

Optical Solutions Business

Create comfort in people's lives using unique technology



Executive Officer
Optical Solutions Business Unit Head

Takashi Yoshida

Profile

Joined Sony Chemicals Corporation, the predecessor of Dexerials, in 2003. Assigned to the former Neagari Plant (Ishikawa Prefecture). Subsequently, served as the Deputy Head of Administration Division and the General Manager of Procurement Department at Suzhou Plant in China. After returning to Japan, appointed the General Manager of the Business Promotion Department in 2011 and the Film Products Business Unit Head in 2016. Achieved expansion of the anti-reflection film business and appointed Executive Officer in 2017. In the current position since 2019.

Market environment

The Optical Solutions Business handles several products holding a large share globally in the two key categories of optical films and optical resin materials.

In the optical films category, anti-reflection film (ARF) is used for displays on tablets, laptop PCs and in vehicles. As the number of displays installed per vehicle increases as well as size of the displays, Dexerials' ARF which is characterized by metal film deposition utilizing sputtering technology and an inspection process in real time maintains a high global share. The moth-eye type ARF is used in applications such as medical eye shields, and demand is increasing as a product that can alleviate burden when worn by

medical workers during the COVID-19 pandemic.

In the optical resin materials category, optical elasticity resin (SVR), with its high technology and quality, maintains a high global share as resin adhesives for small-to-medium-sized displays. Also, there is a growing demand for smart precision adhesives (SA) used to affix components such as camera modules despite the lack of growth in shipment volume of smartphones around the world, since the number of cameras installed per unit is increasing, as well as the flattening, enlargement, and higher resolution of cameras themselves.

Growth strategy and risks

While the second half of fiscal 2019 saw the effects of factory shutdowns worldwide due to US-China trade frictions and the spread of COVID-19, sales of our products in fiscal 2020 have grown as a result of the surge in sales of laptop PCs and tablets with the proliferation of work-at-home and online classes caused by the pandemic. At the same time, improvement in yield for the manufacturing process of ARF has enabled cutting down on the amount of industrial waste.

Going forward, if an environment in which social distancing is required continues, Dexerials' ARF, characterized by its ability to make it difficult for colors to change due to the angle they are seen, will have opportunities to expand its anti-reflection application in artistic works and in viewing video images. Meanwhile, we recognize the possibility of trends in demand changing going forward as a result of normalization of changes in lifestyle caused by the pandemic as a risk.

Growth of high-speed technology in communication infrastructure, such as with 5G, has been around before the start of the pandemic as an irreversible trend, and attempts to achieve further growth through the spread of use in public institutions.

Connecting Materials Business

Sharing goals and values, and striving for "One for All, All for Won."



Executive Officer
Connecting Materials Business Unit Head

Kozaburo Hayashi

Profile

Joined Sony Chemicals Corporation, the predecessor of Dexerials, in 1992. Engaged in sales and development and was in charge of thermo-curable adhesive sheets, UV-curable adhesives, optical resin materials, etc. Appointed the Display Materials Business Unit Head in 2016 and contributed to expansion of mainstay products such as anisotropic conductive films (ACF) and optical elasticity resins (SVR). In the current position since 2019.

Market environment

The Connecting Materials Business handles adhesive materials, thermal conductive sheets, and water treatment agents in addition to anisotropic conductive films (ACF) and surface mounted type fuses.

Dexerials' ACF maintains its high global share with small-to-medium-sized displays, mainly with particle-arrayed ACF. Aside from displays, it is also used in IC chips such as on credit cards and in sensors on camera modules. The surface mounted type fuses category secures a high market share as products that protect laptop PCs and smartphones with self-control protectors (SCP) that prevent overcharging and overcurrent in Li-ion batteries for these devices. In addition, as a result of the stay-at-home trend caused by the pandemic, demand of use for such as cordless electric

power tools and vacuum cleaners is increasing. In the adhesive materials category, thermal conductive sheets secure a high market share particularly for 5G base stations, and we can expect further growth in line with the spread of 5G networks going forward. We can anticipate heightened interest in water treatment agents against a backdrop of increased awareness in the environment around the world to not only enable efficient treatment of water with ingredients that take advantage of plant material, but also as products that lead to a reduction in CO₂ emissions and sludge.

Growth strategy and risks

The ACF category, which saw a double-digit growth year on year in fiscal 2019 with expansion in business, continues smooth progress in fiscal 2020 with sales expansion of particle-arrayed ACF in addition to sales acceleration of laptop PCs, large-screen TVs and tablets with at-home demand due to the pandemic. Going forward, we will actively meet the demand not only for small-to-medium-sized displays but also for large-sized displays showing a similar move toward higher-definition. Also, while displays themselves change from LCD to OLED type, and as even more sophisticated functions and high reliability are expected, we will strive to establish particle-arrayed ACF, which is Dexerials' differentiating technology, as the de facto standard in the industry.

Supported by digitization including higher communication speed, reduction in manpower and a switch to automation, it is expected that display equipment will clearly increase going forward. It will be an opportunity for ACF's substantial growth as an indispensable part of display equipment. In the future, with the development of electric vehicles and other mobility stemming from consideration of the environment, we can anticipate an increase in the demand for SCP.

While there is the risk that demand for PCs and tablets which grew in 2020 will start to diminish next term and onward in the short-term, we consider that large business opportunities await going forward with the acceleration of digitization.

Automotive Solutions Business

Armed with the business model cultivated thus far, we propose new value creation.



Automotive Solutions Business Unit Head

Kentaro Oshima

Profile

Joined Sony Chemicals Corporation, the predecessor of Dexerials, in 1991. Engaged in product development and was in charge of anti-reflection film, etc. Appointed Deputy Head of the Automotive Solutions Business Unit in 2019 and contributed to deployment of the Company's products into the automotive field. In the current position since October 2020.

Market environment

The Automotive Solutions Business is working to achieve business growth by utilizing the Company's various resources for a wide range of domains with a focus on application in automobiles. With the aim of growing new domains centering on automotive applications to a scale of approximately 40% of overall sales (30% for in-vehicle applications) by fiscal 2023, we are working to attract new customers and raise recognition of Dexerials within the automotive industry.

Our design-in/spec-in approach, through which we approach final customers ourselves to identify their needs and issues and consider solutions together with them from a technical perspective, is highly regarded by our customers. Dexerials' anti-reflection film is already being recognized as a product that contributes

to higher visibility and safety for in-vehicle displays, the number and size of which are becoming larger.

→ See page 11 for details of design-in/spec-in.

Growth strategy and risks

While effects of the COVID-19 pandemic lasted until the 2nd quarter of fiscal 2020, recovery of the market in China was the beginning of gradual improvement in the automobile industry worldwide. Going forward, we will cooperate with the newly established DIG Promotion Department for application-based product development and commercialization, while also focusing on creating new value with external cooperative partners. In October 2020, we began a collaboration for technical support of in-vehicle displays with German design house SemsoTec Group, which designs in-vehicle displays installed on the dashboard of automobiles and creates concepts for the entire driver's seat.

Effects of the COVID-19 pandemic will remain as a potential risk going forward, but by regarding change in a positive manner, it is possible to change risk into opportunity. Trends in environmental restrictions across various regions can potentially become a risk, but we will continue preparations for the age of autonomous driving which is certain to arrive sometime in the future. To address various issues that come about with the progress of digitalization of automobiles, such as overheating and problems with camera sensors for autonomous driving, we will propose solutions which go beyond the domain of traditional displays and seize business opportunities.