a limited number of potential buyers. All interested buyers should submit their offer in writing and must be directed at the whole portfolio (i.e. no cherry picking) and shall list all material conditions required to closing. Assets will be taken off the market once a PPA has been executed and buyers will be given a reasonable period to complete the closing.

12. Contact Information

For all inquiries, please contact Louis Carbonneau, CEO of Tangible IP, LLC, at:

By phone: +1 (425) 868-9280 (direct) or +1 425 213-7252 (mobile)
By Skype: louis.carbonneau
By email: louis@tangibleip.biz