Business Results

Industrial Business

Performance materials

Polarizing plate protection film for flat panel displays
- Amid an increasing trend towards larger screen sizes, VA-TAC films for LCD televisions are showing strong sales.
- Supported by greater smartphone demand, sales of thin TAC films for small- and medium-sized panels continued to do well.

New business areas
- We launched a new window film product.
- We provided OLED lighting for theme park illumination. Mass production is set to begin in the fall.

Main Achievements in Fiscal 2014

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Market environment (opportunities and challenges)
- In the displays market, demand for televisions and smartphones continues to grow. Including demand for higher definition products and outdoor applications, needs will increasingly diversify.
- There is a continued trend towards larger TV screens and TV screens of higher definition. High-definition technologies using quantum dots are now hitting the market.
- There is a growing demand for small- and medium-sized displays in completely new applications, including wearable devices and free-form displays.
- Even in fields unrelated to displays, consumers are also looking for products equipped with various functions that include heat insulating, UV ray reducing, and anti-fogging capabilities.

Strengths and strategies
- In the field of displays, we are developing products that apply TAC technologies and expertise. This includes QWP films that enable sharper image recognition by emulating unpolarized light when wearing polarizing sunglasses outdoors, hence improving customer productivity, and the quantum dot barrier films that allow visual displays to show high-definition content.
- It is an advantage that Konica Minolta’s technologies and expertise can be utilized for these products enhanced by our distinguished TAC technology. There are, moreover, other strengths such as the low costs, high quality, high productivity, and speed of manufacture enabled by the ability to use our existing production equipment and supply chain.
- We are also making steady progress towards commercializing products in fields unrelated to displays, including window films for automobiles.

Fiscal 2014 business results and fiscal 2015 forecast
In the field of performance materials, sales of TAC (triacetylcellulose) film, which is used as protective film for LCD polarizers and is a core product of the Company, are being supported by strong sales of large LCD TVs and smartphones. Sales were strong for both applications involving large panels and small- to medium-sized panels. Among these, VA-TAC films that achieve increased viewing angle, ultra-thin films, and other such products that enable thinner mobile devices also saw robust sales.

Konica Minolta has established its new OLED lighting business as a driver of future growth, and in the fall of 2014 we began operations at the world’s first plant engaged in the mass production of plastic substrate flexible OLED lighting panels. These panels were used for an outdoor illumination at a prominent Japanese theme park in December, showing an example of how

Sales in the performance materials field

<table>
<thead>
<tr>
<th>Year</th>
<th>2013</th>
<th>2014</th>
<th>2015 (forecast)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td>100</td>
<td>105</td>
<td>106</td>
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</table>

Polarizing plate protection film market trends and forecasts

<table>
<thead>
<tr>
<th>Year</th>
<th>2013</th>
<th>2014</th>
<th>2015 (CY)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sales</td>
<td>8.6</td>
<td>9.8</td>
<td>10.0</td>
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*Base index: FY2013=100
*Konica Minolta data
these panels are being recognized for the new value they provide in being thin, light, and bendable—characteristics not seen in conventional light sources.

As a result, fiscal 2014 revenue for the segment increased 5% year on year to ¥60.9 billion (¥60.9 billion based on IFRS).

In fiscal 2015, along with continuing to satisfy market demand with TAC films, we will further solidify our business base through expanded efforts involving peripheral industries. At the same time, we will look at bringing new products to market—including window films and barrier films—in order to make the fiscal year a springboard from which to develop businesses that will become cornerstones of the Company, following TAC films. The above factors contribute to a fiscal 2015 segment sales forecast of ¥62.0 billion (based on IFRS), a 2% year-on-year increase.

QWP film: emulating unpolarized light to show device screen colors as they normally appear

As people increasingly use their smartphones and tablets outdoors, people are beginning to see a problem in how images on these screens can appear darker or discolored when viewed through polarized sunglasses. Konica Minolta has developed QWP film in response. Used on displays, this film emulates unpolarized light, allowing people to see the colors of images on device screens as normal even when wearing polarized sunglasses. The roll-to-roll manufacturing method can be used to produce the polarizing plates, dramatically improving polarizing plate manufacturer productivity. A mass production system will be built in the spring of 2016, with further expansion to follow.

**Growth strategies**

High-quality TAC film born from long-cultivated technologies for manufacturing photographic base film is the engine driving growth in this field. It is used to protect polarizing plates, a constituent material of LCD screens used in everything from LCD TVs to computers to smartphones, and there has been a steady demand for these products.

Phase 0 will focus on achieving substantial TAC film sales growth. Developments that include the emergence of 4K televisions are expected to prompt a continued increase in TV sizes. Total manufactured display area should continue to increase with growth remaining strong in the market for small- to medium-sized displays. This should result in more film being used. Although we predict there will be greater competition with respect to things such as pricing, we will focus on providing greater added value in order to satisfy our customers’ expectations concerning quality and survive the competition.

In Phase 1, efforts will focus on new areas of business that are cropping up as displays find use in more and more applications. This will involve expanding the range of TAC film application by leveraging the many connections we have developed with our customers to provide new value. One example of this is investing technologies, expertise, and resources into automobile window films that provide heat insulation and high polarization performance, as well as QWP films used for device screens, which are easier on the eyes and allow people wearing polarized sunglasses to see screen colors as they normally appear by emulating unpolarized light (see expected growth in the figure on the right).

In Phase 2, we will begin full-scale efforts to market solutions involving OLED lighting, which use organic materials that emit light when voltage is applied. We will focus on a wide range of applications including construction materials, automobiles, and mobile devices, making the most of their strengths: being lightweight, thin, and flexible; emitting light across the entire surface; and consuming very little power.

By refining material technologies unique to Konica Minolta, we will focus on creating new key business areas in the performance materials field.