

Risk Factors Comparison 2024-02-22 to 2023-02-23 Form: 10-K

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You should carefully consider the following risks and uncertainties when reading this Annual Report on Form 10-K. The following factors, as well as other factors affecting our operating results and financial condition, could cause our actual future results and financial condition to differ materially from those projected.

Risks Related to Our Intellectual Property If we cannot obtain and maintain appropriate patent and other intellectual property protection for our OLED technologies and materials, our business will suffer. The value of our OLED technologies and materials is dependent on our ability to secure and maintain appropriate patent and other intellectual property rights protection. Although we own or license many patents respecting our OLED technologies and materials that have already been issued, there can be no assurance that additional patents applied for will be obtained, or that any of these patents, once issued, will afford commercially significant protection for our OLED technologies and materials, or will be found valid if challenged. Also, there is no assurance that we will be successful in defending the validity of our current or future patents in pending and future patent oppositions, invalidation trials, interferences, reexaminations, reissues, or other administrative or court proceedings. Moreover, we have not obtained patent protection for some of our OLED technologies and materials in all foreign countries in which OLED products or materials might be manufactured or sold. We believe that the strength of our current intellectual property position results primarily from the essential nature of our fundamental patents covering phosphorescent OLED devices and certain materials utilized in these devices. Certain of our existing fundamental phosphorescent OLED patents expired in the United States in 2017 and 2019; and expired in other countries of the world in 2018 and 2020. While we hold a wide range of additional patents and patent applications relating to our commercial OLED materials and technologies whose expiration dates extend (and in the case of patent applications, will extend) beyond ~~2022~~ **2023**, many of which are also of importance in the OLED industry, none may be of an equally essential nature as our original fundamental patents, and therefore our competitive position may be less certain as a result of the expiration of these patents. We have more than ~~5-6, 500-000~~ issued and pending patents relating to our OLED technologies. There is no assurance that these patents and applications will not be challenged prior to their respective expirations in any of the jurisdictions in which they are utilized, or that if challenged, we will be able to secure sufficient breadth of protection, and monetary and injunctive relief for the violation of our rights to make up for the business harm resulting from such activities. Moreover, there can be no assurance that competitors will not develop or produce competing PHOLED material designs that may be outside of our existing patents. There may also be fundamental new advancements in the field of OLED technology that could enable the commercial use of older and unpatented PHOLED materials or the adoption of new OLED materials that do not require the utilization of our proprietary PHOLED materials to achieve superior performance characteristics. We may become engaged in litigation to protect or enforce our patent and other intellectual property rights, or in International Trade Commission proceedings to abate the importation of goods that would compete unfairly with those of our licensees. In addition, we are participating in or have participated in, and in the future will likely have to participate in, interference, reissue, or reexamination proceedings before the U. S. Patent and Trademark Office, and opposition, nullity or other proceedings before foreign patent offices, with respect to some of our patents or patent applications. All of these actions place our patents and other intellectual property rights at risk and may result in substantial costs to us as well as a diversion of management attention from our business and operations. Moreover, if successful, these actions could result in the loss of patent or other intellectual property rights protection for the key OLED technologies and materials on which our business depends. We rely, in part, on several non-patented proprietary technologies to operate our business. Others may independently develop the same or similar technologies or otherwise obtain access to our unpatented technologies. Furthermore, these parties may obtain patent protection for such technology, inhibiting or preventing us from practicing the technology. To protect our trade secrets, know-how and other non-patented proprietary information, we require employees, consultants, financial advisors and strategic partners to enter into confidentiality agreements. These agreements may not ultimately provide meaningful protection for our trade secrets, know-how or other non-patented proprietary information. In particular, we may not be able to fully or adequately protect our proprietary information as we conduct discussions with potential strategic partners. Additionally, although we take many measures and implement safeguards to prevent unauthorized use, including by theft and misuse, of our intellectual property and proprietary information, third parties may attempt to obtain, copy, reverse-engineer, use or disclose, illegally or otherwise, such intellectual property and proprietary information. We also may face attempts by others to gain unauthorized access through the Internet to our information technology systems or to our intellectual property, which might be the result of industrial or other espionage or actions by hackers seeking to harm our company or its products. If we are unable to protect the proprietary nature of our intellectual property and proprietary information, it will harm our business. We or our customers may incur substantial costs or lose important rights as a result of litigation or other proceedings relating to our patent and other intellectual property rights or with respect to our OLED materials business. There are a number of other companies and organizations that have been issued patents and are filing patent applications relating to OLED technologies and materials, including, without limitation, Kodak (substantially all of whose OLED assets were sold to a group of LG companies in 2009), CDT (acquired by Sumitomo in 2007), Canon, Inc., Semiconductor Energy Laboratories Co., Idemitsu Kosan and Mitsubishi Chemical Corporation. In addition, some of our customers such as SDC and LG Display have been issued patents and are filing patent applications relating to OLED technologies and materials. As a result, there may be issued patents or pending patent applications of third parties that would be infringed by the use of our OLED technologies or materials, thus subjecting our customers to possible suits for patent infringement in the future. Such lawsuits could result in our customers being liable for

damages or require our customers to obtain additional licenses that could increase the cost of their products. This, in turn, could have an adverse effect on our customers' sales and thus our royalties or material sales revenues, or cause our customers to seek to renegotiate our royalty rates or pricing. In addition, we have agreed to indemnify customers purchasing our OLED materials for commercial usage against certain claims of patent infringement by third parties, as a result of which we may incur substantial legal costs in connection with defending these customers from such claims. Our licensees may also seek to avoid paying future royalties by attempting to have our patents declared invalid and unenforceable by a court. Our licensees may be more likely to file such declaratory actions in light of the U. S. Supreme Court's decision in *MedImmune, Inc. v. Genentech, Inc.* (2007), in which the Court found that a licensee need not refuse to pay royalties and commit material breach of the license agreement before bringing an action to declare a licensed U. S. patent invalid and unenforceable. In addition, we may be required, from time- to- time, to assert our intellectual property rights by instituting legal proceedings against others. We cannot be assured that we will be successful in enforcing our patents in any lawsuits we may commence. Defendants in any litigation we may commence to enforce our patents may attempt to establish that our patents are invalid or are unenforceable. Thus, any patent litigation we commence could lead to a determination that one or more of our patents are invalid or unenforceable. If a third party succeeds in invalidating one or more of our patents, that party and others could compete more effectively against us. Our ability to derive licensing revenues from products or technologies covered by these patents would also be adversely affected. Whether our customers are defending the assertion of third- party intellectual property rights against their businesses arising as a result of the use of our technology, or we are asserting our own intellectual property rights against others, such litigation can be complex, costly, protracted and highly disruptive to our or our customers' business operations by diverting the attention and energies of management and key technical personnel. As a result, the pendency or adverse outcome of any intellectual property litigation to which we or our customers are subject could disrupt business operations, require the incurrence of substantial costs and subject us or our customers to significant liabilities, each of which could severely harm our business. Costs associated with these actions are likely to increase as AMOLED products using our PHOLED and other OLED technologies and materials continue to enter the consumer marketplace. Plaintiffs in intellectual property cases often seek injunctive relief in addition to money damages. Any intellectual property litigation commenced against our customers may force them to take actions that could be harmful to their businesses and thus to revenues, including the halting of sales of products that incorporate or otherwise use our technology or materials. Furthermore, the measure of damages in intellectual property litigation can be complex and is often subjective or uncertain. If our customers were to be found liable for infringement of proprietary rights of a third party, the amount of damages they might have to pay could be substantial and is difficult to predict. Decreased sales of our customers' products incorporating our technology or materials would have an adverse effect on our royalty revenues under existing licenses and material sales under our existing sales agreements. Were this to occur, it would likely harm our ability to (i) obtain new licensees which would have an adverse effect on the terms of the royalty arrangements we could enter into with any new licensees, and (ii) sell our UniversalPHOLED® materials to existing and new customers. Moreover, to the extent any third party claims are directed specifically to materials supplied by us to our customers, we may be required to incur significant costs associated with the defense of such claims and potential damages associated with such claims that may be awarded against our customers. As is commonplace in technology companies, we employ individuals who were previously employed at other technology companies. To the extent our employees are involved in research areas that are similar to those areas in which they were involved at their former employers, we may be subject to claims that such employees or we have, inadvertently or otherwise, used or disclosed the alleged trade secrets or other proprietary information of the former employers. Litigation may be necessary to defend against such claims. The costs associated with these actions or the loss of rights critical to our or our customers' businesses could negatively impact our revenues or cause our business to fail. Recent court decisions in various patent cases may make it more difficult for us to obtain future patents, enforce our patents against third parties or obtain favorable judgments in cases where the patents are enforced. Recent case law may make it more difficult for patent holders to secure future patents and / or enforce existing patents. For example, in *KSR International Co. vs. Teleflex, Inc.* (2007), the U. S. Supreme Court mandated a more expansive and flexible approach to determine whether a patent is obvious and invalid. As a result of the less rigid approach to assessing obviousness, defending the validity of or obtaining patents may be more difficult. Recent court decisions may also impact the enforcement of our patents. For example, we may not be able to enjoin certain third party uses of products or methods covered by our patents following the initial authorized sale, even where those uses are expressly proscribed in an agreement with the buyer. Also, we may face increased difficulty enjoining infringement of our patents. The U. S. Supreme Court has held that an injunction should not automatically issue based on a finding of patent infringement, but should be determined based on a test balancing considerations of the patentee's interest, the infringer's interest, and the public's interest. Obtaining enhanced damages for willful infringement of our patents may also be more difficult even in those cases where we successfully prove a third party has infringed our patents, as a recent case set a more stringent standard for proving willful infringement. Therefore, as a result of such rulings, it may be more difficult for us to defend our currently issued patents, obtain additional patents in the future or achieve the desired competitive effect even when our patents are enforced. If we are unable to so defend our currently issued patents, or to obtain new patents for any reason, our business would suffer.

Risks Related to Our Business and Operations If we cannot form and maintain lasting business relationships with OLED product manufacturers, our business strategy will fail. Our business strategy ultimately depends upon our development and maintenance of commercial licensing and material supply relationships with high- volume manufacturers of OLED products. We have entered into a limited number of such relationships from which most of our material sales and licensing revenue are generated. Our other relationships with product manufacturers currently are limited to technology development and the evaluation of our OLED technologies and materials for possible use in commercial products. Some or all of these relationships may not succeed or, even if they are successful, may not result in the product manufacturers entering into commercial licensing and material supply relationships with us. Many of our agreements with product manufacturers last for

only limited periods of time, such that our relationships with these manufacturers will expire unless they are renewed. These product manufacturers may not agree to renew their relationships with us on a continuing basis or may agree to do so on terms that are less favorable to us. In addition, we regularly continue working with product manufacturers after our existing agreements with them have expired while we are attempting to negotiate contract extensions or new agreements with them. Should our relationships with the various product manufacturers not continue or be renewed on less favorable terms, or if we are not able to identify other product manufacturers and enter into contracts with them, our business may materially suffer. Our ability to enter into additional commercial licensing and material supply relationships, or to maintain our existing relationships, may depend on our ability to make certain financial or other commitments. We might not be able, for financial or other reasons, to enter into or continue these relationships on commercially acceptable terms, or at all. Failure to do so may cause our business strategy to fail. If we fail to continue to make advances in our OLED research and development activities, we might not succeed in continuing to commercialize our OLED technologies and materials. Further advances in our OLED technologies and materials depend, in part, on the success of the research and development work we conduct, both alone and with our research partners. We cannot be certain that this work will yield additional advances in the research and development of these technologies and materials. Our research and development efforts remain subject to all of the risks associated with the development of new products based on emerging and innovative technologies, including, without limitation, unanticipated technical or other problems and the possible insufficiency of funds for completing development of these products. Technical problems may result in delays and cause us to incur additional expenses that would increase our losses. If we cannot complete research and development of our OLED technologies and materials successfully, or if we experience delays in completing research and development of our OLED technologies and materials for use in potential commercial applications, particularly after incurring significant expenditures, our business may fail. Conflicts or other problems may arise with our customers or joint development partners, resulting in renegotiation, breach or termination of, or litigation related to, our agreements with them. This would adversely affect our revenues. Conflicts or other problems could arise between us and our customers or joint development partners, some of which we have made strategic investments in, as to royalty rates, milestone payments or other commercial terms. Similarly, we may disagree with our customers or joint development partners as to which party owns or has the right to commercialize intellectual property that is developed during the course of the relationship or as to other non-commercial terms. If such a conflict were to arise, a customer or joint development partner might attempt to compel renegotiation of certain terms of their agreement or terminate their agreement entirely, and we might lose the royalty revenues, material sales revenues and other benefits of the agreement. Either we or the customer or joint development partner might initiate litigation to determine commercial obligations, establish intellectual property rights or resolve other disputes under the agreement. Such litigation could be costly to us and require substantial attention of management. If we were unsuccessful in such litigation, we could lose the commercial benefits of the agreement, be liable for financial damages and suffer losses of intellectual property or other rights that are the subject of dispute. If our OLED technologies and materials are not feasible for broad-based product applications, we may not be able to continue to generate revenues sufficient to support ongoing operations. Our main business strategy is to sell our OLED materials and license our OLED technologies to manufacturers for incorporation into the display and lighting products that they sell. Consequently, our success depends on the ability and willingness of manufacturers to continue to develop, manufacture and sell commercial products integrating our technologies and materials. Before product manufacturers will agree to expand the use of our OLED technologies and materials for wider scale commercial production, they will likely require us to demonstrate to their satisfaction that our OLED technologies and materials are feasible for broad-based product applications beyond current commercial application, such as smartphones, wearables and television displays. This, in turn, may require additional advances in our technologies and materials, as well as those of others, for applications in a number of areas, including, without limitation, advances with respect to the development of: • OLED materials with improved lifetimes, efficiencies and color coordinates for larger area full-color OLED displays and general lighting products; • more robust OLED materials for use in more demanding large-scale manufacturing environments; and • scalable and cost-effective methods and technologies for the fabrication of large volume OLED materials and products. We cannot be certain that these advances will occur, and hence our OLED technologies and materials may not be feasible for additional broad-based product applications and expansion. Even if our OLED materials and technologies are technically feasible, they may not be further adopted by product manufacturers for broad-based product applications. The potential size, timing and viability of market opportunities targeted by us remain uncertain. Market acceptance of our OLED materials and technologies beyond current product offerings and sales volumes will depend, in part, upon these materials and technologies providing benefits comparable or superior to competing display and lighting technologies at an advantageous cost to manufacturers, and the adoption of products incorporating these technologies by consumers. Many current and potential customers for our OLED technologies utilize and have invested significant resources in competing technologies, and may, therefore, be reluctant to redesign their products or manufacturing processes to incorporate our OLED technologies. During the entire product development process for a new product, we face the risk that our materials or technologies will fail to meet the manufacturer's technical, performance or cost requirements or will be replaced by a competing product or alternative technology. Even if we offer materials and technologies that are satisfactory to a product manufacturer, the manufacturer may choose to delay or terminate its product development efforts for reasons unrelated to our materials or technologies. In addition, our agreements with our customers do not require them to purchase our host materials to utilize our phosphorescent emitter materials, and those customers may elect not to purchase our host materials. Mass production of new mass market OLED products will require the availability of suitable manufacturing equipment, components and materials, many of which are available only from a limited number of suppliers. In addition, there may be a number of other technologies that manufacturers need to utilize in conjunction with our OLED technologies in order to bring these new OLED products to the market. Thus, even if our OLED technologies are a viable alternative to competing approaches, if product manufacturers are unable to obtain access to this equipment and

these components, materials and other technologies, they may not utilize our OLED technologies. There are numerous potential alternatives to OLEDs, which may limit our ability to commercialize our OLED technologies and materials. The display market remains dominated by displays based on LCD technology. Numerous companies are making substantial investments in, and conducting research to improve characteristics of, LCDs; additionally, other competing display technologies have been, or are being, developed, like microLED. A similar situation exists in the solid-state lighting market, which is currently dominated by LED products. Advances in any of these various technologies may overcome their current limitations and permit them to become the leading technologies in their field, either of which could limit the potential market for products utilizing our OLED technologies and materials. This, in turn, would cause product manufacturers to avoid entering into commercial relationships with us, or to terminate or not renew their existing relationships with us. Other OLED technologies may be more successful or cost-effective than ours, which may limit the commercial adoption of our OLED technologies and materials. Our competitors have developed and continue to develop OLED technologies that differ from or compete with our OLED technologies. In particular, competing fluorescent and thermally activated delayed fluorescence OLED technology may become a viable alternative to our phosphorescent OLED technology. Moreover, our competitors may succeed in developing new OLED technologies that may become more cost-effective or have fewer limitations than our OLED technologies. If our OLED technologies, and particularly our phosphorescent OLED technology, are unable to continue to capture a substantial portion of the OLED product market, our business strategy may fail. The consumer electronics industry experiences significant downturns from time to time, any of which may adversely affect the demand for and pricing of our OLED technologies and materials. Our success depends upon the ability and continuing willingness of our customers to manufacture and sell products utilizing our technologies and materials, specifically our phosphorescent emitters and host materials, and the widespread acceptance of our customers' products in the consumer marketplace. Any slowdown in the demand for our customers' products or a decrease in our customers' use of or demand for our materials would adversely affect our material sales and royalty revenues and thus our business. Our customers' decrease in the use of or demand for our materials may depend on several factors, including pricing, availability, continued technical improvements and competitive product offerings. The markets for flat panel displays and lighting products are highly competitive. Success in the market for end-user products that may integrate our OLED technologies and materials also depends on factors beyond the control of our customers and us, including the cyclical and seasonal nature of the end-user markets that our customers serve, as well as industry and general economic conditions. The markets that we hope to penetrate have experienced significant periodic downturns, often in connection with, or in anticipation of, declines in general economic conditions. These downturns have been characterized by lower product demand, production overcapacity and erosion of average selling prices. Our business strategy is dependent on manufacturers building and selling products that incorporate our OLED technologies and materials. Industry-wide fluctuations and downturns in the demand for displays and solid-state lighting products could cause significant harm to our business. Our customers may develop new or more efficient manufacturing processes, which may adversely affect demand for our OLED materials. By developing enhanced material processing methods and more efficient manufacturing techniques, our customers who purchase our phosphorescent emitter and host materials could become more efficient in the utilization of our materials by developing designs that require less materials on a per square meter basis, or by modifying their manufacturing process to make more efficient use of our materials, which could limit or reduce the amount of materials they purchase from us. Thus, demand for our materials may not expand in proportion to the number of OLED related products manufactured by our customers, and may result in reduced demand for our materials and technologies relative to our customers' manufacture and sale of products made with such materials. **Epidemics, The COVID-19 pandemic, pandemics, disease outbreaks and other public health crises could** we expect it to continue to have a material adverse effect on our operations and business. **As we experienced in**, and similar future epidemics, pandemics, disease outbreaks and other -- **the past during the** public health crises could also have a similar effect. The COVID-19 **epidemic and** pandemic has, **such events could** negatively impacted -- **impact** the global economy, disrupted -- **disrupt** consumer spending and global supply chains, and created -- **create** significant volatility and disruption of financial markets, which in turn has had **could have** a material adverse effect on our **business, financial condition and results of operations and business**. We expect the COVID-19 pandemic to continue to have an adverse impact on our business and financial performance. The extent of **such** the continued impact **would** of the COVID-19 pandemic on our business and financial performance, including our ability to execute our near-term and long-term business strategies and initiatives in the expected time frame, will depend on **factors** future developments, including the duration and severity of the pandemic, which are uncertain and cannot be predicted. In addition, consumer spending generally may also be negatively impacted by general macroeconomic conditions and consumer confidence, including the impact of any recession, resulting from the ongoing COVID-19 pandemic. This may negatively continue to impact sales for our customers and may also have an impact on their development of new products. Should there be in the future any epidemics, pandemics, disease outbreaks and other public health crises, such as the **duration** COVID-19 pandemic, that harm the global economy in general, our business, financial condition and results **severity** of operations **the event, which could** **would likely** be **difficult** adversely affected. We may also experience impacts to **predict** certain of our customers as a result of public health crises occurring in one or more locations, which in turn may materially and adversely affect our business, financial condition and results of operations. Any downturn in U. S. or global economic conditions may have a significant adverse effect on our business. There have been significant and sustained economic downturns in the U. S. and globally in the past. These downturns have placed pressure on consumer demand, and the resulting impact on consumer spending has had a material adverse effect on the demand for consumer electronic products. Similar downturns in the future may have a significant adverse effect on one or more of our licensees as an enterprise, which could result in those licensees reducing their efforts to commercialize products that incorporate our OLED technologies and materials. Consumer demand and the condition of the display and lighting industries may also be impacted by other external factors such as war, terrorism, geopolitical uncertainties, epidemics and other business interruptions. The impact of these external factors is

difficult to predict, and one or more of these factors could adversely impact the demand for our customers' products, and thus our business. Heightened levels of inflation and the potential worsening of macro- economic conditions, including slower growth or recession, changes to fiscal and monetary policy, tighter credit, higher interest rates and currency fluctuations, present a risk for us, our suppliers and the display and lighting industries in general. If inflation remains at current levels for an extended period, or increases, and we are unable to successfully mitigate the impact, our costs are likely to increase, resulting in pressure on our profits, margins and cash flows, particularly for existing fixed- price contracts. In addition, our business could be adversely impacted if our customers experience budget, inflationary or other pressures, such as increases in the cost of borrowing from rising interest rates. Many of our competitors have greater resources **and are based in the same Asia- Pacific countries where our significant customers are located**, which may make it difficult for us to compete successfully against them. The display and solid- state lighting industries are characterized by **increasingly** intense competition. Many of our competitors have better name recognition and greater financial, technical, marketing, personnel and research capabilities than we do **. Also, many of them are based in the same Asia- Pacific countries where our customers' operations are located, and as such they may receive preference from such countries and / or not be subject to the same laws, regulations and requirements as we are**. Because of these differences, we may never be able to compete successfully in these markets or maintain any competitive advantages we are able to achieve over time. If we cannot keep our key employees or hire other talented persons as we grow, our business might not succeed. Our performance is substantially dependent on the continued services of our executive officers and other key technical and managerial personnel, and on our ability to offer competitive salaries and benefits to these and our other employees. We do not have employment agreements with any of our executive officers or other key technical or managerial personnel that require them to continue to work for us for any specified period and, therefore, they could terminate their employment with us at any time. Additionally, competition for highly skilled technical and managerial personnel is intense. We might not be able to attract, hire, train, retain and motivate the highly skilled employees we need to be successful. If we fail to attract and retain the necessary technical and managerial personnel, our business will suffer and might fail. We rely solely on PPG to manufacture the OLED materials we use and sell to product manufacturers. Our business prospects depend significantly on our ability to obtain proprietary OLED materials for our own use and for sale to product manufacturers. Our agreement with PPG provides us with a source for these materials for development, evaluation and commercial purposes. Our agreement with PPG currently runs through the end of 2024 and shall be automatically renewed for additional one- year terms, unless terminated by us with prior notice of one year or terminated by PPG with prior notice of two years. Our inability to continue obtaining these OLED materials from PPG or another source at cost- competitive prices and to continue obtaining these OLED materials in sufficient quantities to meet our product manufacturers' current and future demands and timetables would have a material adverse effect on our revenues and cost of goods sold relating to sales of these materials to OLED product manufacturers, as well as on our ability to perform future development work. Additionally, PPG manufactures our materials at facilities based in the United States and Ireland **, which materials we then predominantly export to our customers that have manufacturing locations in countries in the Asia- Pacific region**. As a result, such materials may be subject to tariffs **, export restrictions** or other barriers from or to **these** countries **and / where some of our or product manufacturer- customers have operations and to where we would need to ship product**. Inflationary pressures and persistently high prices and uncertain availability of raw materials or other inputs used by us and our suppliers, or instability in logistics and related costs, could negatively impact our profitability. Increases in prices, including as a result of inflation and rising interest rates, for raw materials or other inputs that we and our suppliers use in manufacturing our OLED materials, or increases in logistics and related costs, have led and may continue to lead to higher production costs for our materials. In addition, any increase in the cost or reduced availability of critical materials for our OLED materials could lead to higher production costs. Further, uncertain supply of such materials could disrupt our or our suppliers' ability to obtain such materials in a timely manner and / or could lead to increased costs. Geopolitical risks and crises, fluctuations in supply and demand, fluctuations in interest rates, any weakening of the U. S. dollar, and other economic and political factors have created and may continue to create pricing pressure for raw materials and other inputs. These inflationary pressures could, in turn, negatively impact our profitability because we may not be able to pass these costs on to our customers or require our suppliers to absorb such costs. We strive to maintain sufficient levels of inventory to accommodate our manufacturing customers. Inventory management relating to our material sales is complex, and excess inventory may harm our business and cause it to suffer. Inventory management remains an area of focus as we balance the need to maintain strategic inventory levels of our OLED materials to ensure competitive lead times against the risk of inventory obsolescence because of rapidly changing technology and customer requirements. As a just- in- time supplier to our customers, we carry sufficient inventory to accommodate their capacity requirements, sometimes without firm purchase commitments. Our dependence on third- party manufacturers to provide our materials to us exposes us to longer lead times than if we were a direct manufacturer, increasing our risk of inventory obsolescence comparatively. Our customers may increase orders during periods of product shortages, cancel orders if their inventory is too high, or delay orders in anticipation of new products. They also may adjust their orders in response to the supply and demand of their products by end- users, or the supply and demand of our products and the products of our competitors that are available to them. Inventory management risks are heightened when our largest customers launch new products and retire existing products. At such times, these customers tend to change product designs and may introduce some of our new materials into new designs. The production of these materials requires us to purchase essential raw material and commence manufacturing well in advance of receiving firm customer orders for such materials. Accordingly, we are subject to the risk of unanticipated changes in our customers' manufacturing plans and designs. Unanticipated product cessation and product introduction delays or cancellation may cause us to order or produce excess or insufficient inventory. Excess inventory of our OLED materials is subject to the risk of inventory obsolescence. In the event that a substantial portion of our inventory becomes obsolete, it could have a material adverse effect on earnings due to the resulting costs associated with the inventory impairment charges and

inventory write-downs. We are the sole source supplier for certain critical components used in OLED technologies, which subjects customers to risk if we are unable to meet the demand for such components. Our customers depend on us as the sole source for certain proprietary PHOLED materials used in manufacturing OLED products, which makes them susceptible to supply shortages if we are unable to meet their demand for such components. A potential customer could be hesitant to adopt OLED technology given the risks inherent in depending on a sole source for critical components and the inability to establish alternate supply relationships. If we are unable to supply the components needed by our existing customers in a timely manner, or if potential customers do not utilize OLED technology because of concerns about our ability to meet supply demands, our business may materially suffer. Because the vast majority of OLED product manufacturers are located in the Asia-Pacific region, we are subject to international operational, financial, legal and political risks which may negatively impact our operations. Many of our customers and prospective customers have a majority of their operations in countries other than the United States, particularly in the Asia-Pacific region, and revenue outside the United States represents a majority of our total net revenue. We also have offices in various countries located outside of the United States. Risks associated with our doing business outside of the United States include, without limitation: • compliance with a wide variety of U. S. and foreign laws and regulations, including foreign anti-corruption **and export** laws, and certain registration **and licensing** requirements for the OLED materials we sell; • legal uncertainties **on doing business in certain countries or with certain parties** regarding taxes, tariffs, quotas, export controls, export licenses and other trade barriers; • economic instability in the countries of our customers, causing delays or reductions in orders for their products and therefore our royalties; • political instability in the countries in which we and / or our customers operate, particularly in South Korea relating to its disputes with and proximity to North Korea, in Hong Kong relating to anti-government protests and in Taiwan relating to its disputes with China; • third party theft or compromise of our products, technology, data or intellectual property, including by means of counterfeiting or reverse-engineering; • difficulties in collecting accounts receivable and longer accounts receivable payment cycles; • fluctuations in foreign currency exchange rates for any revenues or expenses not denominated in U. S. dollars; • potentially adverse tax and tariff consequences; and • trade conflicts between and among various geopolitical factions that could result in trade restrictions being placed on our business **and sale of OLED materials**. Any of these factors could impair our ability to license our OLED technologies and sell our OLED materials, thereby harming our business. Compliance with changing laws and regulations may involve significant costs or require changes in business practice that could result in reduced profitability. We rely on information technology systems to operate various elements of our business and a cyber-attack or other breach of our systems, or those of third parties on whom we may rely, could subject us to liability or interrupt the operation of our business. We are dependent on information technology systems to operate various elements of our business. A breakdown, invasion, corruption, destruction or interruption of critical information technology systems by employees, others with authorized access to our systems or unauthorized persons could negatively impact operations. In the ordinary course of business, we collect, store and transmit important data and it is critical that we do so in a secure manner to maintain the confidentiality and integrity of such information. Additionally, we outsource certain elements of our information technology systems to third parties. As a result of this outsourcing, our third-party vendors may or could have access to our confidential information making such systems vulnerable. Data breaches of our information technology systems, or those of our third-party vendors, may pose a risk that sensitive data may be exposed to unauthorized persons or to the public. While we believe that we have taken appropriate security measures to protect our data and information technology systems, and have been informed by our third-party vendors that they have as well, there can be no assurance that our efforts will prevent breakdowns or breaches in our systems, or those of our third-party vendors, that could adversely affect our business. Natural disasters or other unforeseen catastrophic events could unfavorably affect our business. Natural disasters, such as hurricanes, tsunamis, or earthquakes, particularly in Asia-Pacific region, where many of our customers are located, or the occurrence of other unforeseen catastrophic events, such as a fire or flood, could unfavorably affect our business and financial performance. Such events could unfavorably affect our customers in many ways, such as causing physical damage to one or more of their properties, the temporary or permanent closure of one or more plants, the disruption or cessation of manufacturing of product lines, and the temporary or long-term disruption in the supply or demand for their products. A resulting by-product of such natural disasters or other unforeseen catastrophic events could be a temporary or long-term disruption in the supply of or demand for our products. Risks Related to Legal, Regulatory and Tax Matters We may be subject to environmental **and export** laws and regulations, including without limitation those associated with the effects of climate change, that impose additional compliance costs and that could negatively impact our business. Changes in environmental **and export** laws or regulations of our products could result in higher operating and compliance expenses and limit the markets in which we can manufacture and to which **markets and customers** we can export **and sell** our products. Changes in environmental **and export** laws or regulations, including laws relating to manufacturing operations and export restrictions, also could lead to new or additional investment in product designs and an increase in raw materials costs, and could increase our environmental **and export** compliance expenditures. Some of these laws and regulations may be changed or augmented as governments and regulatory bodies seek to address the effects of climate change **and export compliance**. If environmental **and / or export** laws or regulations are either changed or adopted and impose additional operational restrictions and compliance requirements upon us or our products, they could negatively impact our business, capital expenditures, results of operations and financial condition. Our effective tax rate may increase or decrease. We are subject to income taxes in the U. S. and numerous foreign jurisdictions. Significant judgment is required in determining our worldwide provision for income taxes. In the ordinary course of our business, there are many transactions and calculations where the ultimate tax determination is uncertain. We are subject to audit by tax authorities where we do business. Although we believe that our tax estimates and tax positions are reasonable, they could be materially affected by many factors including the final outcome of tax audits and related litigation, the introduction of new tax accounting standards, legislation, regulations, and related interpretations, our global mix of earnings and the realizability of deferred tax assets. An increase or decrease in our effective tax rate could have a material

adverse impact on our financial condition and results of operations. In addition, at any time, U. S. federal tax laws or the administrative interpretations of those laws may be changed. We also cannot predict whether, when or to what extent other new U. S. federal tax laws, regulations, interpretations or rulings will be issued. As a result, changes in U. S. federal tax laws could negatively impact our operating results, financial condition and business operations, and adversely impact our shareholders. Occasionally, changes in state and local tax laws or regulations are enacted that may result in an increase in our tax liability. Shortfalls in tax revenues for states and municipalities in recent years may lead to an increase in the frequency and size of such changes. If such changes occur, we may be required to pay additional taxes on our assets or income. **The Organization for Economic Development's Base Erosion Profit Shifting Pillar 2.0 (BEPS Pillar 2.0) initiative provides a minimum global tax rate of 15% for multinational organizations with a global turnover of € 750 million or more. The Company is not expected to reach this threshold in the coming year. Rules and regulations surrounding the BEPS Pillar 2.0 initiative are continually evolving. At the current time, the impact and timing of BEPS Pillar II cannot be estimated.**

Risks Related to Our Stock and Capitalization We may require additional funding in the future in order to continue our business. Our capital requirements have been and will continue to be significant. We may require additional funding in the future for the research, development and commercialization of our OLED technologies and materials, to obtain and maintain patents and other intellectual property rights in these technologies and materials, and for working capital and other purposes, the timing and amount of which are difficult to ascertain. Our cash on hand may not be sufficient to meet all our future needs. When we need additional funds, such funds may not be available on commercially reasonable terms or at all. If we cannot obtain more money when needed, our business might fail. Additionally, if we attempt to raise money in an offering of shares of our common stock, preferred stock, warrants or depositary shares, or if we engage in acquisitions involving the issuance of such securities, the issuance of these shares will dilute our then-existing shareholders. The market price of our common stock may be highly volatile. The market price of our common stock may be highly volatile, as has been the case with our common stock in the past as well as the securities of many companies, particularly other emerging-growth companies in the technology industry. Factors such as the following may have a significant impact on the market price of our common stock in the future: • our revenues, expenses and operating results; • announcements by us, by our licensors, customers, or our competitors of technological developments, new product applications or contractual arrangements; • announcements relating to dividends and share repurchases; and • other factors affecting the display and solid-state lighting industries in general. Our operating results may have significant period-to-period fluctuations, which would make it difficult to predict our future performance. Due to the current stage of commercialization of our OLED technologies and materials, current geopolitical risks, the limited number of commercially successful consumer products utilizing our OLED technologies that customers have introduced in the marketplace, the relatively short product lifetimes of these consumer products, and the significant development and manufacturing objectives that we and our customers must achieve for the widespread inclusion of our OLED technologies in consumer products such as mobile phones, tablets, television displays and lighting products, our quarterly operating results are difficult to predict and may vary significantly from quarter to quarter. We believe that period-to-period comparisons of our operating results are not a reliable indicator of our future performance at this time. Among other factors affecting our period-to-period results, our license and technology development fees often consist of large one-time, annual, semi-annual or quarterly payments, which may result in significant fluctuations in our revenues. In addition, our reliance on a relatively small number of licensees with large volumes of consumer product sales makes our quarterly operating results subject to our licensees' specific plans and the success of their specific product offerings. With respect to material sales, our sales are primarily dependent on purchases made by a relatively small number of customers. In addition to the other factors described above relating to our customers' sales opportunities, our quarter-to-quarter sales may be materially impacted by our customers' inventory management plans, which may vary substantially based on financial management considerations, changes in their product mix plans, modified material processing techniques and manufacturing line modifications. If, in some future period, our operating results or business outlook fall below the expectations of securities analysts or investors, our stock price would be likely to decline and investors in our common stock may not be able to resell their shares at or above their purchase price. Broad market, industry and global economic factors may also materially reduce the market price of our common stock, regardless of our operating performance. The issuance of additional shares of our common stock could drive down the price of our stock. The price of our common stock could decrease if: • shares of our common stock that are currently subject to restriction on sale become freely salable, whether through an effective registration statement or based on Rule 144 under the Securities Act of 1933, as amended; or • we issue additional shares of our common stock that might be or become freely salable, including shares that would be issued upon conversion of our preferred stock or the exercise of outstanding stock options. We can issue shares of preferred stock that may adversely affect the rights of shareholders of our common stock. Our Articles of Incorporation authorize us to issue up to 5,000,000 shares of preferred stock with designations, rights and preferences determined from time-to-time by our Board of Directors. Accordingly, our Board of Directors is empowered, without shareholder approval, to issue preferred stock with dividend, liquidation, conversion, voting or other rights superior to those of shareholders of our common stock. For example, an issuance of shares of preferred stock could: • adversely affect the voting power of the shareholders of our common stock; • make it more difficult for a third party to gain control of us; • discourage bids for our common stock at a premium; or • otherwise adversely affect the market price of our common stock. As of February 23-22, 2023-2024, we have issued and outstanding 200,000 shares of Series A Nonconvertible Preferred Stock, all of which are held by an entity controlled by members of the family of Sherwin I. Seligsohn, our late founder and former Chairman of the Board of Directors. Our Board of Directors has authorized and issued other shares of preferred stock in the past, none of which are currently outstanding, and may do so again at any time in the future. Any decisions to reduce or discontinue paying cash dividends to our shareholders could cause the market price for our common stock to decline. In 2017, our Board of Directors began declaring quarterly cash dividends on our common stock, which we have consistently paid since then and we intend to continue to pay in the future.

However, payment of future cash dividends will be at the discretion of our Board of Directors and will depend upon our results of operations, earnings, capital requirements, contractual restrictions and other factors deemed relevant by our Board of Directors. As such, we may modify, suspend or cancel our cash dividend policy in any manner and at any time. Any reduction or discontinuance by us of the payment of quarterly cash dividends could cause the market price of our common stock to decline. Moreover, in the event our payment of quarterly cash dividends are reduced or discontinued, our failure or inability to resume paying cash dividends at historical levels could cause the market price of our common stock to decline. There is no guarantee that our common stock will appreciate in value or even maintain the price at which current shareholders purchased their shares.