

Light is OSRAM

15.08.2018

Dear Customer,

please find attached our OSRAM OS PCN:

OS-PCN-2018-021-A

Introduction of frontend production location Kulim for OS_\nLON Signal / LX and backend production location Wuxi for OS_\nLON Signal / LX / SX

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 **20.09.2018**. *)

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-B", 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."

OS-PCN-2018-021-A

Introduction of frontend production location Kulim for OSLOON Signal / LX and backend production location Wuxi for OSLOON Signal / LX / SX

Subject of change:	Introduction of frontend production location Kulim for OSLOON Signal / LX and backend production location Wuxi For OSLOON Signal / LX / SX	
Affected products	<p>Frontend location and backend location change:</p> <p>OSLOON Signal: LB CRBP, LCB CRBP, LCY CLBP, LUW CRBP</p> <p>OSLOON LX: LUW CVBP.CE</p> <p>Only backend location change:</p> <p>OSLOON Signal: LJ CKBP, LT CQBP, LV CQBP, LY CKBP</p> <p>OSLOON SX: LA CN5M, LY CN5M</p>	
Reason for change:	<p>Frontend location:</p> <ul style="list-style-type: none"> • Secure continuous supply – lower risk of allocation • Increase chip production capacity to meet growing market demand with frontend production at new location Kulim (Malaysia) <p>Backend location:</p> <ul style="list-style-type: none"> • OSRAM Opto Semiconductors is a continuously growing company. In order to improve the support of a fast and reliable delivery to our customers, we will introduce LED assembly factory in Wuxi (China) for OSLOON Signal, LX and SX 	
Description of change	<p><u>Frontend current status</u> Regensburg and Penang chip production</p>	<p><u>Frontend new status</u> Regensburg, Penang and Kulim chip production</p>
	<p><u>Backend current status</u> Penang</p>	<p><u>Backend new status</u> Penang Wuxi</p>

Chips from all frontend locations (Regensburg, Penang and additionally Kulim) will be used for finished good assembly. Therefore release of all chip production location sites is necessary to ensure deliveries

Chips from all productions sites are fully mixable

Current backend production location for OSOLON Signal / LX / SX may be phased out after customer approval of new location - without further customer information

Please refer to customer information package for details.

Product identification:

Date code

Time schedule for PCN material
(after implementation of change):

Final qualification report 15.08.2018

Samples available 15.08.2018

Intended Start of delivery 01.11.2018 *)
*) or earlier if released by customer and upon mutual agreement

Time schedule for Pre-PCN material
(prior to implementation of change):

Last time order date (LTO) 30.06.2019 **)
**) 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) 31.12.2019 ***)
***) planned last date for delivery of products of current status

Assessment:

No changes in electrical and optical parameters. No change in fit / form / function or reliability.

Documentation:

- 2_cip_OS-PCN-2018-021-A
- 3_cip_OS-PCN-2018-021-A_interim_Rel_BE
- 4_cip_OS-PCN-2018-021-A_Rel_FE

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-2018-021-A

Introduction of frontend production location Kulim for OSLOK Signal / LX and backend production location Wuxi for OSLOK Signal / LX / SX

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

Please check the appropriate box below:

- | | |
|---|---|
| <input type="radio"/> Approval:
We agree with the proposed change and accept start of the shipment upon availability of PCN material. | <input type="radio"/> Not relevant:
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:** dd.mm.yyyy

- 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

Products Affected by Product Change Notification

Number: OS-PCN-2018-021-A

Name: Introduction of frontend production location Kulim for OSLON Signal / LX and backend production location Wuxi for OSLON Signal / LX / SX

Release Date: 8/27/2018

Response Due Date: 9/20/2018

Implementation Date: 11/1/2018

<i>Product</i>	<i>QNumber</i>	<i>QNumber Description</i>	<i>Part Number</i>
LA CN5M	Q65110A8681	LA CN5M-FBGB-24-1-140-R18-Z	LA CN5M-FBGB-24-1-Z
	Q65111A0282	LA CN5M-FBGB-23-1-140-R18-Z	LA CN5M-FBGB-23-1-Z
	Q65111A0460	LA CN5M-GAHA-23-1-140-R18-Z	LA CN5M-GAHA-23-1-Z
	Q65111A1207	LA CN5M-GAHA-24-1-140-R18-Z	LA CN5M-GAHA-24-1-Z
	Q65111A5734	LA CN5M-GAGB-23-1-140-R18-Z	LA CN5M-GAGB-23-1-Z
	Q65111A5939	LA CN5M-GBHB-24-1-140-R18-Z-BAY	LA CN5M-GBHB-24-1-Z-BAY
	Q65111A6011	LA CN5M-GBHB-24-1-140-R18-Z-1-XX	LA CN5M-GBHB-24-1-Z-1-XX
	Q65111A6412	LA CN5M-GBHB-24-3A4B-140-R18-Z-HE	LA CN5M-GBHB-24-3A4B-Z-HE
	Q65111A7007	LA CN5M-GBHA-24-1-140-R18-Z-HAN	LA CN5M-GBHA-24-1-Z-HAN
	Q65111A7256	LA CN5M-GBHB-24-3A4B-140-R18-Z-VAR	LA CN5M-GBHB-24-3A4B-Z-VAR
LB CRBP	Q65111A5184	LB CRBP-HYJX-47-1-350-R18-Z	LB CRBP-HYJX-47-1
	Q65111A5792	LB CRBP-HXJX-47-1-350-R18-Z	LB CRBP-HXJX-47-1
	Q65111A7831	LB CRBP-HXJX-45-1-350-R18-Z-XX	LB CRBP-HXJX-45-1-XX
	Q65111A8787	LB CRBP-HYJX-45-8E8F-350-R18-Z-XX	LB CRBP-HYJX-45-8E8F-XX
	Q65111A9037	LB CRBP-HZJX-46-1-350-R18-Z-XX	LB CRBP-HZJX-46-1-XX
	Q65112A1994	LB CRBP-HXJX-46-8E8G-350-S	LB CRBP-HXJX-46-8E8G
LCB CRBP	Q65111A5183	LCB CRBP-JXKX-3B6B-1-350-R18-Z	LCB CRBP-JXKX-3B6B-1
	Q65111A5965	LCB CRBP-JZKX-3B4B-1-350-R18-Z-XX	LCB CRBP-JZKX-3B4B-1-XX
	Q65111A6984	LCB CRBP-JYJZ-4B5B-1-350-R18-Z-XX	LCB CRBP-JYJZ-4B5B-R18-Z-XX
	Q65111A7998	LCB CRBP-JZKX-3B6B-1-350-R18-Z	LCB CRBP-JZKX-3B6B-1
	Q65112A1245	LCB CRBP-JZKX-4B5B-8E8F-350-R18-Z-X	LCB CRBP-JZKX-4B5B-8E8F-XX
LCY CLBP	Q65111A4316	LCY CLBP-KXKZ-5F5G-1-350-R18-Z	LCY CLBP-KXKZ-5F5G-1
	Q65111A4907	LCY CLBP-KYLX-5F-1-350-R18-Z-XX	LCY CLBP-KYLX-5F-1-XX
	Q65111A5392	LCY CLBP-KZLY-5F5G-1-350-R18-Z-XX	LCY CLBP-KZLY-5F5G-1-Z-XX
	Q65111A7137	LCY CLBP-KZLX-5F-1-350-R18-SIE	LCY CLBP-KZLX-5F-1-SIE
	Q65111A7229	LCY CLBP-KYKZ-5F5G-8E8F-350-R18-Z-X	LCY CLBP-KYKZ-5F5G-8E8F-XX
	Q65111A7544	LCY CLBP-KYKZ-5F-1-350-R18-Z-SIE	LCY CLBP-KYKZ-5F-1-SIE
	Q65111A9391	LCY CLBP-KZLX-5F-1-350-R18-Z-XX	LCY CLBP-KZLX-5F-1-Z-XX
	Q65111A9706	LCY CLBP-KYKZ-5F-1-350-R18-Z-ADB	LCY CLBP-KYKZ-5F-1-ADB
	Q65111A9775	LCY CLBP-KYLY-5F5G-8E8G-350-R18	LCY CLBP-KYLY-5F5G-8E8G
	Q65112A1246	LCY CLBP-KZLY-5F5G-8E8F-350-R18-Z-X	LCY CLBP-KZLY-5F5G-8E8F-XX
LJ CKBP	Q65111A4878	LJ CKBP-JXKZ-27-1-350-R18-Z	LJ CKBP-JXKZ-27-1
	Q65111A4908	LJ CKBP-JZKX-34-1-350-R18-Z-XX	LJ CKBP-JZKX-34-1-XX
	Q65111A5609	LJ CKBP-JZKZ-25-1-350-R18-Z	LJ CKBP-JZKZ-25-1-Z
	Q65111A5610	LJ CKBP-JYKY-36-1-350-R18-Z	LJ CKBP-JYKY-36-1-Z
	Q65111A5611	LJ CKBP-JXKX-47-1-350-R18-Z	LJ CKBP-JXKX-47-1-Z
	Q65111A5924	LJ CKBP-KXKZ-47-1-350-R18-Z	LJ CKBP-KXKZ-47-1-Z
	Q65111A6907	LJ CKBP-HXJY-67-1-350-R18-Z-XX	LJ CKBP-HXJY-67-1-XX
	Q65111A6925	LJ CKBP-KXKZ-35-1-350-R18-Z-XX	LJ CKBP-KXKZ-35-1-Z-XX

<i>Product</i>	<i>QNumber</i>	<i>QNumber Description</i>	<i>Part Number</i>
LJ CKBP	Q65111A7134	LJ CKBP-JZKX-34-J3Q3-350-R18-SIE	LJ CKBP-JZKX-34-J3Q3-SIE
	Q65111A7152	LJ CKBP-KXKZ-3-1-350-R18-Z-XX	LJ CKBP-KXKZ-3-1-XX
	Q65111A7230	LJ CKBP-JZKY-34-J3M3-350-R18-Z-XX	LJ CKBP-JZKY-34-J3M3-XX
	Q65111A7463	LJ CKBP-KSKU-23-1-350-R18-XX	LJ CKBP-KSKU-23-1-XX
	Q65111A7464	LJ CKBP-KRKT-23-1-350-R18-XX	LJ CKBP-KRKT-23-1-XX
	Q65111A7533	LJ CKBP-JYKY-45-1-350-R18-Z-XX	LJ CKBP-JYKY-45-1-XX
	Q65111A8305	LJ CKBP-JZKZ-45-1-350-R18-Z-XX	LJ CKBP-JZKZ-45-1-XX
	Q65111A8640	LJ CKBP-JZKX-4-1-350-R18-Z-SIE	LJ CKBP-JZKX-4-1-SIE
	Q65111A8786	LJ CKBP-JZKY-45-J3Q3-350-R18-Z-XX	LJ CKBP-JZKY-45-J3Q3-XX
	Q65111A9188	LJ CKBP-JXKX-46-1-350-R18-Z	LJ CKBP-JXKX-46-1-Z
	Q65111A9390	LJ CKBP-JZKY-45-1-350-R18-Z-XX	LJ CKBP-JZKY-45-1-Z-XX
	Q65111A9705	LJ CKBP-JYKX-46-1-350-R18-Z-ADB	LJ CKBP-JYKX-46-1-ADB
	Q65112A0755	LJ CKBP-HYKX-47-1-350-R18-Z	LJ CKBP-HYKX-47-1
	Q65112A1879	LJ CKBP-KXKZ-34-1-350-R18-Z-SF	LJ CKBP-KXKZ-34-1-Z-SF
	LT CQBP	Q65111A4877	LT CQBP-KYLX-36-1-350-R18-Z
Q65111A8192		LT CQBP-KYLX-34-1-350-R18-Z-XX	LT CQBP-KYLX-34-1-XX
Q65111A8570		LT CQBP-KYLX-35-1-350-R18-Z-SIE	LT CQBP-KYLX-35-1-SIE
Q65111A8785		LT CQBP-KZLY-35-1-350-R18-Z-XX	LT CQBP-KZLY-35-1-XX
Q65111A9389		LT CQBP-KZLX-45-1-350-R18-Z-XX	LT CQBP-KZLX-45-1-Z-XX
LUW CRBP	Q65111A9704	LT CQBP-KZLX-36-1-350-R18-Z-ADB	LT CQBP-KZLX-36-1-ADB
	Q65111A5182	LUW CRBP-LXLZ-G4J4-1-350-R18-Z	LUW CRBP-LXLZ-G4J4-1
	Q65111A8211	LUW CRBP-LXLZ-IMJ4-1-350-R18-Z-XX	LUW CRBP-LXLZ-IMJ4-1-XX
LUW CRBP	Q65111A9695	LUW CRBP-LYLZ-G4J4-1-350-R18-SIE	LUW CRBP-LYLZ-G4J4-1-SIE
	Q65111A9702	LUW CRBP-LYLZ-IMJ4-1-350-R18-Z-ADB	LUW CRBP-LYLZ-IMJ4-1-ADB
	Q65111A4876	LV CQBP-JZLX-BD-1-350-R18-Z	LV CQBP-JZLX-BD-1
	Q65111A4906	LV CQBP-KXKY-CD-1-350-R18-Z-XX	LV CQBP-KXKY-CD-1-XX
LV CQBP	Q65111A6404	LV CQBP-JZKZ-CD-1-350-R18-Z	LV CQBP-JZKZ-CD-1
	Q65111A6922	LV CQBP-KXKZ-BC-1-350-R18-Z-XX	LV CQBP-KXKZ-BC-1-Z-XX
	Q65111A6983	LV CQBP-JZKY-BC-1-350-R18-Z-XX	LV CQBP-JZKY-BC-R18-Z-XX
	Q65111A7169	LV CQBP-KXLX-C-1-350-R18-Z-XX	LV CQBP-KXLX-C-1-XX
	Q65111A7231	LV CQBP-KXKZ-BD-8E8F-350-R18-Z-XX	LV CQBP-KXKZ-BD-8E8F-XX
	Q65111A8215	LV CQBP-JZKZ-C-1-350-R18-Z-XX	LV CQBP-JZKZ-C-1-XX
	Q65111A9696	LV CQBP-KYKZ-CD-1-350-R18-SIE	LV CQBP-KYKZ-CD-1-SIE
	Q65112A1376	LV CQBP-KYLX-BD-1-350-R18-Z-XX	LV CQBP-KYLX-BD-1-XX
	Q65112A1710	LV CQBP-KXLX-BD-1-350-R18-Z-XX	LV CQBP-KXLX-BD-1-XX
	LY CKBP	Q65111A4890	LY CKBP-JYKX-36-1-350-R18-Z
Q65111A5613		LY CKBP-JYKX-46-1-350-R18-Z	LY CKBP-JYKX-46-1-Z
Q65111A5615		LY CKBP-HYJZ-35-1-350-R18-Z	LY CKBP-HYJZ-35-1-Z
Q65111A9187		LY CKBP-JYKX-45-1-350-R18-Z	LY CKBP-JYKX-45-1-Z
LY CN5M	Q65110A8680	LY CN5M-FAGA-36-1-140-R18-Z	LY CN5M-FAGA-36-1-Z
	Q65111A0281	LY CN5M-FBGB-56-1-140-R18-Z	LY CN5M-FBGB-56-1-Z
	Q65111A1208	LY CN5M-FBGB-36-1-140-R18-Z	LY CN5M-FBGB-36-1-Z
	Q65111A1429	LY CN5M-FBGB-56-1-140-R33-Z	LY CN5M-FBGB-56-1-L-Z
	Q65111A2761	LY CN5M-FAGA-46-1-140-R18	LY CN5M-FAGA-46-1
	Q65111A7625	LY CN5M-FBGA-45-3B4B-140-R33-Z-HAN	LY CN5M-FBGA-45-3B4B-L-Z-HAN
	Q65112A0083	LY CN5M-FBGB-45-1-140-R18-Z-BAY	LY CN5M-FBGB-45-1-Z-BAY
	Q65112A0759	LY CN5M-FBGA-5-3B4B-140-R33-Z-HAN	LY CN5M-FBGA-5-3B4B-L-Z-HAN
	Q65112A1586	LY CN5M-FAGB-36-3B5A-140-R18	LY CN5M-FAGB-36-3B5A
	Q65112A1653	LY CN5M-GAGB-45-3B4B-140-R33-Z-HAN	LY CN5M-GAGB-45-3B4B-L-Z-HAN

<i>Product</i>	<i>QNumber</i>	<i>QNumber Description</i>	<i>Part Number</i>
LY CN5M	Q65112A1654	LY CN5M-GAGB-5-3B4B-140-R33-Z-HAN	LY CN5M-GAGB-5-3B4B-L-Z-HAN