

Light is OSRAM

01.09.2021

Dear Customer,

please find attached our OSRAM OS PCN:

## OS-PCN-2021-022-A Introduction of new Green LED chip in LED Engin Emitters

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 **13.10.2021**. \*)

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-2021-022-A

## Introduction of new Green LED chip in LED Engin Emitters

<b>Subject of change:</b>	Introduction of new Green LED chip in LED Engin Emitters	
<b>Affected products</b>	LZ4-00MD09; LZ4-00G108; LZ4-00MC08; LZ4-00MA08; LQ4-00MZ08-0794; LQ4-04MZC8-0761; LQP-00MD00; LZP-00MN00; LZ1-00G102; LQ4-01MWCZ-0809; LZ4-60MD09; LZ4-40G108; LZ4-20MC08; LZ4-20MA08; LZP-L0MD00; LZP-W0MD00; LQP-W0MD00-0689; LZP-W0MN00; LZ1-10G102	
<b>Reason for change:</b>	Current chip reached end of life; Ensure continuous supply of emitters;	
<b>Description of change</b>	Please refer to attached <u>2_CIP_OS-PCN-2021-022-A</u>	
<b>Product identification:</b>	Date Code	
<b>Time schedule for PCN material (after implementation of change):</b>	Final qualification report	Available on request
	Samples	Available on request
	Intended Start of delivery	01.10.2021 <sup>*)</sup> *) or earlier if released by customer and upon mutual agreement
<b>Time schedule for Pre-PCN material (prior to implementation of change):</b>	Last time order date (LTO)	n.a. (Pre-PCN material no longer orderable)
	Last time delivery date (LTD)	30.09.2021 <sup>**)</sup> **) planned last date for delivery of products of current status
<b>Assessment:</b>	Datasheets will be updated	
<b>Documentation:</b>	2_CIP_OS-PCN-2021-022-A	

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-2021-022-A

### Introduction of new Green LED chip in LED Engin Emitters

---

**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. |
|--|---|

---

**Change cannot be accepted:**

- We have objections:**

---

- We request following Information:**

---

- We request following Samples:**

---

- Expected approval date:**

---

- Volume requirements for Pre-PCN material:**

---

**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

**OSRAM**  
Opto Semiconductors

**QUALITY**  
**FIRST**

# **OS-PCN-2021-022-A**

## **Introduction of new Green LED chip in LED Engin Emitters**

### **Customer information package**

OS QM CQM | 01.09.2021

**Light is OSRAM**

**OSRAM**  
Opto Semiconductors

# OS-PCN-2021-022-A

## Introduction of new Green LED chip in LED Engin Emitters



### Reason for change

- Current chip reached end of life
- Ensure continuous supply of emitters

### Affected products

Level 1 (Emitter only)	Level 2 (Emitter on MCPCB)
LZ4-00MD09	LZ4-60MD09
LZ4-00G108	LZ4-40G108
LZ4-00MC08	LZ4-20MC08
LZ4-00MA08	LZ4-20MA08
LQ4-00MZ08-0794	
LQ4-04MZC8-0761	
LZP-00MD00	LZP-L0MD00
	LZP-W0MD00
	LQP-W0MD00-0689
LZP-00MN00	LZP-W0MN00
LZ1-00G102	LZ1-10G102
LQ4-01MWCZ-0809	

# OS-PCN-2021-022-A

## Introduction of new Green LED chip in LED Engin Emitters

---

QUALITY  
FIRST

### Assessment

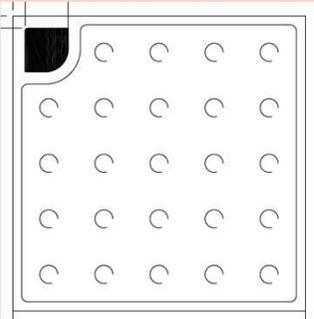
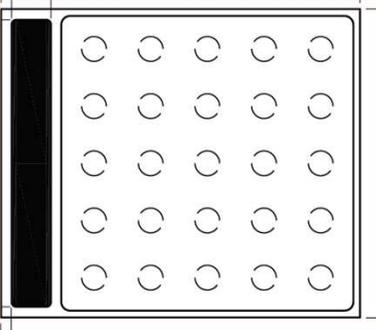
- The new chip is already used in other LED Engin emitters, such as LZ7-04M2PD.
- Minor improvement in I-V curve and typical Vf, other datasheet parameters unchanged.
- No change in lifetime and reliability

# OS-PCN-2021-022-A

## Introduction of new Green LED chip in LED Engin Emitters



### Description of change

Description	Current status	New status
Chip Dimensions	1000 $\mu\text{m}$ x 1000 $\mu\text{m}$ x 150 $\mu\text{m}$	1200 $\mu\text{m}$ x 1000 $\mu\text{m}$ x 120 $\mu\text{m}$
Light Emitting Area	1000 $\mu\text{m}$ x 1000 $\mu\text{m}$ (minus wire bond area)	1000 $\mu\text{m}$ x 1000 $\mu\text{m}$
Chip Picture	 A schematic diagram of a square LED chip. It features a 5x5 grid of circular emitters. A black semi-circular area is located in the top-left corner, representing a wire bond area.	 A schematic diagram of a rectangular LED chip. It features a 5x5 grid of circular emitters. A black vertical bar is located on the left side, representing a wire bond area.

# OS-PCN-2021-022-A

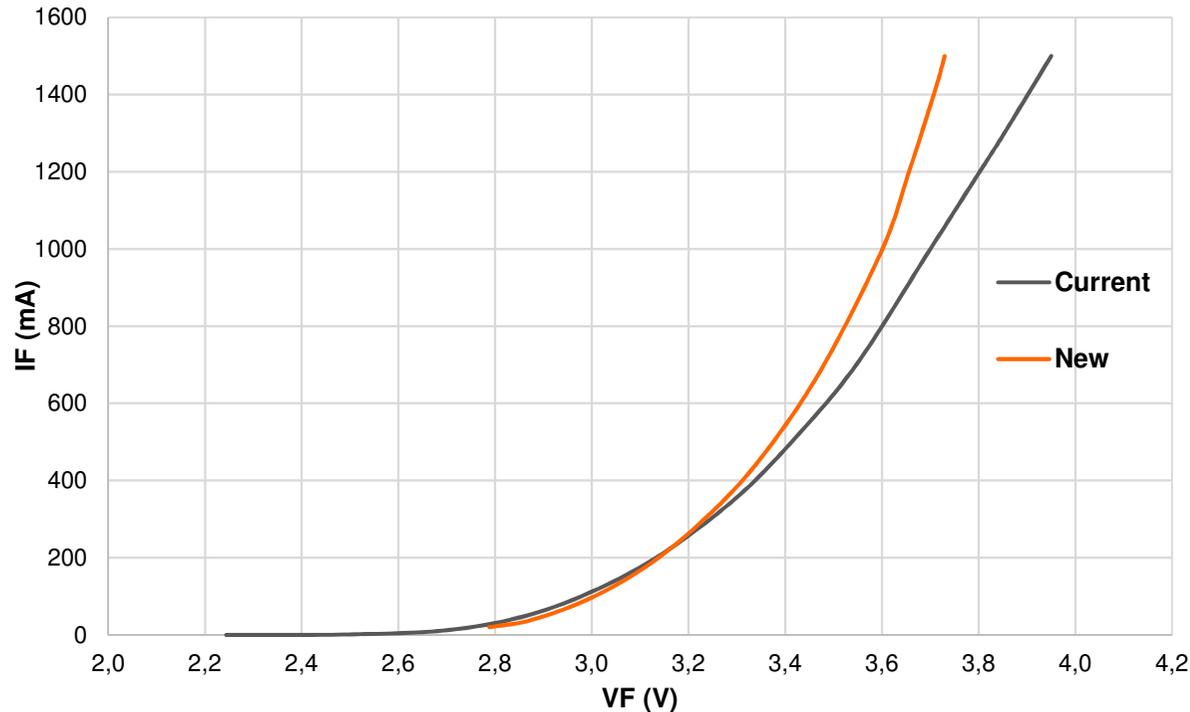
## Introduction of new Green LED chip in LED Engin Emitters



### Minor improvement in I-V curve and typical Vf

Datasheets of affected products to be updated by Sept 30, 2021

**I-V Curve per Chip**



Typical VF per chip	Current status	New status
@700mA	3.55V	3.50V
@1A	3.70V	3.60V

**No change to maximum current of all affected products:**

- LZ1-00G102: 1.5A
- All others (green channel): 1.0A

# OS-PCN-2021-022-A

## Introduction of new Green LED chip in LED Engin Emitters



### Sample Availability

Level 1 (Emitter only)	Sample Availability
LZ4-00MD09	Available by early August
LZ4-00G108	Will be built upon request
LZ4-00MC08	Available by early August
LZ4-00MA08	Will be built upon request
LQ4-00MZ08-0794	Will be built upon request
LQ4-04MZC8-0761	Available by early August
LZP-00MD00	Available by early August
LZP-00MN00	Will be built upon request
LZ1-00G102	Available by early August
LQ4-01MWCZ-0809	Will be built upon request

Level 2 samples will be built upon request

# OS-PCN-2021-022-A

## Introduction of new Green LED chip in LED Engin Emitters



### Time schedule

Qualification report	New chip has been qualified in LED Engin emitters, based on LZ7-04M2PD. Qualification report available on request.
Last time order date for pre-PCN material (prior to implementation of change)	N.A (Pre-PCN material no longer orderable)
Last time delivery date of pre-PCN material	September 30 <sup>th</sup> , 2021
Intended start of delivery for PCN material (after implementation change)	October 1 <sup>st</sup> , 2021 *) *) or earlier if released by customer and upon mutual agreement

**QUALITY**  
**FIRST**

**Thank you.**