

Light is OSRAM

02.09.2019

Dear Customer,

please find attached our OSRAM OS PCN:

OS-PCN-2019-018-A Introduction of next Generation 1mm² UX:3 with bar pad for OBF-S

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 **04.10.2019**. *)

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."

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Introduction of next Generation 1mm² UX:3 with bar pad for OBF-S

Subject of change:	Introduction of next generation 1mm ² UX:3 with bar pad for OBF-S	
Affected products	Refer to attached file 2_CIP_OS-PCN-2019-018-A	
Reason for change:	<ul style="list-style-type: none"> To achieve continuous performance improvements Quality improvement due to adapted design New chip production at Kulim (Malaysia) 	
Description of change	Refer to attached file 2_CIP_OS-PCN-2019-018-A	
Product identification:	Date Code or new material number	
Time schedule for PCN material (after implementation of change):	Intermediate qualification report	available
	Qualification report	25.10.2019
	Samples available	available
	Intended Start of delivery	01.03.2020 ^{*)} <small>*) or earlier if released by customer and upon mutual agreement</small>
Time schedule for Pre-PCN material (prior to implementation of change):	Last time order date (LTO)	01.09.2020 ^{**)} <small>**) expected approval date needs to be available at this time. Lead time and LTO quantity shall be mutually agreed between OSRAM OS and customer.</small>
	Last time delivery date (LTD)	01.03.2021 ^{***)} <small>***) planned last date for delivery of products of current status</small>
Assessment:	No change in fit / form / function or reliability	
Documentation:	2_CIP_OS-PCN-2019-018-A 3_CIP_OS-PCN-2019-018-A_Qual	

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

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Introduction of next Generation 1mm² UX:3 with bar pad for OBF-S

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

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PCN OS-PCN-2019-018-A

Introduction of next Generation 1mm² UX:3 with bar pad for OBF-S

OS QM CQM A EXT | 2019-09-02

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Introduction of next Generation 1mm² UX:3 with bar pad for OBF-S



Reason of Change

- To achieve continuous performance improvements
- Quality improvement due to adapted design
- Secure continuous supply – lower risk of allocation
- Increase chip production capacity to meet growing market demand with frontend production at new location Kulim (Malaysia)
- Follow Mid-term manufacturing footprint strategy

Remarks:

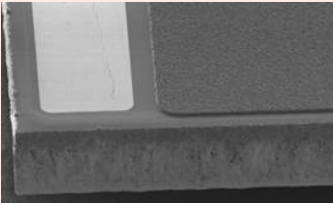
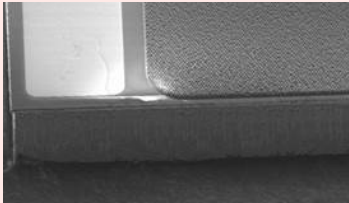
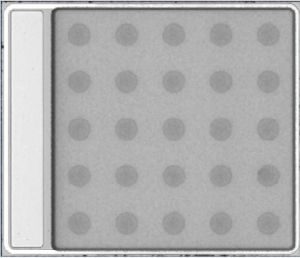
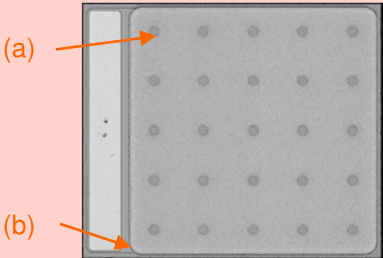
- LEDs with old and new chips are considered mixable in application
- no change in fit / form / function or reliability
- **ZVEI evaluation level C**

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Introduction of next Generation 1mm² UX:3 with bar pad for OBF-S

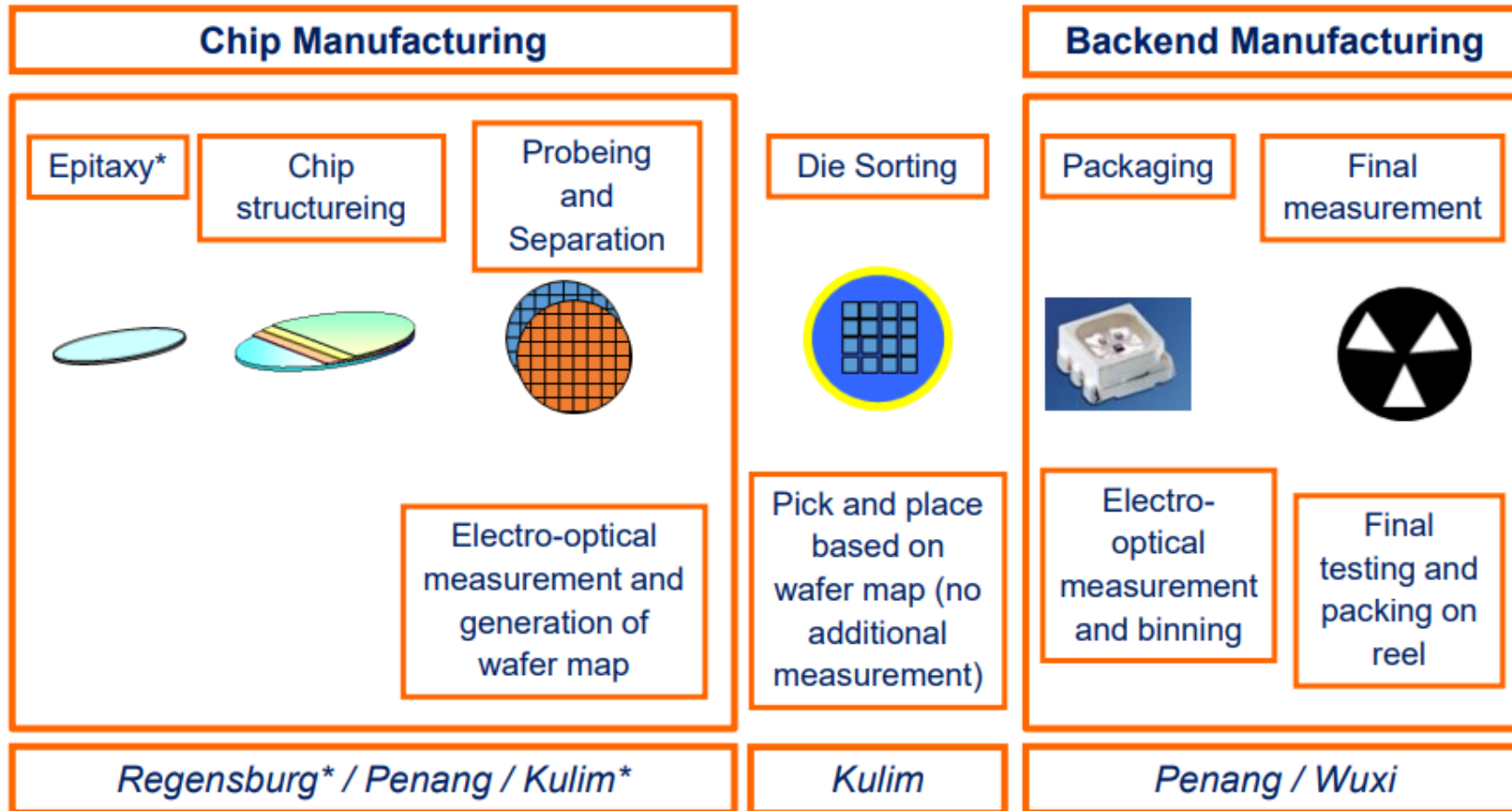


Description of change:

Change item	Current status	New status
Chip singulation technology	 Laser dicing	 Plasma dicing
Chip design improvements.		 (a) Optimized via diameter (b) No Ag mirror at chip edge
Chip dimension [μm]	1000 x 1200 x 120	1000 x 1200 x 120
Chip production in	<ul style="list-style-type: none"> • Regensburg / Germany • Penang / Malaysia 	<ul style="list-style-type: none"> • Regensburg / Germany • Penang / Malaysia • Kulim / Malaysia

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List of affected products:

OSLON Black Flat S
KW HJL531.TE
KW HKL531.TE
KW HLL531.TE

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PCN Samples with Narrow brightness binning and typical color point *

OSLON Black Flat S
KW HJL531.TE
KW HKL531.TE
KW HLL531.TE



available
available in Oct 19

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Introduction of next Generation 1mm² UX:3 with bar pad for OBF-S



Time schedule

- prelim. Qualification report: available
- Final Qualification report : 25.10.2019
- Start of delivery: 01.03.2020*)
*) or earlier if released by customer
- Last time order date: 01.09.2020**)
**) last date for ordering products of current status
- Last time delivery date: 01.03.2021***)
***) planned last date for delivery of products of current status

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Thank you.

Q-Number	Q-Description
Q65111A8764	KW HJL531.TE-6Q5R-ebvF46fcbB46-DFYF
Q65112A0351	KW HJL531.TE-7Q5R-ebxD46ebzB46-DFGF-HE
Q65112A2862	KW HJL531.TE-7Q5R-fcbB46-DFGF-NAL
Q65112A3974	KW HJL531.TE-8Q2-ebzB46-DFYF-HAN
Q65112A4055	KW HJL531.TE-Z6Q7-ebvFfcbB46-DFYF
Q65112A4181	KW HJL531.TE-7Q5R-ebxD46ebzB46-DFYF-NAL
Q65112A5511	KW HJL531.TE-Z7Q5-fcbB46-DFYF-XX
Q65112A6275	KW HJL531.TE-7QF3-ebxD46ebzB46-DFGF-NAL
Q65112A6533	KW HJL531.TE-T1T4-fcbB46-DFYF-HAN
Q65112A6602	KW HJL531.TE-D9T2-ebxD46ebzB46-DFYF-NAL
Q65112A6634	KW HJL531.TE-7Q3-ebxD46ebzB46-DFUF-LM
Q65112A6651	KW HJL531.TE-T2T5-fcbB46-DFYF-HAN
Q65112A6894	KW HJL531.TE-Z6Q7-ebvFfcbB46-DFYF-KO
Q65112A6972	KW HJL531.TE-8Q4-ebxD46ebzB46-UFYF-ZKW
Q65112A7307	KW HJL531.TE-8Q3-ebxD46ebzB46-DFYF-HV
Q65112A7308	KW HJL531.TE-Z8Q5-ebzB46fcbB46-DFYF-VAR
Q65112A7436	KW HJL531.TE-T2T5-ebzB46-DFYF-HAN
Q65112A7647	KW HJL531.TE-T1T4-ebzB46-DFYF-HAN
Q65112A7742	KW HJL531.TE-7Q3-ebvFfcbB46-DFGF-XX
Q65112A8050	KW HJL531.TE-T3T7-fcbB46-DFGF-VL
Q65112A8128	KW HJL531.TE-7Q3-ebxDebzb46-DFGF-KO
Q65111A9197	KW HKL531.TE-8Q7R-ebvF46fcbB46-4LZL
Q65112A4054	KW HKL531.TE-Z8Q7-ebvFfcbB46-4LZL
Q65112A4780	KW HKL531.TE-6R7R-fcbB46-4LZL-HAN
Q65112A5512	KW HKL531.TE-Z6R5-fcbB46-4LZL-XX
Q65112A5920	KW HKL531.TE-6R3-ebxD46ebzB46-4LZL-VAR
Q65112A6130	KW HKL531.TE-6RF3-ebxD46ebzB46-4LZL-ZKW
Q65112A6514	KW HKL531.TE-6R3-ebxD46ebzB46-4LZL-HV
Q65112A6535	KW HKL531.TE-F1F4-fcbB46-4LZL-HAN
Q65112A6722	KW HKL531.TE-6R2-ebxD46ebzB46-4LZL-HV
Q65112A6893	KW HKL531.TE-8Q7R-ebvF46fcbB46-4LZL-KO
Q65112A6971	KW HKL531.TE-6RF3-ebxD46ebzB46-4LQL-NAL
Q65112A7648	KW HKL531.TE-F1F4-ebzB46-4LZL-HAN
Q65112A7998	KW HKL531.TE-F2F6-ebvFebxD46-4LZL-VL
Q65112A8051	KW HKL531.TE-F2F6-fcbB46-4LML-VL
Q65112A8052	KW HKL531.TE-6RF3-ebxD46ebzB46-4LZL-VL
Q65111A9196	KW HLL531.TE-6R6S-ebvF46fcbB46-RS5R
Q65112A1767	KW HLL531.TE-7R5S-ebxD46ebzB46-RS5R-LM
Q65112A3647	KW HLL531.TE-8R5S-ebxD46ebzB46-RSKR-LM
Q65112A4053	KW HLL531.TE-Z6R9-ebvFfcbB46-RS5R
Q65112A5236	KW HLL531.TE-8R3-ebxD46ebzB46-RS5R-XX
Q65112A5564	KW HLL531.TE-Z8RF5-ebxDebzb46-RSKR-XX
Q65112A5921	KW HLL531.TE-8R3-ebxD46ebzB46-RS5R-VAR
Q65112A6129	KW HLL531.TE-8RF3-ebxD46ebzB46-RS5R-ZKW
Q65112A6534	KW HLL531.TE-G1G4-fcbB46-RS5R-HAN

Q65112A8076 KW HLL531.TE-8R3-ebxD46ebvF46-RS5R-HV