Light is OSRAM

OSRAM
Opto Semiconductors

15.12.2020

Dear Customer,

please find attached our OSRAM OS PCN:

OS-PCN-2020-007-A
New Separation Technology for IR Pulsed Laser SPL PL90

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 **20.01.20212**. *)

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-2020-007-A
New Separation Technology for IR Pulsed Laser SPL PL90

Subject of change:	New Separation Technology for IR Pulsed Laser SPL PL90	
Affected products	SPL PL90	
Reason for change:	1. Improved automatization of singulation processes 2.Additional design changes on p-side	
Description of change	Please refer of customer information package 2_cip_OS-PCN-2020-007-A	
Product identification:	Date code	
Time schedule for PCN material (after implementation of change):	Final qualification report	Available
	Long-term monitoring	March 2021
	Samples available	On request from Feb. 2021 onwards
	Intended Start of delivery	30.09.2021 *) *) 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)	30.06.2021 **) **) 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)	29.09.2021 ***) ***) planned last date for delivery of products of current status

Assessment:	No change in mechanical dimensions No change is electro-optical performance No change in reliability
Documentation:	2_cip_OS-PCN-2020-007-A 3_cip_OS-PCN-2020-007-A 4_cip_OS-PCN-2020-007-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-2020-007-A
New Separation Technology for IR Pulsed Lasers
SPL PL90

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	○ **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:**
- ○ **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

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OS-PCN-2020-007-A
New Separation Technology for IR Pulsed Laser SPL PL90

Customer information package

OS QM CQM | 15.12.2020

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New Separation Technology for IR Pulsed Laser SPL PL90

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New Separation Technology for IR Pulsed Laser SPL PL90

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1. Reason for change

Description why change will be introduced

Item	Description
1	Improved automatization of singulation processes
2	Additional design changes on p-side

OS-PCN-2020-007-A

New Separation Technology for IR Pulsed Laser SPL PL90

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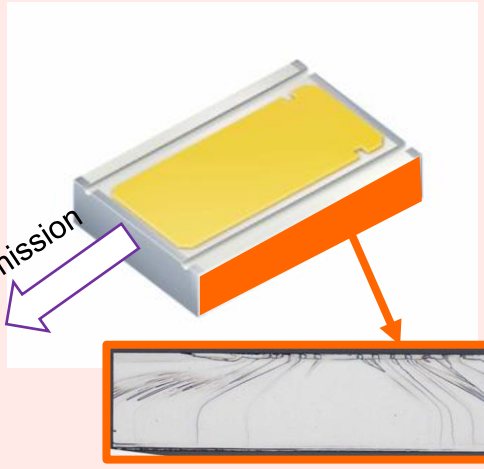
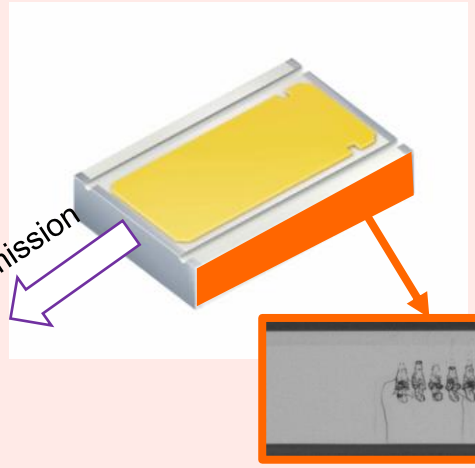
2. Description of change

Item	Current status	New status
1	Visible at both laser bar non facet side Both technologies mixed in production.	
1	 Schematic drawing (front side)	

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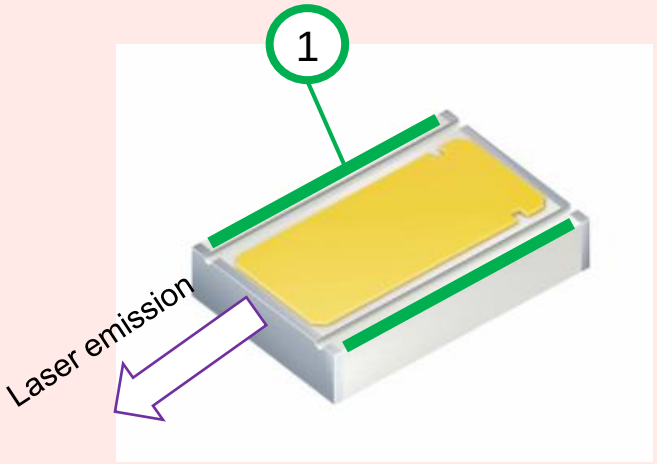
2. Description of change

Item	New status (p-side)
2	**p-side** 1. 10µm back set of passivation at both inactive laser bar sides, semiconductors material is visible. (1) **n-side** no changes
2	 (tolerances for all dimensions +-5µm)

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New Separation Technology for IR Pulsed Laser SPL PL90

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3. Data sheet changes

- No change in mechanical dimensions
- No change is electro-optical performance
- No change in reliability

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4. List of affected products

Device
SPL PL90

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New Separation Technology for IR Pulsed Laser SPL PL90

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5. PCN Samples

Device
On request from Feb. 2021 onwards

available

on request

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6. Qualification Plan

Test vehicle: SPL DS90A_3, mounted in TO56 metal can (SPL UL90AT08) for testing purpose

Test item	Test condition	Test duration	Sample Size
Temperature cycle (TC) *JESD22-A104*	T_{min} = -40°C, T_{max} = 125°C, 15min each extreme	1000c	3x26
Pulse life test (PLT) *JESD22-A108*	T_{amb} = -40°C, I_{pulse} = 50A, t_p = 100ns, DC = 0.2% **(Overstress)**	1000h	3x26
Pulse life test (PLT) *JESD22-A108*	T_{amb} = 105°C, I_{pulse} = 50A, t_p = 100ns, DC = 0.1% **(Overstress)**	1000h	3x26

Remark: Introduction of pioneering technology platform is supported by exclusive non-standard long-term monitoring up to 8000h.

- Qualification available
- Interim long-term monitoring results available
  Final 8000h monitoring data are scheduled for March 2021

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7. Time schedule

Time schedule for PCN material (after implementation of change):	Final qualification report	Available
	Long-term monitoring	March 2021
	Samples available	On request from Feb. 2021 onwards
	Intended Start of delivery	30.09.2021 *)

*) 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)	30.06.2021 **)
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Thank you.