



# Mid-term Plan MG20 Optronics Division

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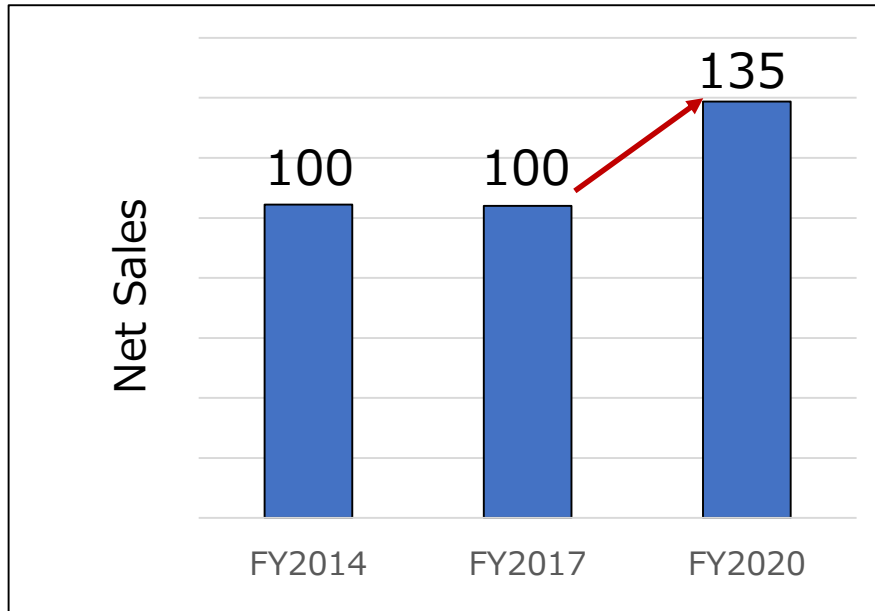
May 29, 2018  
Masaharu Deguchi  
Director and General Manager  
Optronics Division  
Maxell, Ltd.

# 1. MG20 Mid-term Management Plan

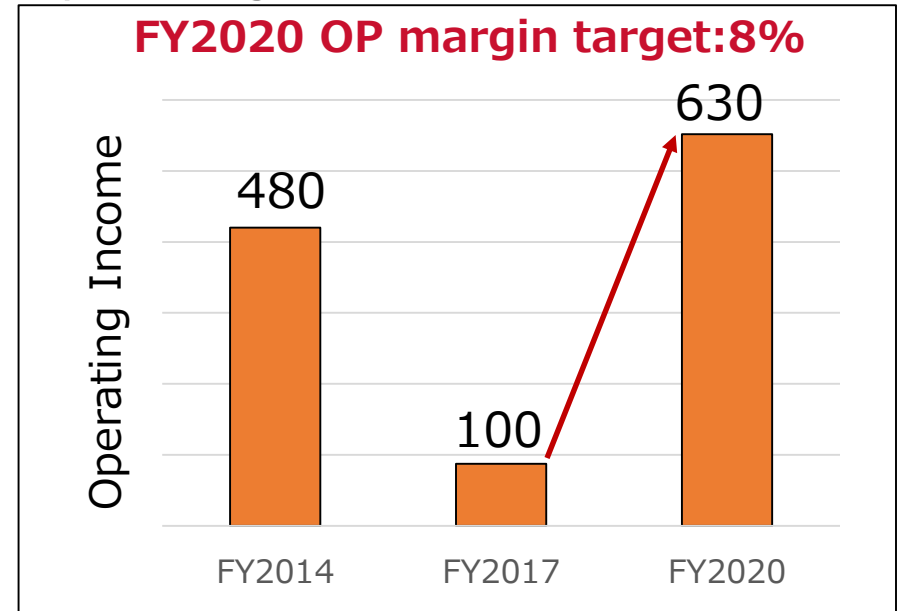
MG20 Target

- Net Sales 135% (vs FY17)
- Operating Income 630% (vs FY17)

Sales



Operating Income









## ■ MG20 Business Policy

1. Recover profitability of the projector business (FY18)
2. Invest into growing business and new products  
(In-Car Camera Lens Unit, LED Headlamp Lenses, HUD etc.,)

# 2. Optronics Div. Product Strategy

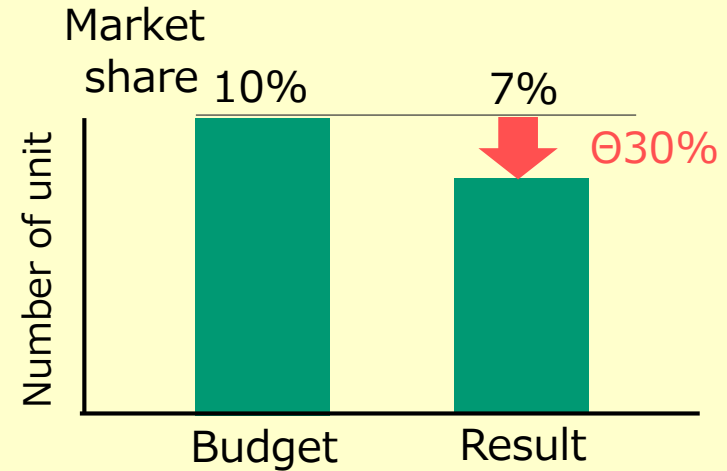


Products	Strategy	Sales	Operating Margin
Projector SSL* High end 	<input type="checkbox"/> Intensive development in fast-growing SSL projectors → Full line-up of self-developed models(FY20)		
Lamp Volume Zone 	<input type="checkbox"/> Discontinue unprofitable models (FY18) Improve sales price by replacing with SSL (LED) models	 EOL*	 EOL
Visual System 	<input type="checkbox"/> Package sales of projectors and various peripherals to education, digital signage		
In-vehicle Business 	<input type="checkbox"/> Offer technology integrated device such as in-vehicle/road surface projection applied from projector's image correction technology (Joint development with automakers)		
In-car camera lens unit 	<input type="checkbox"/> Expand lens line up for sensing-camera in the growing "ADAS (Advanced Driver-Assistance Systems) market		
LED Headlamp lenses 	<input type="checkbox"/> Respond to the growing volume demand and design variation of LED headlamp, and add values by developing LED module assembly		

\* SSL: Solid State Lighting \*EOL: End Of Life = Discontinue

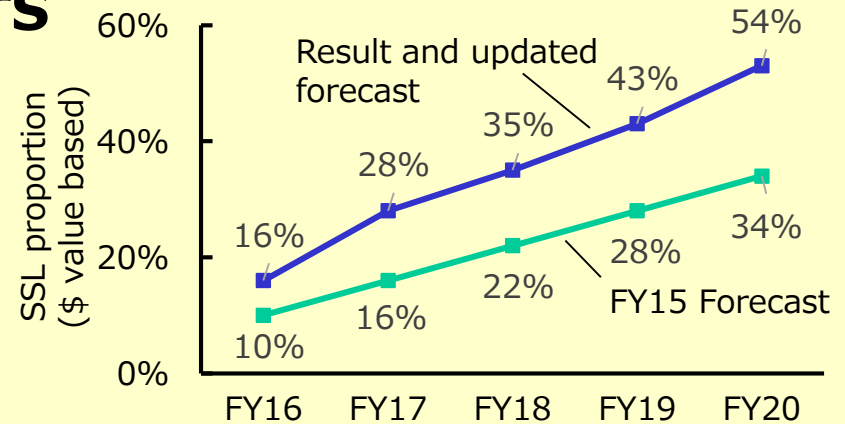
## 1. FY16 Quake aftermath

- FY16 Market share down
- Forced to postpone new (SSL) model development
- FY16/17 cost reduction target not achieved



## 2. Rise of SSL projectors

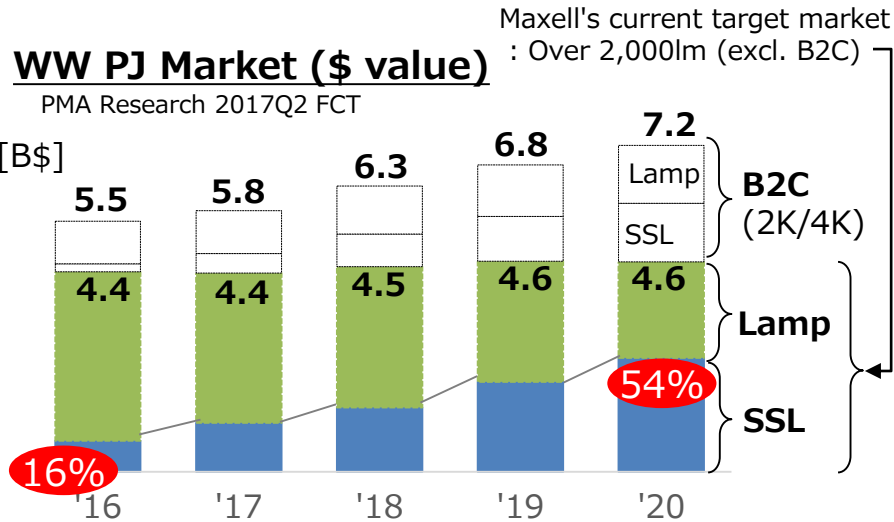
- Faster-than-expected switch over to SSL projectors
- Lamp model sales reduced



# 3 - 2 . Projectors

## Market Size and Growth

**B2B PJ Market : Flat**  
**SSL PJ Market : Growing at 130%/yr**



## Market Share Target

**WW Share (SSL) >10%**

## MG20 Business Plan Objectives

- **OP Margin FY20 > 5%**
- **Imaging Business Sales > 3Billion yen**

## Technical Strengths

- **Optical technology**
  - ➔ High efficiency illumination system, High resolution projection lens etc.,
- **Image processing technology**
  - ➔ HDCR\*, Super resolution, Multi-axis color correction etc.,
- **High efficiency cooling technology**
  - \*HDCR: High Dynamic Contrast Range

## Policy and Challenges

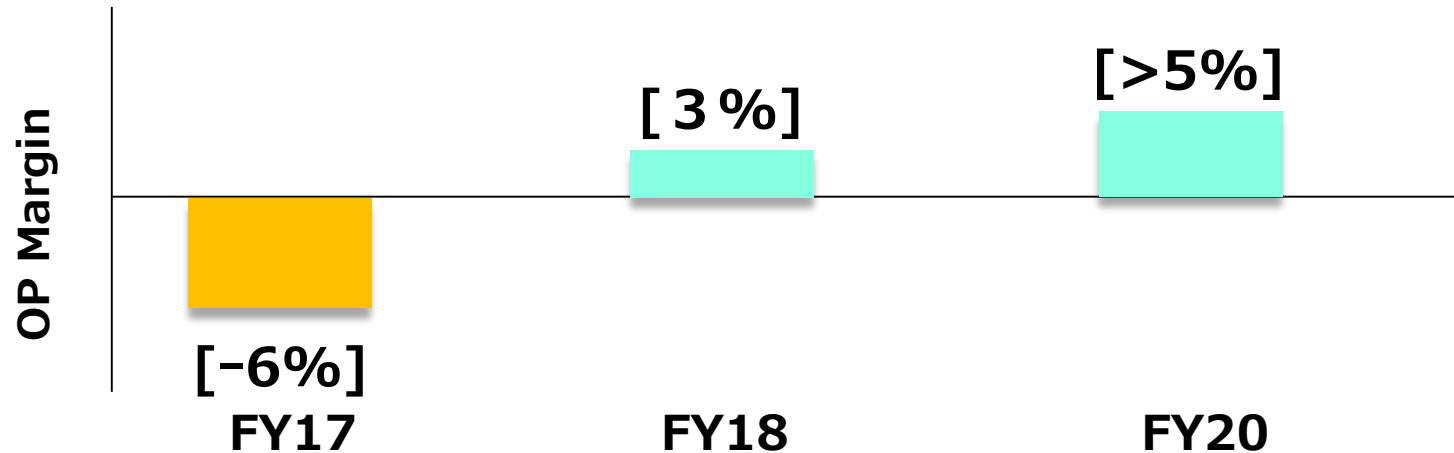
### 1. Recover profitability

- (1) Shift to high profit SSL models (EOL commoditized low profit lamp models)
- (2) Cost reduction (Saving by joint development)
- (3) Increase sales (Add OEM, Enter to 4K market)

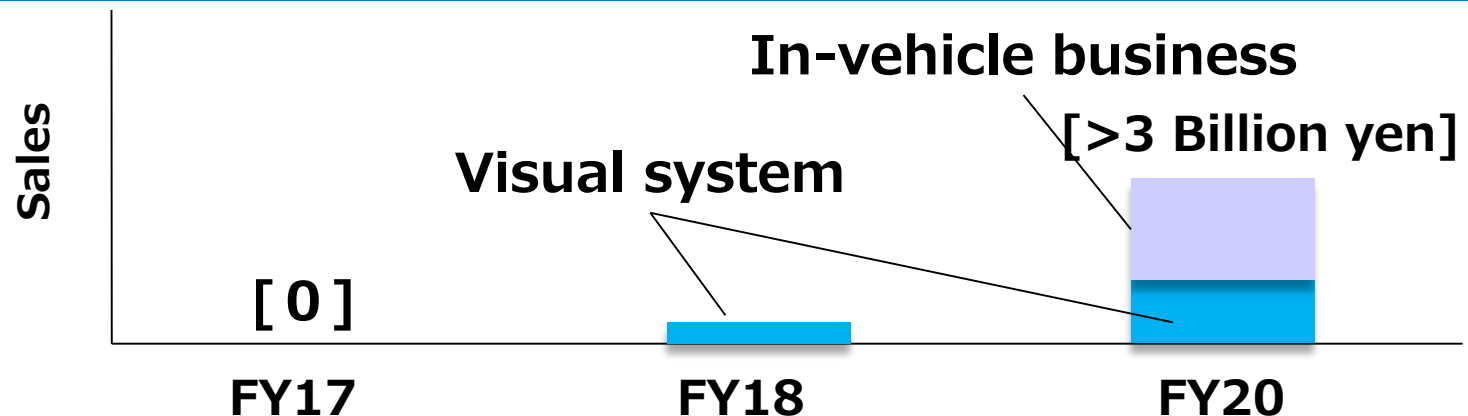
### 2. Enhance imaging business

(Visual System/In-vehicle business)

## ● Recovery of projector business profitability



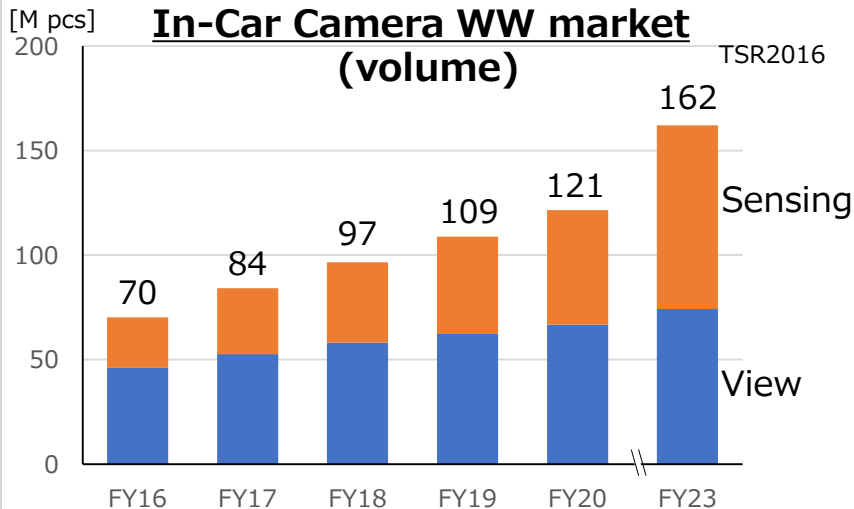
## ● Enhance imaging business (Application of projector technology)



# 4. In-Car Camera Lens Unit

## Market Size and Growth

- ADAS\* market is growing
- Sensing camera market size: **2.8 times (FY17-> FY23)**



## Policy and Challenges

**Top position in sensing market expected to surge from FY2020**

**(1) Develop high perf, high reliability sensing lens**

- Advanced optical design capability
- Highly reliable material process technology

**(2) Set up 4 regional factories and bolster competitiveness**

- Local production in 4 major markets
- Accelerate production automation & build supply chain

## WW Production Sites

**To meet Global Tier 1s' demand for local contents Triple the current production capacity in FY2023**



## Market Share Target

**WW Share >20%, target Top share**

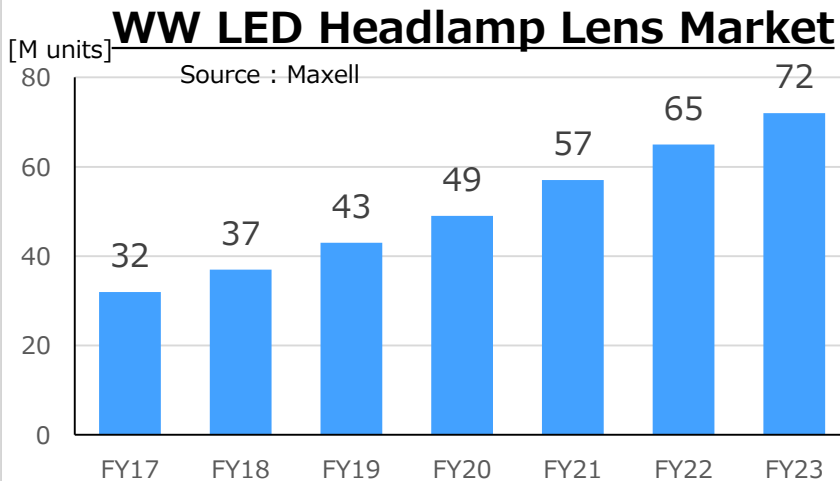
**Long term plan & Mid term plan (MG20) Objectives**

- Sales Growth > 3 times the FY17 sales in FY2023
- OP Margin FY20 > 15%

# 5. LED Headlamp lenses

## Market Size and Growth

● **LED Headlamp market growth**  
:CAGR +15%



## Market Share Target

**WW Share (Volume)** Keep >50%

**Long term plan &  
Mid term plan (MG20)  
Objectives**

- **Sales Growth** > 2.3 times the FY17 sales in FY2023
- **OP Margin FY20** > 15%

## Policy and Challenges

**Add 4 overseas factories and bolster competitiveness to expand business**

**(1) WW 6 factories scheme (by FY20)**

Add US(FY18),EU(TBD) to JPN, China, Malaysia

**(2) Strengthen cost competitiveness**

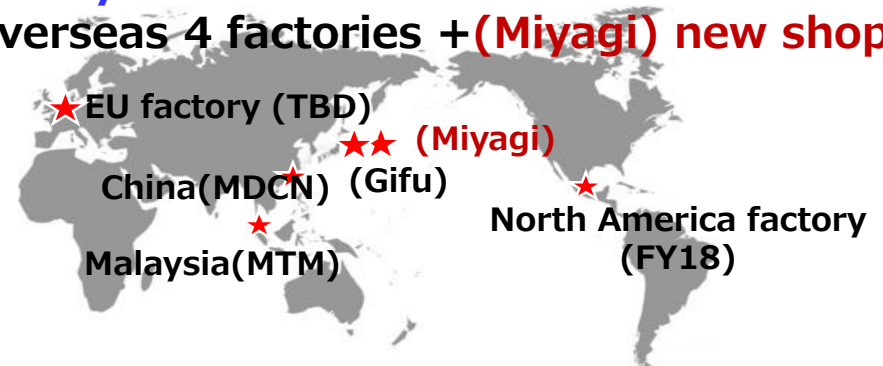
by High-cycling, multi-cavity and cooling process

**(3) New (Miyagi) molding shop**

to meet domestic customer's factory nearby

## WW Production Sites

**Locally based factories at customers sites**  
**Overseas 4 factories + (Miyagi) new shop**





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Within, the Future

Parts of this document contain predictions about the future that are based on our current expectations and beliefs.

These statements are provided as background material for investors.

We cannot ensure or guarantee that any such statement will prove to be correct.

Please keep in mind that actual outcomes might differ from anticipated results.