

# OSRAM Infonote

AO-IN-2022-040-I

Optimization of doping level for  
KY DMLNS31.FY and KY DMLS31.FY  
(SYNIOS P2720) Phosphor

15.03.2023

Dear Customer,

please find attached the **OSRAM Infonote**:

## AO-IN-2022-040-I

### Optimization of doping level for KY DMLN31.FY and KY DMLS31.FY (SYNIOS P2720) Phosphor

Please take note, that this customer notification is for info only and does not require customer approval.

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<b>Objective:</b>	Optimization of Phosphor doping level
<b>Affected products:</b>	KY DMLN31.FY and KY DMLS31.FY
<b>Reason for change:</b>	Doping level of volume converter material is optimized to achieve higher brightness and improved color over temperature behavior
<b>Description of change:</b>	<u>New status</u> Optimized Phosphor doping level based on the same Phosphor system
<b>Time schedule:</b>	Updated datasheets are available
<b>Assessment:</b>	No change in fit, form, function and reliability of the affected products
<b>Documentation:</b>	Customer information package: 2_cip_AO-IN-2022-040-I

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# OSRAM Infonote

AO-IN-2022-040-I

Optimization of doping level for KY DMLN31.FY and  
KY DMLS31.FY (SYNIOS P2720) Phosphor

Customer information package

OSR OS Q CQM AM

15.03.2023

# Agenda

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# AO-IN-2022-040-I

## Optimization of doping level for KY DMLN31.FY and KY DMLS31.FY (SYNIOS P2720) Phosphor

### Reason for change

Item	Description
Optimization of doping level	Doping level of volume converter material is optimized to achieve higher brightness and improved color over temperature behavior.

# AO-IN-2022-040-I

## Optimization of doping level for KY DMLN31.FY and KY DMLS31.FY (SYNIOS P2720) Phosphor

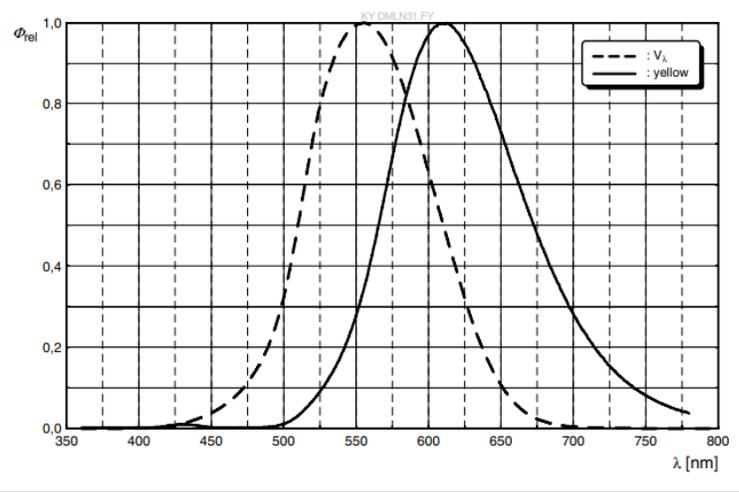
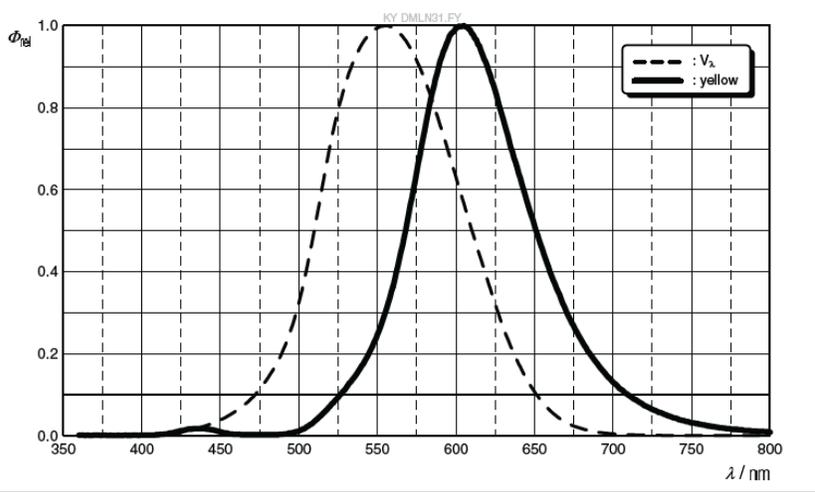
Description of change: KY DMLN31.FY

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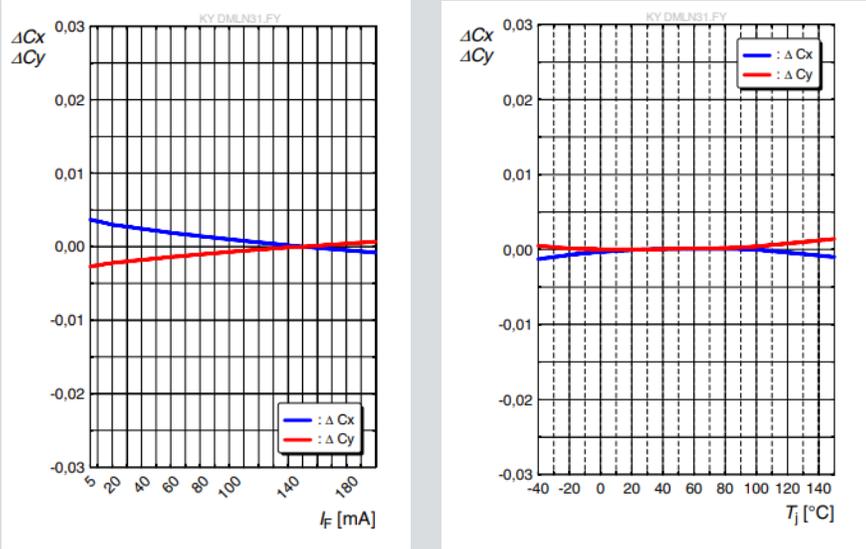
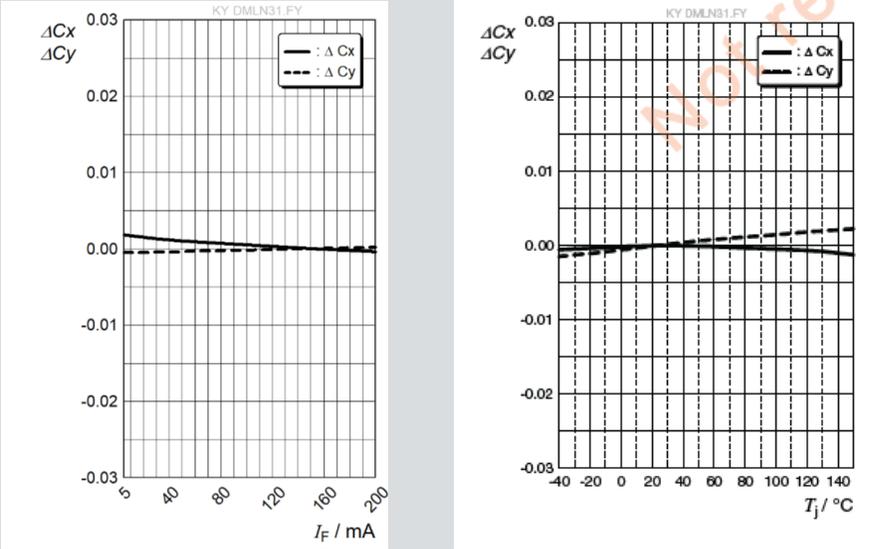
Description of change: KY DMLN31.FY

Item	Current status	New status
Radiation Characteristics		

# AO-IN-2022-040-I

## Optimization of doping level for KY DMLN31.FY and KY DMLS31.FY (SYNIOS P2720) Phosphor

Description of change: KY DMLN31.FY

Item	Current status	New status
Chromaticity Coordinate Shift		

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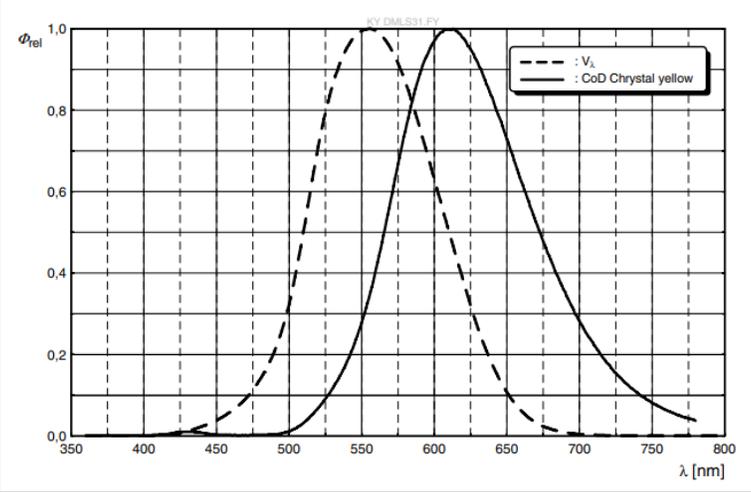
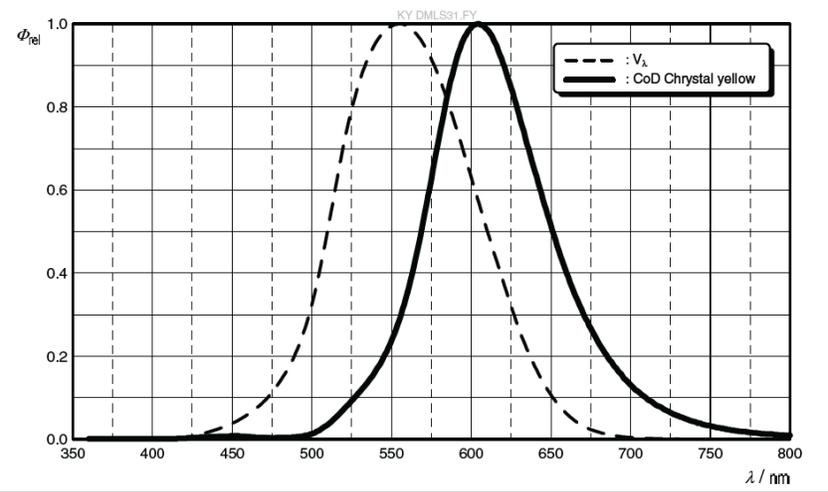
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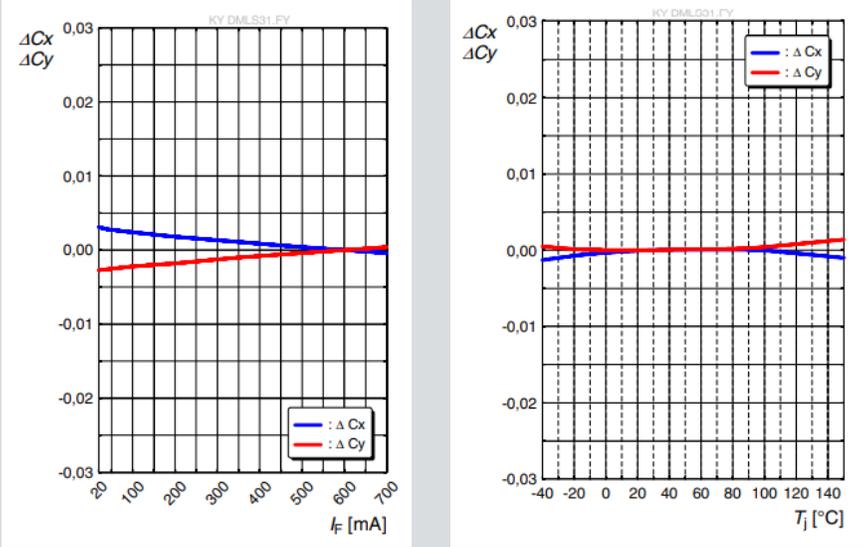
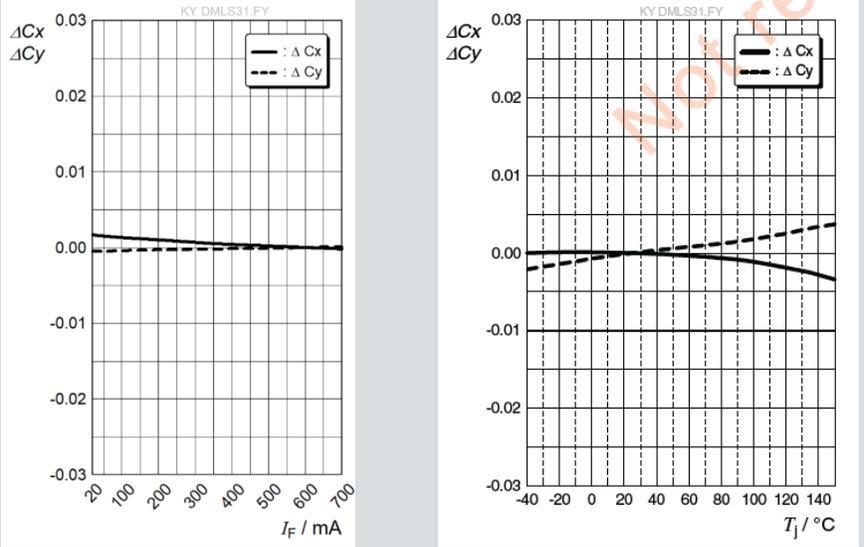
Description of change: KY DMLS31.FY

Item	Current status	New status
Radiation Characteristics	 <p>The graph shows the relative radiation flux <math>\phi_{rel}</math> on the y-axis (ranging from 0.0 to 1.0) against the wavelength <math>\lambda</math> in nm on the x-axis (ranging from 350 to 800). Two curves are plotted: a dashed line for <math>V_{\lambda}</math> and a solid line for CoD Chrystal yellow. The <math>V_{\lambda}</math> curve peaks at approximately 560 nm, and the CoD Chrystal yellow curve peaks at approximately 600 nm. The title of the graph is 'KY DMLN31.FY'.</p>	 <p>The graph shows the relative radiation flux <math>\phi_{rel}</math> on the y-axis (ranging from 0.0 to 1.0) against the wavelength <math>\lambda</math> in nm on the x-axis (ranging from 350 to 800). Two curves are plotted: a dashed line for <math>V_{\lambda}</math> and a solid line for CoD Chrystal yellow. The <math>V_{\lambda}</math> curve peaks at approximately 560 nm, and the CoD Chrystal yellow curve peaks at approximately 600 nm. The title of the graph is 'KY DMLS31.FY'.</p>

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## Optimization of doping level for KY DMLN31.FY and KY DMLS31.FY (SYNIOS P2720) Phosphor

Description of change: KY DMLS31.FY

Item	Current status	New status
Chromaticity Coordinate Shift	 <p>The current status section contains two graphs. The first graph, titled 'KY DMLS31.FY', plots chromaticity coordinate shifts <math>\Delta C_x</math> (blue line) and <math>\Delta C_y</math> (red line) against forward current <math>I_F</math> [mA]. The x-axis ranges from 20 to 700 mA, and the y-axis ranges from -0.03 to 0.03. <math>\Delta C_x</math> starts at approximately 0.003 at 20 mA and decreases to 0.00 at 700 mA. <math>\Delta C_y</math> starts at approximately -0.003 at 20 mA and increases to 0.00 at 700 mA. The second graph, titled 'KY DMLN31.FY', plots <math>\Delta C_x</math> (blue line) and <math>\Delta C_y</math> (red line) against junction temperature <math>T_j</math> [°C]. The x-axis ranges from -40 to 140 °C, and the y-axis ranges from -0.03 to 0.03. <math>\Delta C_x</math> starts at approximately -0.001 at -40 °C and decreases to -0.002 at 140 °C. <math>\Delta C_y</math> starts at approximately 0.00 at -40 °C and increases to 0.002 at 140 °C.</p>	 <p>The new status section contains two graphs. The first graph, titled 'KY DMLS31.FY', plots chromaticity coordinate shifts <math>\Delta C_x</math> (solid black line) and <math>\Delta C_y</math> (dashed black line) against forward current <math>I_F</math> [mA]. The x-axis ranges from 20 to 700 mA, and the y-axis ranges from -0.03 to 0.03. <math>\Delta C_x</math> starts at approximately 0.002 at 20 mA and decreases to 0.00 at 700 mA. <math>\Delta C_y</math> starts at approximately -0.001 at 20 mA and increases to 0.00 at 700 mA. The second graph, titled 'KY DMLS31.FY', plots <math>\Delta C_x</math> (solid black line) and <math>\Delta C_y</math> (dashed black line) against junction temperature <math>T_j</math> [°C]. The x-axis ranges from -40 to 140 °C, and the y-axis ranges from -0.03 to 0.03. <math>\Delta C_x</math> starts at approximately 0.00 at -40 °C and decreases to -0.005 at 140 °C. <math>\Delta C_y</math> starts at approximately -0.002 at -40 °C and increases to 0.005 at 140 °C.</p>

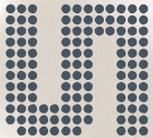
# AO-IN-2022-040-I

## Optimization of doping level for KY DMLN31.FY and KY DMLS31.FY (SYNIOS P2720) Phosphor

### Time schedule

Time schedule	
Intended Start of Introduction	Updated datasheets are available (new version: 1.8)

Sensing is life

am  OSRAM