

PCN OS-PCN-2021-003-A

Introduction of additional frontend production location Kulim for OSLON Compact PL, OSLON Boost HL and OSRAM OSTAR Projection Compact

OS QM CQM | 01.04.2021

Light is OSRAM





Additional frontend production location Kulim for OSLON Compact PL, OSLON Boost HL and OSRAM OSTAR Projection Compact

Overview

- Secure continuous supply lower risk of allocation
- Increase chip production capacity to meet growing market demand with frontend production at new location Kulim (Malaysia)
- All frontend locations (Regensburg, Penang and additionally Kulim) will be released for finished good assembly.
- Follow Mid-term manufacturing footprint strategy; therefore release of all chip production location sites is necessary to ensure deliveries.
- no change in fit / form / function or reliability





Additional frontend production location Kulim for OSLON Compact PL, OSLON Boost HL and OSRAM OSTAR Projection Compact

Description of change

Current status	New status
Chip production inRegensburg / GermanyPenang / Malaysia	 Chip production in Regensburg / Germany Penang / Malaysia* Kulim / Malaysia



Additional frontend production location Kulim for OSLON Compact PL, OSLON Boost HL and OSRAM OSTAR Projection Compact

Chip Manufacturing

Backend Manufacturing

Epitaxy*

Chip structureing

Probeing and Separation



Electro-optical measurement and generation of wafer map

Regensburg* / Penang / Kulim*

Die Sorting



Pick and place based on wafer map (no additional measurement)

Kulim

Packaging

Final measurement



Electrooptical measurement and binning



Final testing and packing on reel

Penang / Wuxi





Additional frontend production location Kulim for OSLON Compact PL, OSLON Boost HL and OSRAM OSTAR Projection Compact

List of affected products:

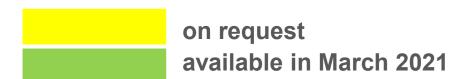
OSLON Compact PL	OSLON Boost HL	OSRAM OSTAR Projection Compact
KY CELNM1.FY	KW CULNM1.TG	KP CSLNM1.F1
KW CELNM1.TG		KB CSLNM1.14
KW2 CFLNM1.TG		KW CSLNM1.TG
KW3 CGLNM1.TG		KY CSLNM1.FY



Additional frontend production location Kulim for OSLON Compact PL, OSLON Boost HL and OSRAM OSTAR Projection Compact

PCN samples:

OSLON Compact PL	OSLON Boost HL	OSRAM OSTAR Projection Compact
KY CELNM1.FY	KW CULNM1.TG	KP CSLNM1.F1
KW CELNM1.TG		KB CSLNM1.14
KW2 CFLNM1.TG		KW CSLNM1.TG
KW3 CGLNM1.TG		KY CSLNM1.FY







Additional frontend production location Kulim for OSLON Compact PL, OSLON Boost HL and OSRAM OSTAR Projection Compact

Qualification test plan for OSRAM OSTAR Projection Compact:

Test device: KB CSLNM1.14

Preconditioning acc. to JEDEC Level 2

Test Performed	C	Conditions	Duration	Sample
Wet High Temperature Operation WHTOL1 JESD2	22-A101 I _F	Ta = 85°C; r.H.= 85% F = 3000mA Ton/off = 30min	1000h	2x26
Temperature Cycling	1	Ta = -40°C/+125°C Smin each extreme	1000c	2x26
TC JESD	22-A104			
Powered Temperature Cycle		Ta = -40°C/+125°C _F = 1500mA	1000c	2x26
PTC JESD2		on/off = 5min		
High Temperature Operating L		Ta =100C _F =3000mA	1000h	2x26
HTOL2 JESD2	?2-A108			

Qualification report available: June 2021





Additional frontend production location Kulim for OSLON Compact PL, OSLON Boost HL and OSRAM OSTAR Projection Compact

Time schedule

for PCN material

(after implementation

of change):

Final qualification report

Available: OSLON Compact

PL/ OSLON Boost HL

June 2021: OSRAM OSTAR

Projection Compact

Samples available

31.03.2021

Intended Start of delivery

01.06.2021*)

 $^{\ast})$ or earlier if released by customer and upon

mutual agreement

for Pre-PCN material

(prior to implementation of change):

Last time order date (LTO)

15.12.2021**)

**) 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) 30.03.2022***

***) 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.





Thank you.



Light is OSRAM



01.04.2021

Dear Customer,

please find attached our OSRAM OS PCN:

OS-PCN-2021-003-A Additional frontend production location Kulim for OSLON Compact PL, OSLON Boost HL and OSRAM OSTAR Projection Compact

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 **07.04.2021**. *)

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.)"

Template revision: 03.03.2015

OS-PCN-2021-003-A Additional frontend production location Kulim for OSLON Compact PL, OSLON Boost HL and OSRAM OSTAR Projection Compact

Subject of change:	Additional frontend production location Kulim for OSLON Compact PL, OSLON Boost HL and OSRAM OSTAR Projection Compact	
Affected products	OSLON Compact PL: KY CELNM1.FY, KW CELNM1.TG, KW2 CFLNM1.TG, KW3 CGLNM1.TG; OSLON Boost HL: KW CULNM1.TG; OSRAM OSTAR Projection Compact: KP CSLNM1.F1, KB CSLNM1.14, KW CSLNM1.TG, KY CSLNM1.FY;	
Reason for change:	Secure continuous supply – lower risk of allocation Increase chip production capacity to meet growing market	
Description of change	Current status: frontend production location Regensburg or Penang	New status: frontend location Regensburg or Penang or Kulim
	For details refer to attached file: 2_CIP_OS-PCN-2021-003-A	
Product identification:	Laser marking / Date code	

Template revision: 03.03.2015

Time schedule for PCN material (after implementation of change):	Final qualification report	Available: OSLON Compact PL/ OSLON Boost HL June 2021: OSRAM OSTAR Projection Compact
	Samples available	31.03.2021
	Intended Start of delivery	01.06.2021 *) *) 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)	15.12.2021 **) **) 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)	30.03.2022 ****) ***) planned last date for delivery of products of current status
Assessment:	No change in fit / form / or reliability	
Documentation:	2_cip_OS-PCN-2021-003-A 3_cip_OS-PCN-2021-003-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

OS-PCN-2021-003-A

Additional frontend production location Kulim for OSLON Compact PL, OSLON Boost HL and OSRAM OSTAR Projection Compact

Please list product(s) affected in your application(s):				
Please check the appropriate box below:				
Approval: We agree with the proposed change and accept start of the shipment upon availability of PCN material.	O Not relevant: Change is not relevant for products in use.			
O Change cannot be accepted:				
 We have objections: 				
 We request following Information: 				
We request following Samples:				
o Expected approval date: dd.mm.yyyy				
O Volume requirements for Pre-PCN material:				
Sender:				
Company:				
Address / Location:				
Signature:	Date:			

Please return this approval form to your Sales partner.

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