

Light is OSRAM

15.09.2021

Dear Customer,

please find attached our OSRAM OS PCN:

## OS-PCN-2021-001-A Introduction of next UX:3 chip generation for OSLON Compact PL (KY CELNM2.FY)

Important information for your attention:

Please review the **Customer approval form** at the end of the document and provide your feedback to your OSRAM OS sales partner before **31.10.2021**. \*)

Your prompt reply will help OSRAM OS to assure a smooth and well executed transition. If OSRAM OS does not hear from your side by the due date, we will assume your (if you are a Distributor: and your customer's) full acceptance to this proposed change and its implementation.

OSRAM OS understands the time requirements your organization needs to approve this PCN. However, if you can provide OSRAM OS an estimated date your organization will approve this PCN, OSRAM OS can use this date to plan continued production to secure your order needs during the transition time you require to review and approve this PCN.

Your attention and response to this matter is highly appreciated.

**Please direct your inquiries to your local Sales office.**

\*) OSRAM OS aligns with the widely-recognized JEDEC STANDARD "JESD46-C", which stipulates:

- "Customers should acknowledge receipt of the PCN within 30 days of delivery of the PCN."
- "Lack of acknowledgement of the PCN within 30 days constitutes acceptance of the change."
- "After acknowledgement, lack of additional response within the 90 day period constitutes acceptance of the change. An acceptance or concern response should be submitted to the supplier in a timely fashion, (i.e., customer should not wait to the end of the 90 day review period before responding, if the response is known before that time.)"

# OS-PCN-2021-001-A

## Introduction of next UX:3 chip generation for OSRON Compact PL (KY CELNM2.FY)

<b>Subject of change:</b>	Next UX:3 chip generation for KY CELNM2.FY	
<b>Affected products</b>	KY CELNM2.FY	
<b>Reason for change:</b>	Brightness improvement	
<b>Description of change</b>	<u>New status</u> - reduction of package height - new via design of main die (pls refer to info package 2_cip_PCN_OS-PCN-2021-001-A)	
<b>Product identification:</b>	Laser marking on device, customer specific ordering code	
<b>Time schedule for PCN material</b> (after implementation of change):	Final qualification report	15.09.2021
	Samples available	15.09.2021
	Intended Start of delivery	01.11.2021 <sup>*)</sup> *) or earlier if released by customer and upon mutual agreement
<b>Time schedule for Pre-PCN material</b> (prior to implementation of change):	Last time order date (LTO)	01.04.2022 <sup>**) </sup> **) expected approval date needs to be available at this time. Lead time and LTO quantity shall be mutually agreed between OSRAM OS and customer.
	Last time delivery date (LTD)	01.10.2022 <sup>***) </sup> ***) planned last date for delivery of products of current status

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**Assessment:** Change of datasheet parameter and package height

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**Documentation:** 2\_cip\_OS-PCN-2021-001-A  
3\_cip\_OS-PCN-2021-001-A\_qual

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Note:

Pre-PCN material: Products of current status, means before implementation of the changes as described in the PCN.

PCN material: Products with implementation of the changes as described in the PCN.

## Customer approval form

OS-PCN-xxx-xxx-A

TITLE OF PCN

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Please list product(s) affected in your application(s):

---

Please check the appropriate box below:

- |  |   |
|--|---|
| <input type="radio"/> <b>Approval:</b><br>We agree with the proposed change and accept start of the shipment upon availability of PCN material | <input type="radio"/> <b>Not relevant:</b><br>Change is not relevant for products in use. |
|--|---|

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**Change cannot be accepted:**

- We have objections:**

---

- We request following Information:**

---

- We request following Samples:**

---

- Expected approval date:**

---

- Volume requirements for Pre-PCN material:**

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**Sender:**

---

**Company:**

---

**Address / Location:**

---

**Signature:**

**Date:**

---

Please return this approval form to your Sales partner.

OSRAM Opto Semiconductors  
GmbH

Head Office:

Leibnizstrasse 4  
93055 Regensburg, Germany  
Phone +49 941 850-5  
Fax +49 941 850-1002  
www.osram-os.com



**OS-PCN-2021-001-A**

**Introduction of next UX:3 chip generation  
for OSOLON Compact PL (KY CELNM2.FY)**

**Customer information package**

OS QM CQM | 15.09.2021

Light is OSRAM

# OS-PCN-2021-001-A

## Introduction of next UX:3 chip generation for OSLON Compact PL (KY CELNM2.FY)



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2. Description of change	04
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4. List of affected products	15
5. Time schedule	16

# OS-PCN-2021-001-A

Introduction of next UX:3 chip generation for OSLON Compact PL  
(KY CELNM2.FY)

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QUALITY  
FIRST

## Reason for change

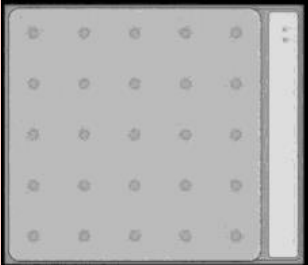

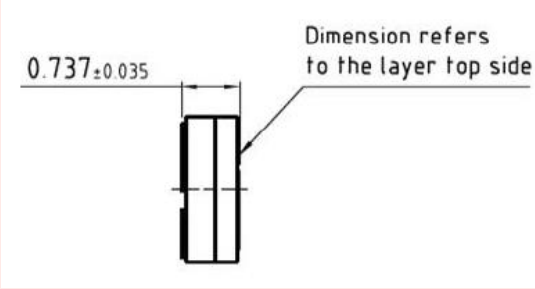
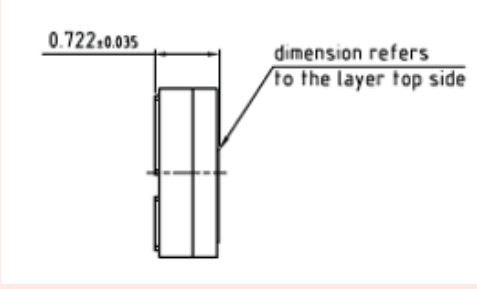
Continuous brightness performance improvement to fulfill the latest requirements from our automotive customers worldwide.

# OS-PCN-2021-001-A

Introduction of next UX:3 chip generation for OSLON Compact PL  
(KY CELNM2.FY)



## Description of change

Item	Current status	New status
Optimized via design	 A top-down view of a square chip with a grid of small circular features. The chip is mounted on a rectangular carrier with a vertical slot on the right side.	 A top-down view of the same chip and carrier, but the chip is slightly smaller, indicating a design optimization.
Reduction of package height by 15 $\mu\text{m}$ through reduced ceramic platelet thickness	 A cross-sectional diagram of the chip and carrier. A dimension line indicates a height of $0.737 \pm 0.035$ mm. A callout points to the top surface of the chip with the text "Dimension refers to the layer top side".	 A cross-sectional diagram of the chip and carrier, showing a reduced height. A dimension line indicates a height of $0.722 \pm 0.035$ mm. A callout points to the top surface of the chip with the text "dimension refers to the layer top side".



# OS-PCN-2021-001-A

## Introduction of next UX:3 chip generation for OSLO Compact PL (KY CELNM2.FY)



### Changes in the datasheet

Item	Current status	New status																		
Ordering information	<table border="1"> <thead> <tr> <th colspan="3">Ordering Information</th> </tr> <tr> <th>Type</th> <th>Luminous Flux <sup>1)</sup> I<sub>F</sub> = 1000 mA Φ<sub>V</sub></th> <th>Ordering Code</th> </tr> </thead> <tbody> <tr> <td>KY CELNM2.FY-Y0Y6-5F5G-2686</td> <td>210 ... 310 lm</td> <td>Q65112A8150</td> </tr> </tbody> </table>	Ordering Information			Type	Luminous Flux <sup>1)</sup> I <sub>F</sub> = 1000 mA Φ <sub>V</sub>	Ordering Code	KY CELNM2.FY-Y0Y6-5F5G-2686	210 ... 310 lm	Q65112A8150	<table border="1"> <thead> <tr> <th colspan="3">Ordering Information</th> </tr> <tr> <th>Type</th> <th>Luminous Flux <sup>1)</sup> I<sub>F</sub> = 1000 mA Φ<sub>V</sub></th> <th>Ordering Code</th> </tr> </thead> <tbody> <tr> <td>KY CELNM2.FY-Y2Y6-5F5G-2686</td> <td>235 ... 310 lm</td> <td>Q65113A2441</td> </tr> </tbody> </table>	Ordering Information			Type	Luminous Flux <sup>1)</sup> I <sub>F</sub> = 1000 mA Φ <sub>V</sub>	Ordering Code	KY CELNM2.FY-Y2Y6-5F5G-2686	235 ... 310 lm	Q65113A2441
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Forward current pulsed	Not part of the current datasheet version	<p>Forward Current pulsed D = 0.005 ; T<sub>S</sub> = 25 °C</p> <table border="1"> <tr> <td>I<sub>F pulse</sub></td> <td>max.</td> <td>2500 mA</td> </tr> </table>	I <sub>F pulse</sub>	max.	2500 mA															
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Efficiency	Electrical thermal resistance junction/solderpoint <sup>6)</sup> with efficiency η <sub>e</sub> = 23 %	Electrical thermal resistance junction/solderpoint <sup>6)</sup> with efficiency η <sub>e</sub> = 25 %																		
R <sub>thJS elec.</sub>	<table border="1"> <tr> <td>R<sub>thJS elec.</sub></td> <td>typ.</td> <td>3.5 K / W</td> </tr> <tr> <td></td> <td>max.</td> <td>4.3 K / W</td> </tr> </table>	R <sub>thJS elec.</sub>	typ.	3.5 K / W		max.	4.3 K / W	<table border="1"> <tr> <td>R<sub>thJS elec.</sub></td> <td>typ.</td> <td>3.5 K / W</td> </tr> <tr> <td></td> <td>max.</td> <td>4.2 K / W</td> </tr> </table>	R <sub>thJS elec.</sub>	typ.	3.5 K / W		max.	4.2 K / W						
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# OS-PCN-2021-001-A

## Introduction of next UX:3 chip generation for OSLO Compact PL (KY CELNM2.FY)



### Changes in the datasheet

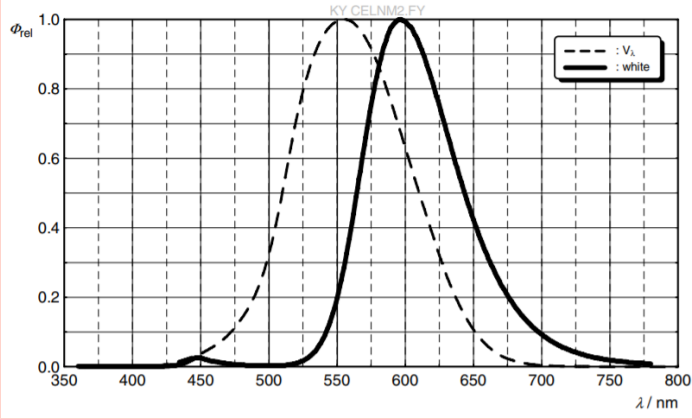
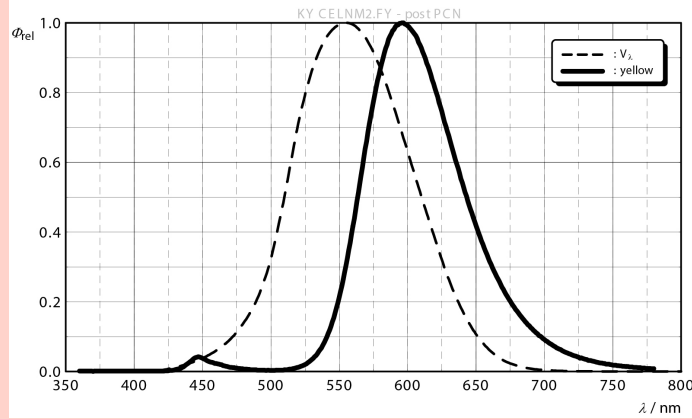
Item	Current status	New status																																													
Chromaticity coordinates (number of digits)	<table border="1"> <tr> <td>Cx</td> <td>typ.</td> <td>0.57</td> </tr> <tr> <td>Cy</td> <td>typ.</td> <td>0.42</td> </tr> </table>	Cx	typ.	0.57	Cy	typ.	0.42	<table border="1"> <tr> <td>Cx</td> <td>typ.</td> <td>0.566</td> </tr> <tr> <td>Cy</td> <td>typ.</td> <td>0.420</td> </tr> </table>	Cx	typ.	0.566	Cy	typ.	0.420																																	
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# OS-PCN-2021-001-A

## Introduction of next UX:3 chip generation for OSLO Compact PL (KY CELNM2.FY)



### Changes in the datasheet

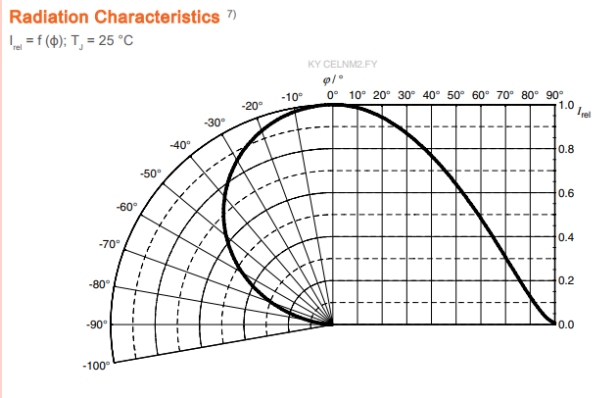
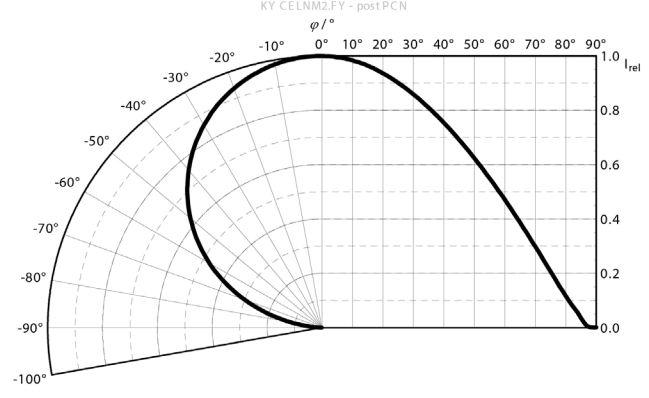
Item	Current status	New status
Relative spectral emission		

# OS-PCN-2021-001-A

## Introduction of next UX:3 chip generation for OSLO Compact PL (KY CELNM2.FY)



### Changes in the datasheet

Item	Current status	New status
Radiation Characteristics	<p><b>Radiation Characteristics</b> <sup>7)</sup></p> <p><math>I_{rel} = f(\phi); T_j = 25\text{ °C}</math></p> 	<p>KY CELNM2.FY - post PCN</p> 

# OS-PCN-2021-001-A

## Introduction of next UX:3 chip generation for OSLO Compact PL (KY CELNM2.FY)

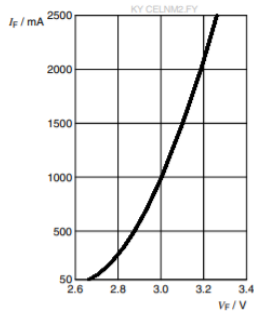


### Changes in the datasheet

#### Current status

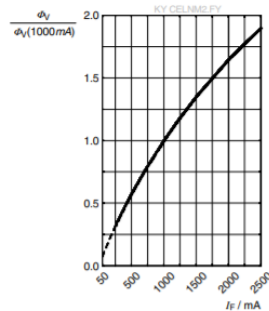
**Forward current** <sup>7)</sup>

$$I_f = f(V_f); T_j = 25\text{ }^\circ\text{C}$$



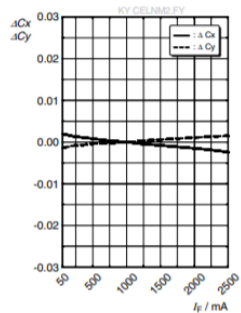
**Relative Luminous Flux** <sup>7), 8)</sup>

$$\Phi_v / \Phi_v(1000\text{ mA}) = f(I_f); T_j = 25\text{ }^\circ\text{C}$$

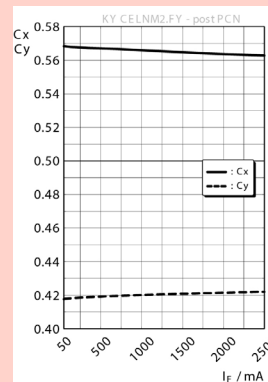
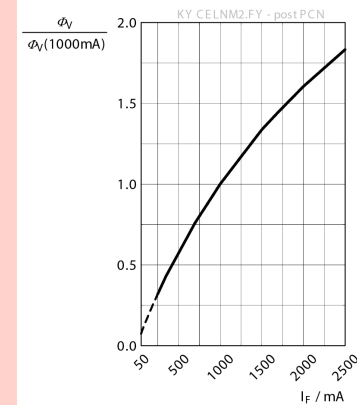
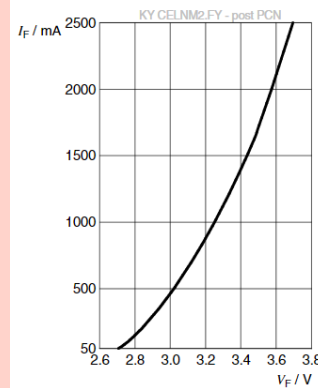


**Chromaticity Coordinate Shift** <sup>7)</sup>

$$\Delta C_x, \Delta C_y = f(I_f); T_j = 25\text{ }^\circ\text{C}$$



#### New status



# OS-PCN-2021-001-A

## Introduction of next UX:3 chip generation for OSLO Compact PL (KY CELNM2.FY)

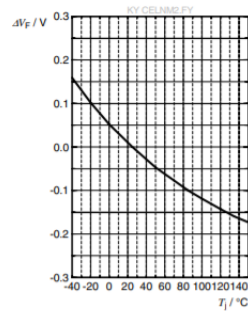


### Changes in the datasheet

#### Current status

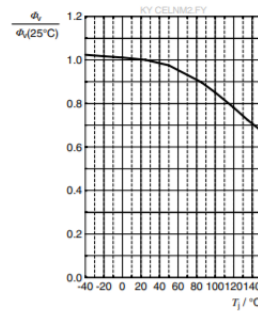
##### Forward Voltage <sup>7)</sup>

$$\Delta V_f = V_f - V_f(25^\circ\text{C}) = f(T_j); I_f = 1000 \text{ mA}$$



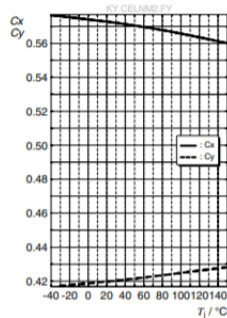
##### Relative Luminous Flux <sup>7)</sup>

$$\Phi_s / \Phi_s(25^\circ\text{C}) = f(T_j); I_f = 1000 \text{ mA}$$

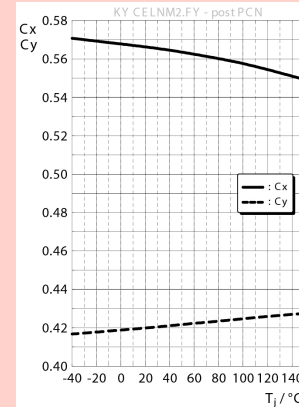
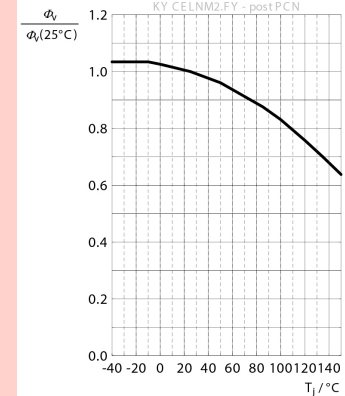
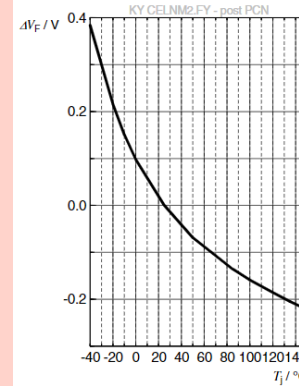


##### Chromaticity Coordinate Shift <sup>7)</sup>

$$C_x, C_y = f(T_j); I_f = 1000 \text{ mA}$$



#### New status



# OS-PCN-2021-001-A

## Introduction of next UX:3 chip generation for OSLO Compact PL (KY CELNM2.FY)

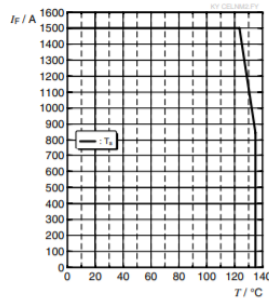


### Changes in the datasheet

#### Current status

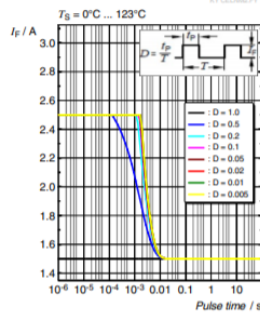
##### Max. Permissible Forward Current

$$I_F = f(T)$$



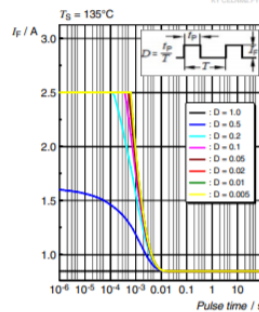
##### Permissible Pulse Handling Capability

$$I_F = f(t_p); D: \text{Duty cycle}$$

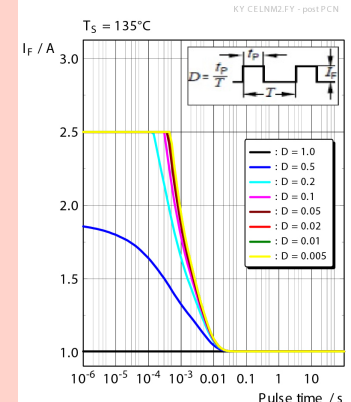
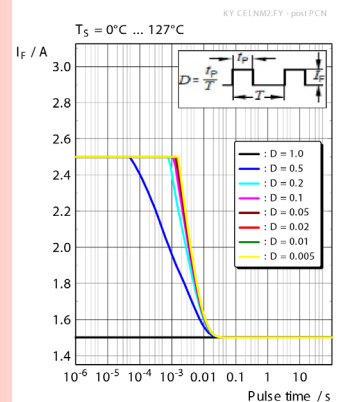
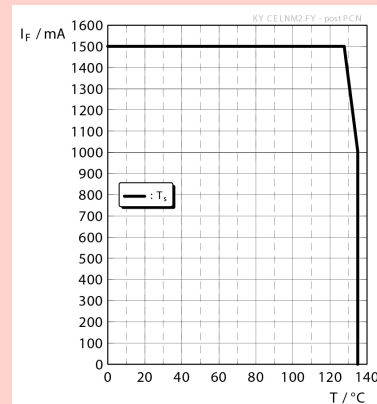


##### Permissible Pulse Handling Capability

$$I_F = f(t_p); D: \text{Duty cycle}$$



#### New status



# OS-PCN-2021-001-A

## Introduction of next UX:3 chip generation for OSLO Compact PL (KY CELNM2.FY)



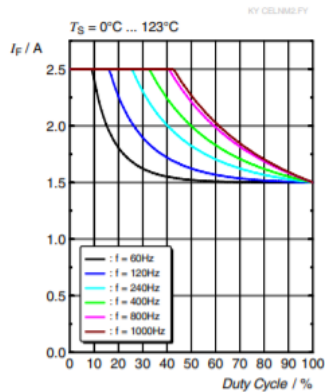
### Changes in the datasheet

#### Current status

#### New status

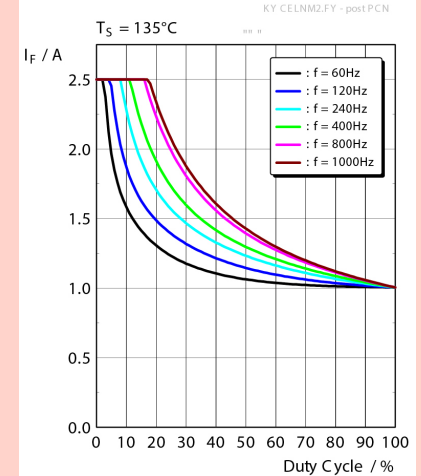
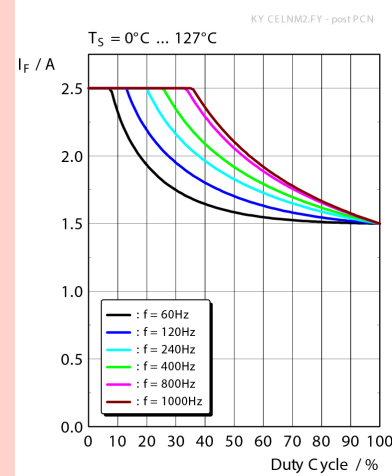
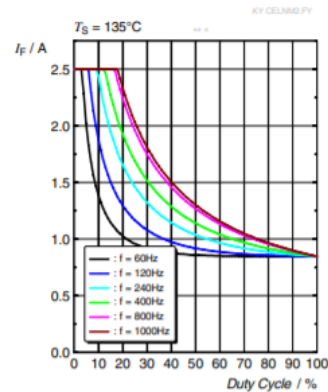
##### Permissible F. Handling Capability

f: Frequency



##### Permissible F. Handling Capability

f: Frequency



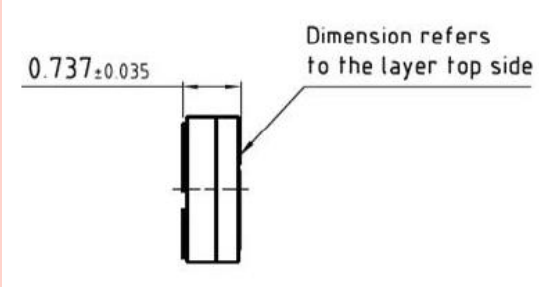
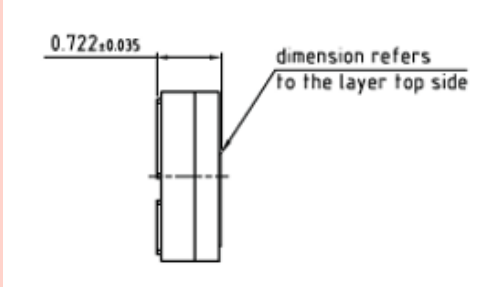
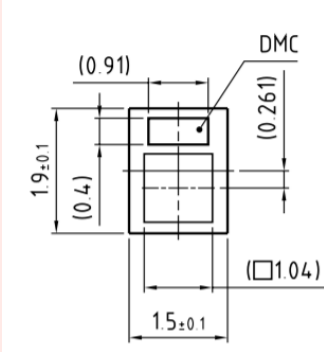
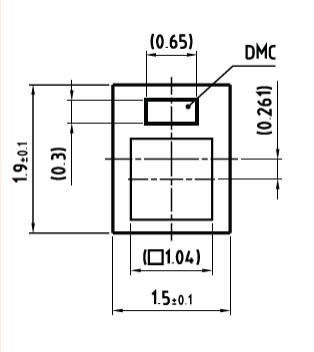


# OS-PCN-2021-001-A

Introduction of next UX:3 chip generation for OSLO Compact PL  
(KY CELNM2.FY)



## Changes in the datasheet

Item	Current status	New status
Dimension		
DMC		

# OS-PCN-2021-001-A

## Introduction of next UX:3 chip generation for OSLON Compact PL (KY CELNM2.FY)



### Up-dated Datasheet Version

Product type	Data sheet version before PCN	Data sheet version after PCN
KY CELNM2.FY	1.0	1.1

Note: After PCN approval and shipment of new material, the new data sheet versions will be valid. Latest version of data sheet is accessible on OSRAM OS homepage.

# OS-PCN-2021-001-A

Introduction of next UX:3 chip generation for OSLON Compact PL  
(KY CELNM2.FY)

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## List of affected products

- KY CELNM2.FY

# OS-PCN-2021-001-A

## Introduction of next UX:3 chip generation for OSLON Compact PL (KY CELNM2.FY)



### Time schedule

	Publication Final PCN	15.09.2021
<b>for <u>PCN material</u></b> (after implementation of change):	Final qualification report	15.09.2021
	Samples available	15.09.2021
	Intended Start of delivery	01.11.2021*)
		*) or earlier if released by customer and upon mutual agreement
<b>for <u>Pre-PCN material</u></b> (prior to implementation of change):	Last time order date (LTO)	01.04.2022**)
	Last time delivery date (LTD)	01.10.2022***)
		***) planned last date for delivery of products of current status

Note:

Pre-PCN material: Products of current status, means before implementation of the changes as described in the PCN.  
PCN material: Products with implementation of the changes as described in the PCN.

**QUALITY**  
**FIRST**

**Thank you.**

Q-Number	Q-Description
Q65113A2344	KY CELNM2.FY350-W9X2-FY-W365-S-HAN
Q65113A2344	KY CELNM2.FY350-W9X2-FY-W365-S-HAN
Q65113A2379	KY CELNM2.FY350-W9X6-FY-W365-S
Q65113A2379	KY CELNM2.FY350-W9X6-FY-W365-S
Q65113A2379	KY CELNM2.FY350-W9X6-FY-W365-S
Q65113A2506	KY CELNM2.FY350-X0X3-FY-W365-S-HAN
Q65113A2506	KY CELNM2.FY350-X0X3-FY-W365-S-HAN
Q65113A2506	KY CELNM2.FY350-X0X3-FY-W365-S-HAN
Q65113A0582	KY CELNM2.FY-4YY6-5F-2686-A-R18-HE
Q65113A0582	KY CELNM2.FY-4YY6-5F-2686-A-R18-HE
Q65113A0582	KY CELNM2.FY-4YY6-5F-2686-A-R18-HE
Q65113A0582	KY CELNM2.FY-4YY6-5F-2686-A-R18-HE
Q65112A8150	KY CELNM2.FY-Y0Y6-5F5G-2686-A-S
Q65112A8150	KY CELNM2.FY-Y0Y6-5F5G-2686-A-S
Q65113A2835	KY CELNM2.FY-Y1Y3-5F-2686-1A-R18-HV
Q65113A2835	KY CELNM2.FY-Y1Y3-5F-2686-1A-R18-HV
Q65112A9623	KY CELNM2.FY-Y1Y5-5F-2686-A-R18-VEN
Q65112A9623	KY CELNM2.FY-Y1Y5-5F-2686-A-R18-VEN
Q65113A1614	KY CELNM2.FY-Y1Y5-5F-2686-A-R18-XX
Q65113A1614	KY CELNM2.FY-Y1Y5-5F-2686-A-R18-XX
Q65112A9754	KY CELNM2.FY-Y1Y5-5F-2686-A-R18-ZKW
Q65112A9754	KY CELNM2.FY-Y1Y5-5F-2686-A-R18-ZKW
Q65113A1635	KY CELNM2.FY-Y1Y5-5F5G-2686-1A-R18-GW
Q65113A1635	KY CELNM2.FY-Y1Y5-5F5G-2686-1A-R18-GW
Q65113A1915	KY CELNM2.FY-Y1Y5-5F5G-2686-1A-R18-XX
Q65113A1915	KY CELNM2.FY-Y1Y5-5F5G-2686-1A-R18-XX
Q65113A1795	KY CELNM2.FY-Y1Y5-5F5G-2686-1A-S-VL
Q65113A1795	KY CELNM2.FY-Y1Y5-5F5G-2686-1A-S-VL
Q65113A0340	KY CELNM2.FY-Y1Y5-5F5G-2686-A-R18-LM
Q65113A0340	KY CELNM2.FY-Y1Y5-5F5G-2686-A-R18-LM
Q65113A2049	KY CELNM2.FY-Y2Y5-5F5G-2686-1A-R18-XX
Q65113A2049	KY CELNM2.FY-Y2Y5-5F5G-2686-1A-R18-XX
Q65113A2441	KY CELNM2.FY-Y2Y6-5F5G-2686-A00-S
Q65113A2441	KY CELNM2.FY-Y2Y6-5F5G-2686-A00-S
Q65113A2548	KY CELNM2.FY-Y3Y5-5F5G-2686-1A-R18-AL
Q65113A2548	KY CELNM2.FY-Y3Y5-5F5G-2686-1A-R18-AL
Q65113A2849	KY CELNM2.FY-Y3Y5-5F5G-2686-1A-R18-I-AL
Q65113A2705	KY CELNM2.FY-Y3Y6-5F5G-2686-1A-R18-XIN
Q65113A2705	KY CELNM2.FY-Y3Y6-5F5G-2686-1A-R18-XIN
Q65113A2801	KY CELNM2.FY-Y4Y6-5F-2686-1A-R18-HE