Light is OSRAM

OSRAM
Opto Semiconductors

03.12.2018

Dear Customer,

please find attached our OSRAM OS PCN:

OS-PCN-2018-027-A
Introduction of next generation High Power Thinfilm chips in OSRAM OSTAR Projection packages

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 **15.01.2019**. *)

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-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.)"

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Subject of change:	Introduction of next generation High Power Thinfilm chips	
Affected products:	LE A P1W LE A P2W LE A P2W.01 LE A P3W.01	LE A Q7WP LE A Q8WP LE R Q8WP
Reason for change:	Brightness increase	
Description of change:	Optimization of intrinsic chip design	
Product identification:	Date code / Laser marking	
Time schedule for PCN material (after implementation of change):	Final qualification report	available
	Samples available	yes
	Intended Start of delivery	01.03.2019 *) *) 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)	01.09.2019 **) **) 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)	01.03.2020 ***) ***) planned last date for delivery of products of current status
Assessment:	No change in outer chip dimension, appearance or reliability	
Documentation:	Customer information package Qualification report	

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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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.

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www.osram-os.com

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Customer information package

OS QM CQM | 03.12.2018

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Introduction of next generation High Power Thinfilm chips

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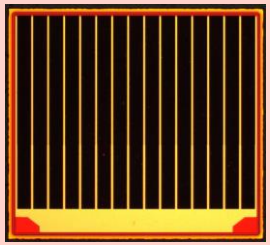
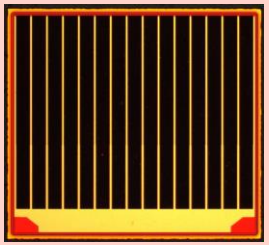
Reason for change

- Brightness increase

Description of change

- Optimization of intrinsic chip design
- No change in outer chip dimension, appearance or reliability

	Current status	New status
Picture (exemplary)		
Height	120µm	120µm
Wafer diameter	150 mm (6“)	150 mm (6“)
Carrier	Si	Si

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List of affected products

OSRAM OSTAR Projection Power	OSRAM OSTAR Projection Compact
LE A P1W	LE A Q7WP
LE A P2W	LE A Q8WP
LE A P2W.01	LE R Q8WP
LE A P3W.01	

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PCN Samples

OSRAM OSTAR Projection Power	OSRAM OSTAR Projection Compact
LE A P1W	LE A Q7WP
LE A P2W	LE A Q8WP
LE A P2W.01	LE R Q8WP
LE A P3W.01	

available

on request

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Changes in the datasheets:

Updated Datasheet Versions

Product type	Data sheet version before PCN	Data sheet version after PCN
LE A P1W	1.11	1.12
LE A P2W	2.8	1.9
LE A P2W.01	1.2	1.3
LE A P3W.01	1.0	1.1
LE A Q7WP	1.6	1.7
LE A Q8WP	1.8	1.9
LE R Q8WP	1.2	1.3

For additional information regarding the changes please refer to the next pages.

Note: After PCN approval and shipment of new material, the new data sheet versions will be valid. Latest version of data sheet is accessible on OSRAM OS homepage.

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Changes in the datasheets:

Updated brightness binning (1/6 grouping) for following devices

Before PCN

LE A P1W		
RX	1120	1300
RY	1300	1500
RZ	1500	1800

LE A P2W		
SY	2100	2400
SZ	2400	2800
TX	2800	3300

LE A P3W 01		
TX	2800	3300
TY	3300	3900
TZ	3900	4500
UX	4500	5200

After PCN

LE A P1W		
RS	1400	1500
RT	1500	1640
RU	1640	1800

LE A P2W		
SU	2590	2800
TP	2800	3040
TQ	3040	3300

LE A P3W 01		
TT	3900	4190
TU	4190	4500
UP	4500	4840
UQ	4840	5200

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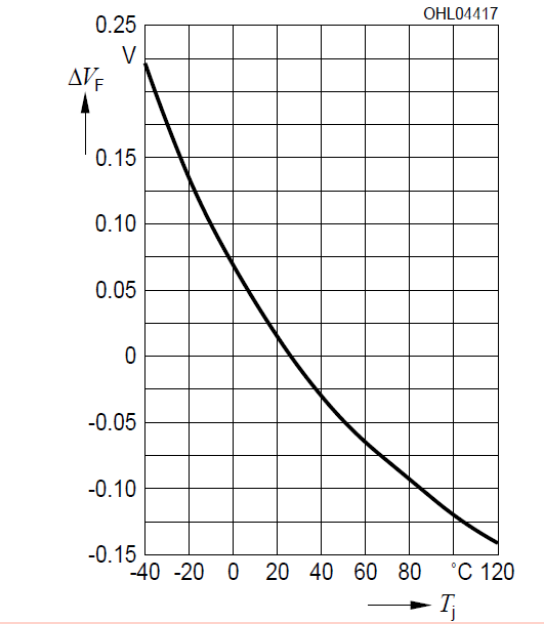
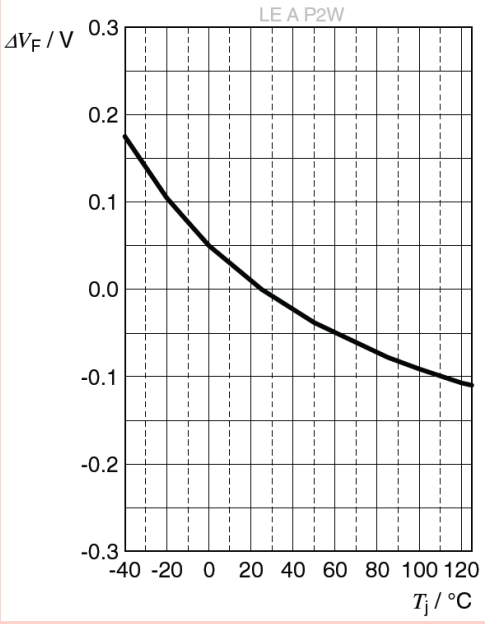
Changes in the datasheets: Exemplary data for LE A P2W

Relative Forward Voltage
Relative Vorwärtsspannung
$\Delta V_F = V_F - V_F(25\ °C) = f(T_j)$; I_F = 24000 mA; all dies operated in parallel

Before PCN	After PCN
	

Note: Characteristic curves in all datasheets have been updated. Please review new datasheets for further details/changes.

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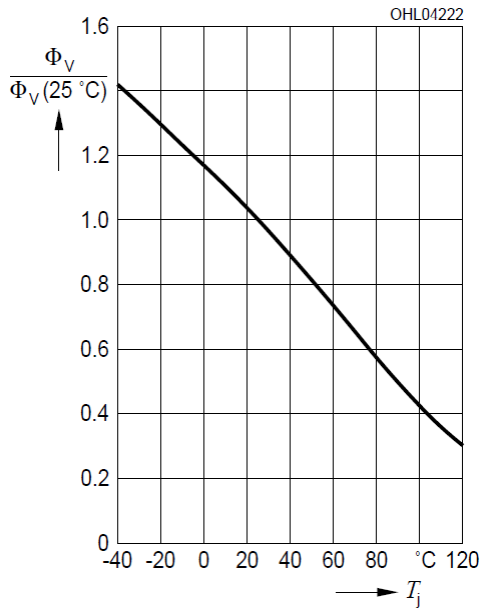
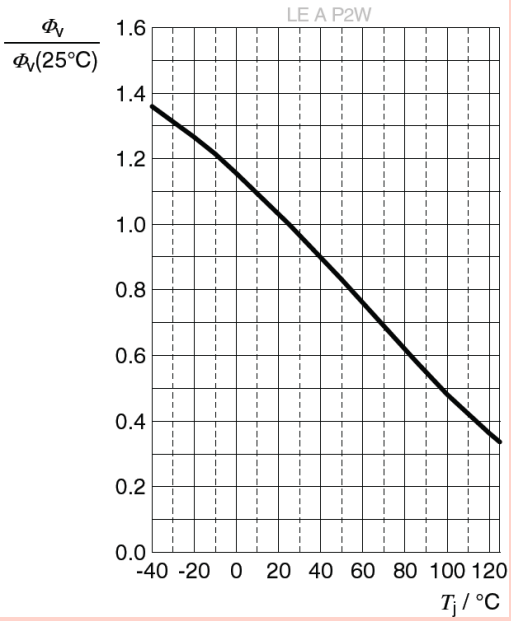
Changes in the datasheets: Exemplary data for LE A P2W

Relative Luminous Flux
Relativer Lichtstrom
$\Phi_V/\Phi_V(25\ °C) = f(T_j)$; I_F = 24000 mA; all dies operated in parallel

Before PCN	After PCN
	

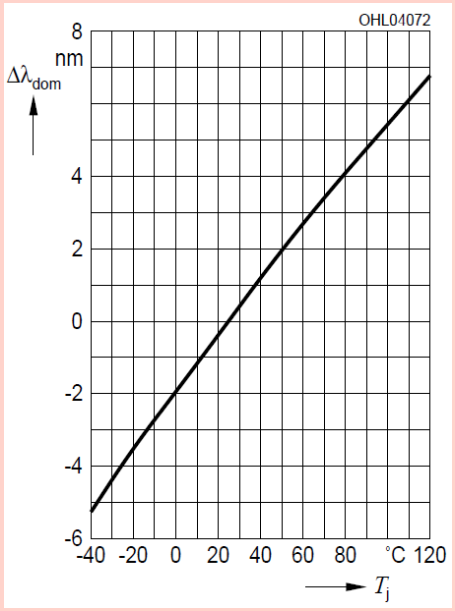
Note: Characteristic curves in all datasheets have been updated. Please review new datasheets for further details/changes.

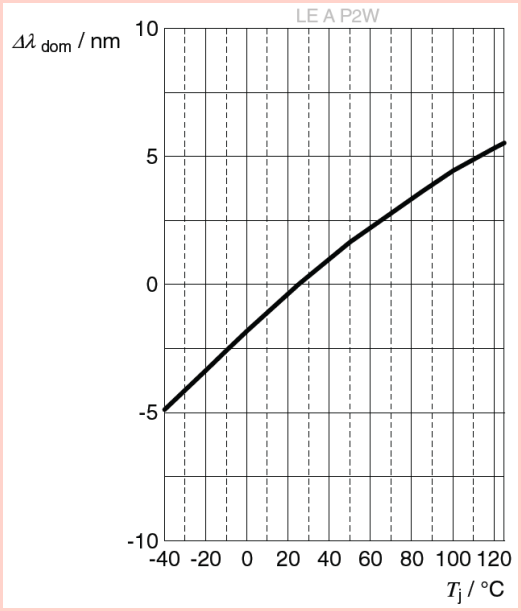
Changes in the datasheets: Exemplary data for LE A P2W

Dominant Wavelength
Dominante Wellenlänge

$\Delta\lambda_{dom} = \lambda_{dom} - \lambda_{dom}$ (25 °C) = f(T_j); I_F = 24000 mA;
all dies operated in parallel

Before PCN	After PCN





Note: Characteristic curves in all datasheets have been updated. Please review new datasheets for further details/changes.

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Time schedule

for <u>PCN material</u> (after implementation of change):	Final qualification report	available
	Samples available	yes
	Intended Start of delivery	01.03.2019 *)

*) or earlier if released by customer and upon mutual agreement

for <u>Pre-PCN material</u> (prior to implementation of change):	Last time order date (LTO)	01.09.2019 **)
	Last time delivery date (LTD)	01.03.2020 ***)

**) expected approval date needs to be available at this time. Lead time and LTO quantity shall be mutually agreed between OSRAM OS and customer.

***) planned last date for delivery of products of current status

<u>Note:</u>

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.

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Thank you.

Products Affected by Product Change Notification

Number: *OS-PCN-2018-027-A*

Name: *Introduction of next generation High Power Thinfilm chips in OSRAM OSTAR Projection packages*

Release Date: *12/3/2018*

Response Due Date: *1/15/2019*

Implementation Date: *9/1/2019*

Product	*QNumber*	*QNumber Description*	*Part Number*
LE A P1W	Q65111A4722	LE A P1W-QZRY-1-0-F00-T01	LE A P1W-QZRY-1
	Q65111A8292	LE A P1W-RXRZ-23-0-F00-T01	LE A P1W-RXRZ-23
LE A P2W	Q65111A4305	LE A P2W-SXTX-1-0-F00-T01	LE A P2W-SXTX-1
	Q65111A8291	LE A P2W-SYTX-23-0-F00-T01	LE A P2W-SYTX-23
	Q65111A8691	LE A P2W-SUTQ-2-0-F00-T01-XX	LE A P2W-SUTQ-2-T01-XX
LE A P2W 01	Q65111A6509	LE A P2W 01-SXTX-1-0-F00-T01	LE A P2W 01-SXTX-1
	Q65111A8224	LE A P2W 01-SYTX-23-0-F00-T01	LE A P2W 01-SYTX-23
LE A P3W 01	Q65111A8264	LE A P3W 01-TXUX-23-0-F00-T01	LE A P3W 01-TXUX-23
	Q65112A0354	LE A P3W 01-TXTY-3-0-F00-T01-LM	LE A P3W 01-TXTY-3-LM
LE A Q7WP	Q65111A4457	LE A Q7WP-MZNZ-1-0-A40-R18-Z	LE A Q7WP-MZNZ-1
	Q65111A5467	LE A Q7WP-NYNZ-1-0-A40-R18-Z	LE A Q7WP-NYNZ-1
	Q65111A7611	LE A Q7WP-NXNZ-2-0-A40-R18-Z-LM	LE A Q7WP-NXNZ-2-LM
	Q65111A8289	LE A Q7WP-NXPX-23-0-A40-R18-Z	LE A Q7WP-NXPX-23
	Q65111A9334	LE A Q7WP-NYPX-23-0-A40-R18-Z-XX	LE A Q7WP-NYPX-23-XX
	Q65112A1299	LE A Q7WP-NXNZ-23-0-A40-R18-XX	LE A Q7WP-NXNZ-23-XX
LE A Q8WP	Q65111A4458	LE A Q8WP-LYMX-1-0-A40-R18-Z	LE A Q8WP-LYMX-1
	Q65111A5466	LE A Q8WP-LZMX-1-0-A40-R18-Z	LE A Q8WP-LZMX-1-Z
	Q65111A7392	LE A Q8WP-MXMY-1-0-A40-R18-Z	LE A Q8WP-MXMY-1
	Q65111A8095	LE A Q8WP-LYMY-23-0-A40-R18-ZI6	LE A Q8WP-LYMY-23
	Q65112A0045	LE A Q8WP-MXMY-23-0-A40-R18-ZI-XX	LE A Q8WP-MXMY-23-ZI-XX
LE R Q8WP	Q65111A8429	LE R Q8WP-KBMA-34-0-A40-R18-Z	LE R Q8WP-KBMA-34