PCN

AO-PCN-2025-046-A1

Introduction of next blue chip generation for LED Engin devices

Published by ams-OSRAM AG
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01.10.2026

Dear Customer,

please review this **PCN** and provide your feedback in the **Customer approval form** (at the end of this PCN document) to your ams OSRAM sales partner before **07.11.2026** *).

Your prompt reply will help ams OSRAM to assure a smooth and well executed transition. If ams OSRAM 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.

ams OSRAM understands the time requirements your organization needs to approve this PCN.
However, if you can provide ams OSRAM an estimated date your organization will have finalized this PCN review, ams OSRAM can use this date to plan continued production to secure your order needs during the transition time.

Your attention and response to this matter is highly appreciated.

Please direct your inquiries to your local Sales office.

*) ams OSRAM aligns with the widely recognized JEDEC/ECIA/IPC Joint Standard No. 46, 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. If the customer requires additional time to perform sample testing, beyond the 90 day review period, an extension must be negotiated with the supplier.

Subject of change:	Introduction of next blue chip generation for LED Engin devices	
Affected products:	LZ1-00DB00, LZ1-10DB00	
Reason for change:	Performance improvement Secure continuous supply	
Description of change:	Current status Current Chip appearance Current Characteristics Current polarity	New status Increased Brightness New Chip appearance Adapted Characteristics New polarity
	For details refer to document 2_cip_AO-PCN-2025-046-A1	
Product identification:	Date code	
Time schedule for PCN material: (after implementation of change):	Final qualification report:	01.05.2025
	Samples available:	On request
	Intended Start of delivery:	01.10.2026*) *) or earlier if released by customer and upon mutual agreement
Assessment:	**No change in fit**	
Documentation:	Customer information package 2_cip_AO-PCN-2025-046-A1 Customer Qualification Report 3_qual_AO-PCN-2025-046-A1	

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
AO-PCN-2025-046-A1

Introduction of next blue chip generation for LED Engin devices

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:**

○ **Remarks:**

Sender:

Company:

Address / Location:

Signature: **Date:**

Please return this approval form to your Sales partner.

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PCN
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Customer information package

OS OSQ Q CQM ICI
2026-10-01

Agenda

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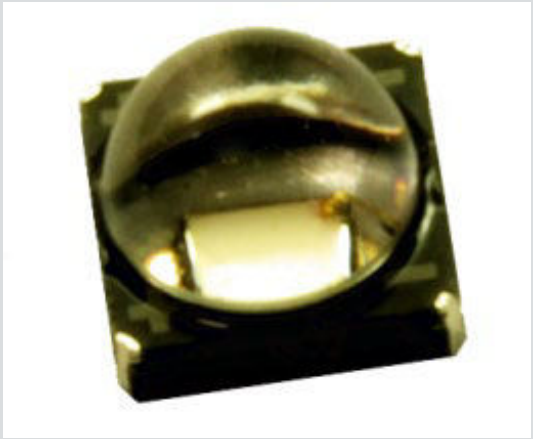
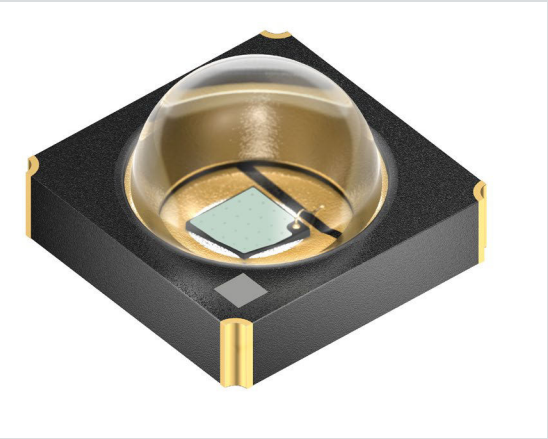
AO-PCN-2025-046-A1
Introduction of next blue chip generation for LED Engin devices

Reason for change

Item	Description
1.	Performance improvement
2.	Secure continuous supply

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Description of change

Item	Current status	New status
1.	Current blue LED Chip	New blue LED Chip
2.	Current Chip appearance 	New Chip appearance 
3.	Current polarity	New polarity

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Changes in the datasheets: The displayed changes below are for LZ1-00DB00 as example.

Regarding details for LZ1-10DB00 please refer to the updated datasheet.

Item	Current status	New status
Characteristics: Typical total radiant flux and Forward Voltage	**Characteristics** I_F = 1000 mA; T_C = 25 °C Parameter / Symbol / Values Total radiant flux [4] — Φ_E — typ. 1100 mW Peak Wavelength [5] I_F = 1000 mA — λ_{peak} — min. 457 nm, typ. 460 nm, max. 463 nm Viewing angle at 50% I_V — 2φ — typ. 80 ° Forward Voltage [6][4] I_F = 1000 mA — V_F — min. 3.20 V, typ. 3.30 V, max. 4.40 V Reverse current [3] — I_R — Not designed for reverse operation Electrical thermal resistance junction/case — $R_{thJC\ elec.}$ — typ. 4.2 K / W	**Characteristics** I_F = 1000 mA; T_C = 25 °C Parameter / Symbol / Values Total radiant flux [4] — Φ_E — typ. 1500 mW Peak Wavelength [5] I_F = 1000 mA — λ_{peak} — min. 457 nm, typ. 460 nm, max. 463 nm Viewing angle at 50% I_V — 2φ — typ. 80 ° Forward Voltage [6][4] I_F = 1000 mA — V_F — min. 2.70 V, typ. 3.19 V, max. 3.90 V Reverse current [3] — I_R — Not designed for reverse operation Electrical thermal resistance junction/case — $R_{thJC\ elec.}$ — typ. 4.2 K / W

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Changes in the datasheets: The displayed changes below are for LZ1-00DB00 as example.

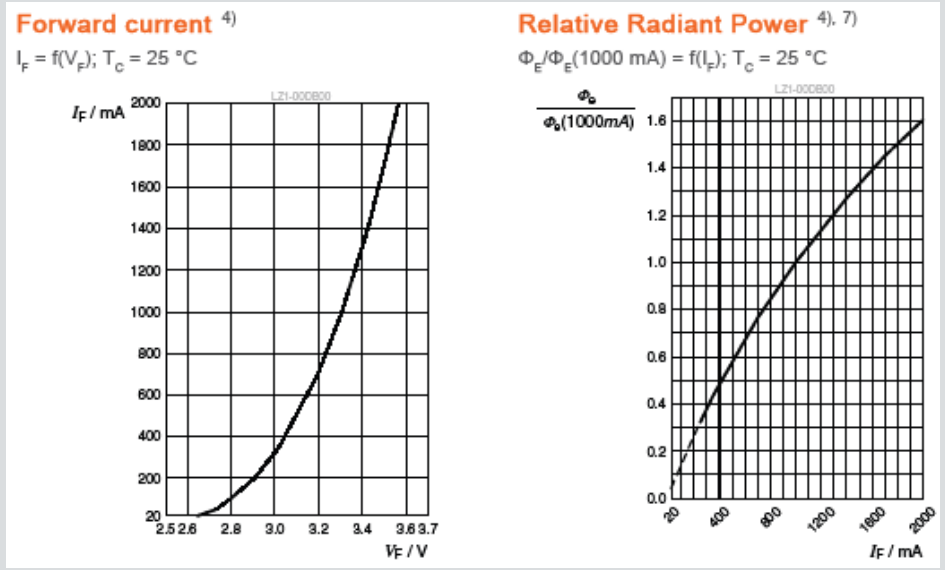
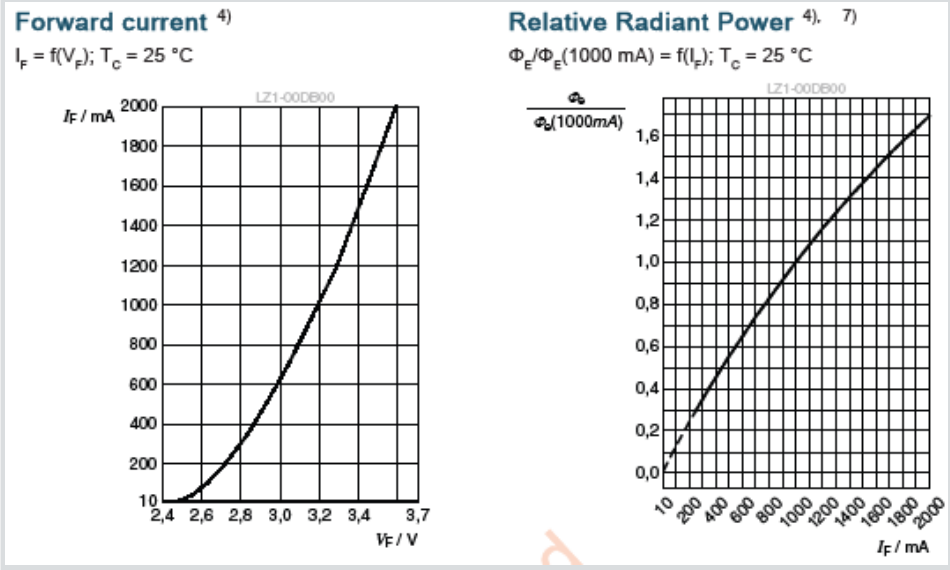
Regarding details for LZ1-10DB00 please refer to the updated datasheet.

Item	Current status	New status
Increased Brightness	**Brightness Groups** Group / Total radiant flux [1] I_F = 1000 mA min. Φ_E / Total radiant flux [1] I_F = 1000 mA max. Φ_E L: 800 mW – 1000 mW M: 1000 mW – 1250 mW	**Brightness Groups** Group / Total radiant flux [1] I_F = 1000 mA min. Φ_E / Total radiant flux [1] I_F = 1000 mA max. Φ_E N: 1250 mW – 1600 mW P: 1600 mW – 2000 mW

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Changes in the datasheets: The displayed changes below are for LZ1-00DB00 as example.

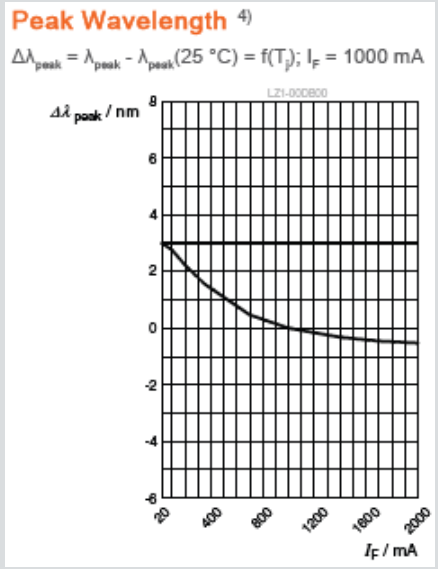
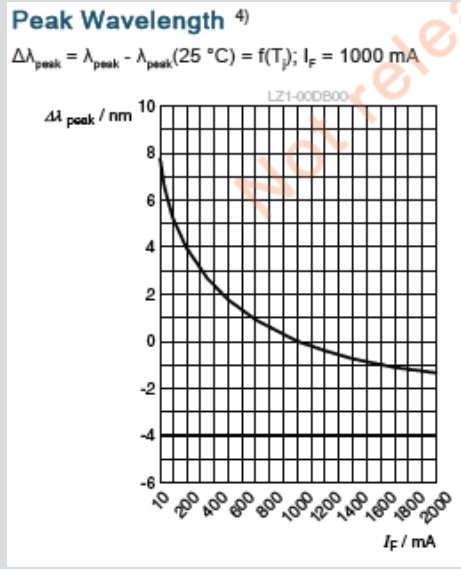
Regarding details for LZ1-10DB00 please refer to the updated datasheet.

Item	Current status	New status
Forward current & Relative Radiant Power		

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Changes in the datasheets: The displayed changes below are for LZ1-00DB00 as example.

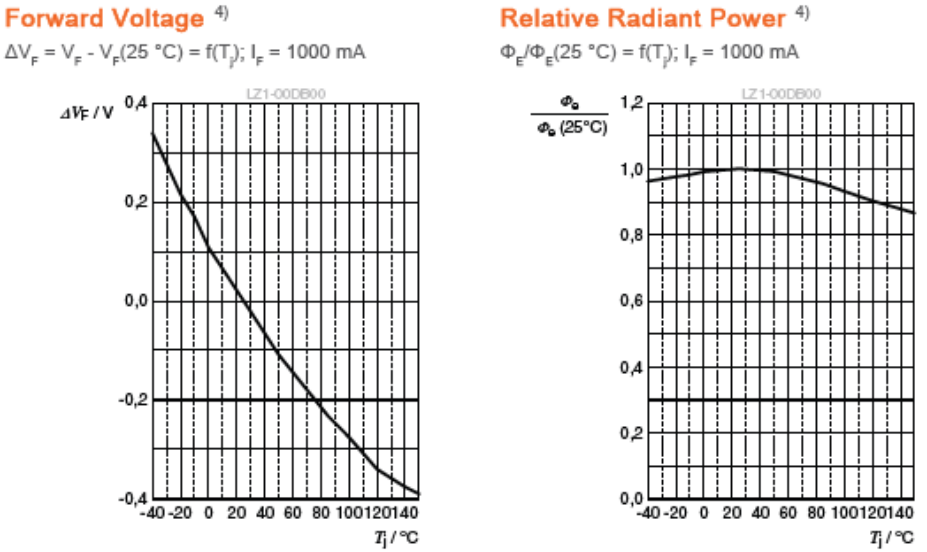
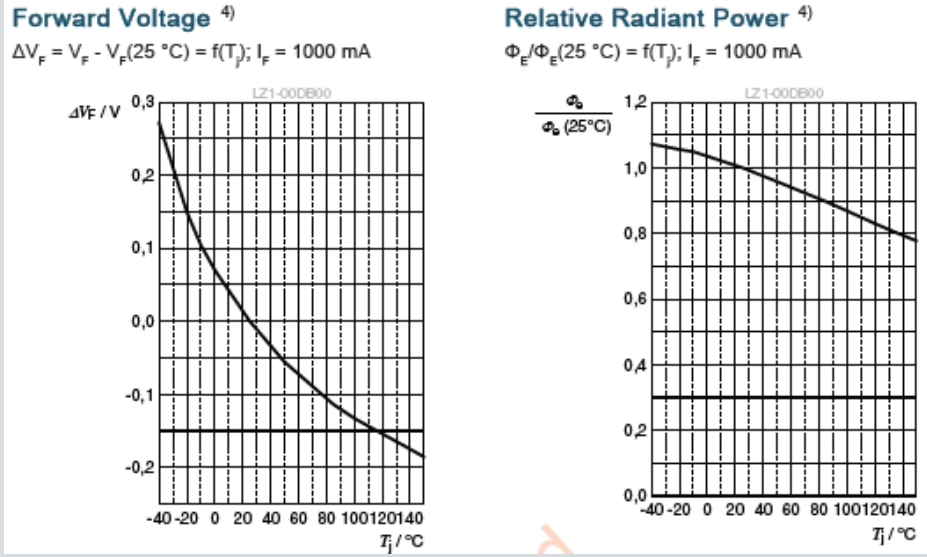
Regarding details for LZ1-10DB00 please refer to the updated datasheet.

Item	Current status	New status
Peak Wavelength		

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Changes in the datasheets: The displayed changes below are for LZ1-00DB00 as example.

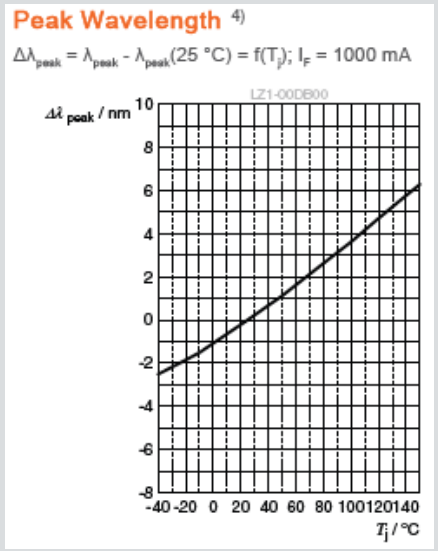
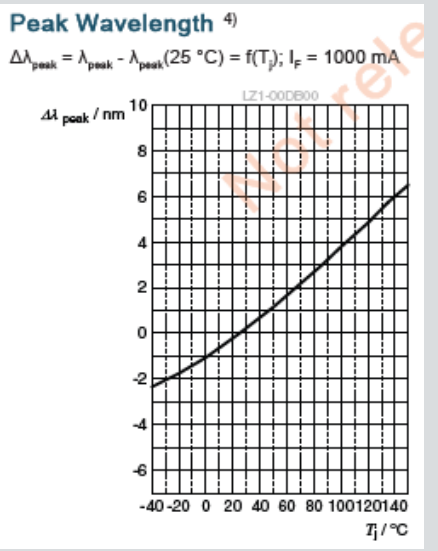
Regarding details for LZ1-10DB00 please refer to the updated datasheet.

Item	Current status	New status
Forward Voltage & Relative Radiant Power		

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Changes in the datasheets: The displayed changes below are for LZ1-00DB00 as example.

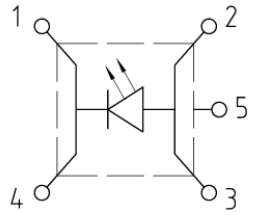
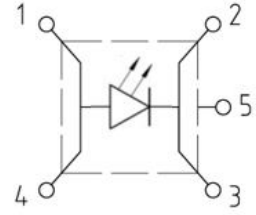
Regarding details for LZ1-10DB00 please refer to the updated datasheet.

Item	Current status	New status
Peak Wavelength		

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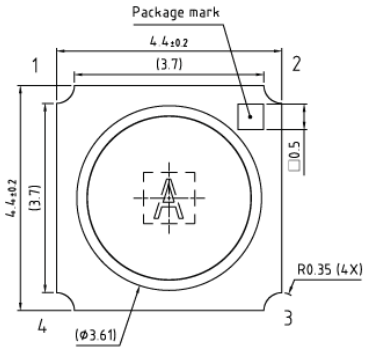
Changes in the datasheets: The displayed changes below are for LZ1-00DB00 as example.

Regarding details for LZ1-10DB00 please refer to the updated datasheet.

Item	Current status	New status
Electrical Internal Circuit	Electrical Internal Circuit Pin Out Pad / Function 1 Cathode 2 Anode 3 Anode 4 Cathode 5 Thermal 	Electrical Internal Circuit Pin Out Pad / Function 1 Anode 2 Cathode 3 Cathode 4 Anode 5 Thermal 

Note: In order to use the new package with changed polarity on an already existing printed circuit board, please consider the following. Pin 1 and 4 have the same polarity. Pin 2 and 3 have the same polarity.

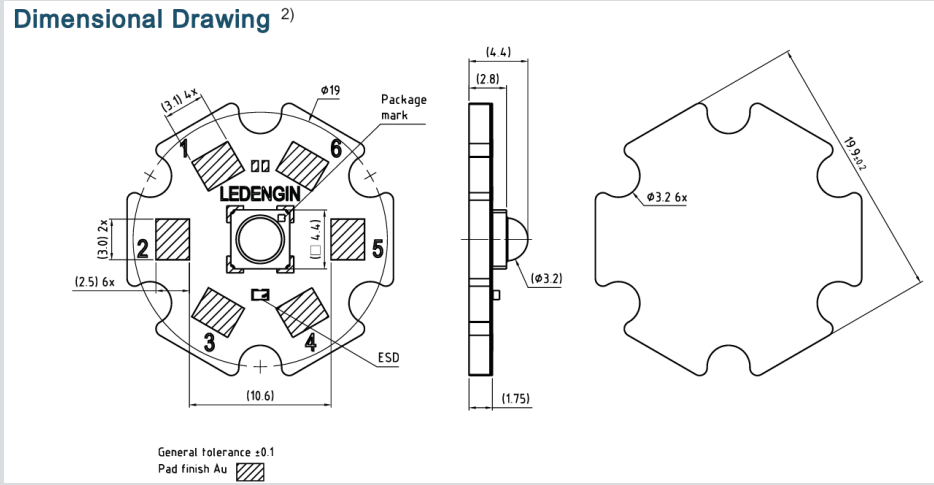
Rotating the package by 180° for assembly allows for polarity swapping without the need for a board re-design.

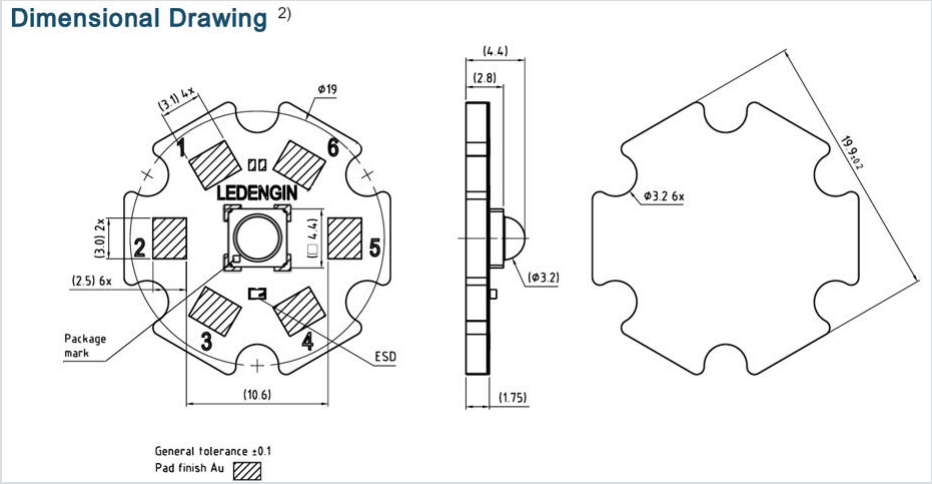


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Changes in the datasheets: The displayed changes in the Dimensional Drawing below are for LZ1-10DB00 as example. For more information, please refer to the updated datasheet.

Item	Current status	New status
Dimensional Drawing	Current location of Package mark	New location of Package mark





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Changes in the datasheets: Updated Datasheet Version

Product type	Data sheet version before PCN	Data sheet version after PCN
LZ1-00DB00	1.7	1.8
LZ1-10DB00	1.1	1.2

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 the ams OSRAM homepage.

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List of affected products

LED ENGIN LuxiGen®
LZ1-00DB00
LZ1-10DB00

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PCN Samples

LED ENGIN LuxiGen®
LZ1-00DB00
LZ1-10DB00

Color code: available on request

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Time schedule

for PCN material (after implementation of change):		
Final qualification report	01.05.2025	
Samples available	On Request	
Intended Start of delivery	01.10.2026*)	*) or earlier if released by customer and upon mutual agreement

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.

Sensing is life



Qualification Report 250139C1

Subject	Qualification report for LED ENGIN LuxiGen® devices according to AO-PCN-2025-046-A
Date	23.04.2025
Tested device	LZ1-00DB00
Brand (including sub brands)	LED ENGIN LuxiGen®
Applies to	LZ1-00DB00, LZ1-10DB00

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Phone +43 3136 500-0
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Pre-conditioning according to Jedec Level I

Test Performed	Condition	Duration	Sample Size	Failures El.	Opt.	Vis
Wet High Temperature Operating Life WHTOL *JESD22-A101*	T_A = 85°C; r.H.= 85% I_F = 1200mA Ton/off=30min	1000h	1x20 1x24	0	0	0
High Temperature Operating Life HTOL *JESD22-A108*	T_A = 100°C I_F = 1200mA	1000h	1x20 1x24	0	0	0
Temperature Cycling TC *JESD22-A104*	T_A = -40°C/+125°C 15min each extreme	1000c	1x20 1x24	0	0	0

Note:

Lot A: Control Lot; Lot B: Evaluation

Acceptance limit:

Electrical failures:	V_f (I_f =1000mA)	± 10% of initial value
Optical failures:	I_e (I_f =1000mA)	± 30% of initial value
Visual failures:	acc. JEDEC JESD22-B101	

Conclusion: The tested devices fulfill the reliability requirements.

Disclaimer

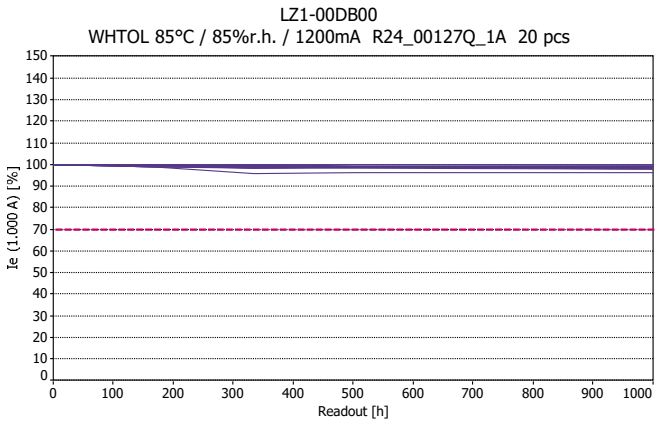
PLEASE CAREFULLY READ THE BELOW TERMS AND CONDITIONS BEFORE USING THE INFORMATION.
IF YOU DO NOT AGREE WITH ANY OF THESE TERMS AND CONDITIONS, DO NOT USE THE INFORMATION.

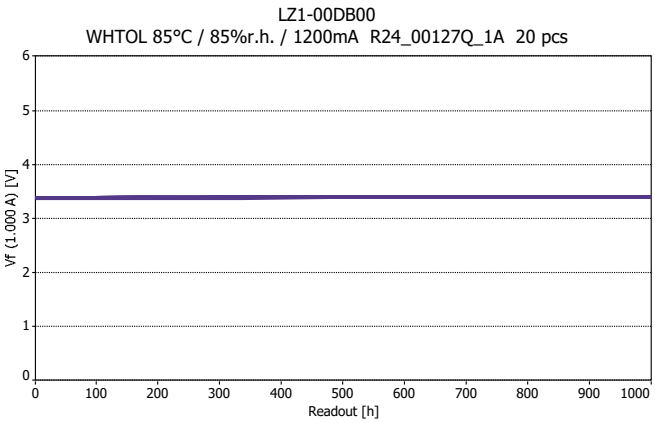
The Information contained in this Document does not constitute an independent warranty. The committed behavior is described in the Product data sheet and/or further, mutually agreed specifications.
Distribution of part or all of the contents of this Document to any 3rd party in any form without the prior permission of ams-OSRAM International GmbH is prohibited except in accordance with applicable mandatory law.

Further explanations:
Data: The Data used in this Document consider the reliability test results under the mentioned driving conditions only. For Product information on the maximum operating conditions and the OSRAM standard qualification profile please refer to the Product data sheet or contact your local sales partner.
Conditions: The conditions for the generation of the Data are as follows:
1. The Data and curves shown in this Document are based on experiments carried out under laboratory conditions on a random sample size of LED/IRED/Laser/Detector with readouts at discrete readout times (where applicable). Thus, the Data above represent a limited number of production lots only and may differ between different assembly lots over time (including chip or package changes). Thus, the behavior of the LED/IRED/Laser/Detector in the final application may differ from the Data. The behavior of the LED/IRED/Laser/Detector at conditions or readout times deviating from those stated above may not be deduced from the Data.
2. If applicable:
    a) Extended driving conditions:
    The tested driving conditions exceed the maximum limits stated in the Product data sheet. Therefore, a reduced lifetime or an accelerated degradation is expected. Failure limits noted in the Document refer to the testing condition according to the OSRAM standard Product qualification profile and not to the actual testing condition.
    b) Extended testing duration:
    The testing duration exceed the OSRAM standard qualification profile of the mentioned Product. Failure limits noted in the Document refer to the testing duration according to the OSRAM standard Product qualification profile and not to the actual testing duration.
    c) Exceeding standard qualification conditions – (Product data sheet limits not affected):
    The tested driving conditions exceed the OSRAM standard qualification profile of the mentioned Product. Therefore a reduced lifetime or an accelerated degradation is expected. Failure limits noted in the Document refer to the testing condition according to the OSRAM standard Product qualification profile and not to the actual testing condition.
3. For long term operation additional failure modes of the chip or package can occur which are not shown in this Document.
4. Possible differences in the thermal management of OSRAM and customer's setup may lead to a different aging behavior.

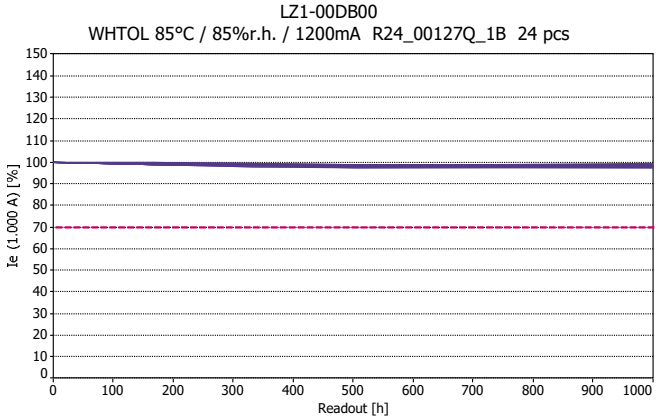
WHTOL 85°C/85% r.H; 1200mA

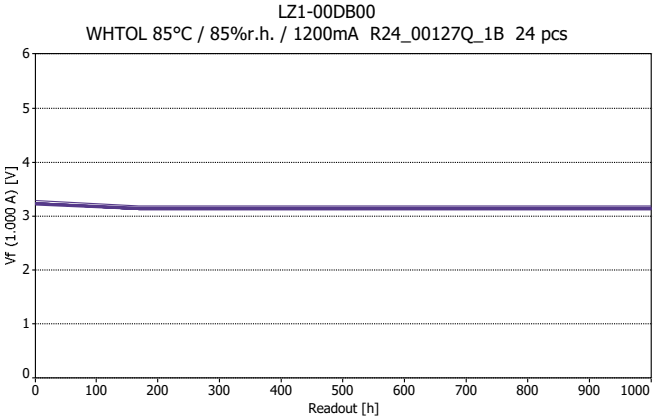
Lot A





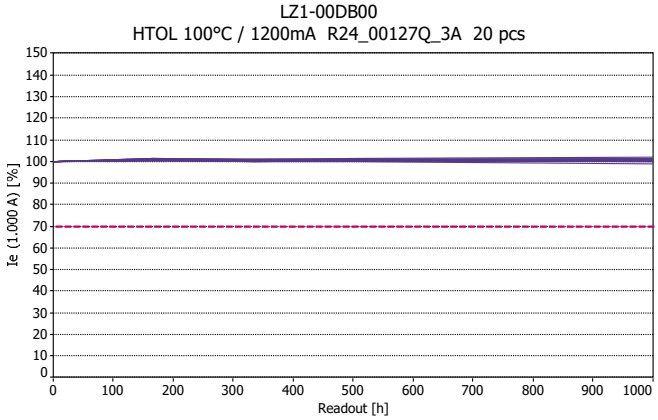
Lot B

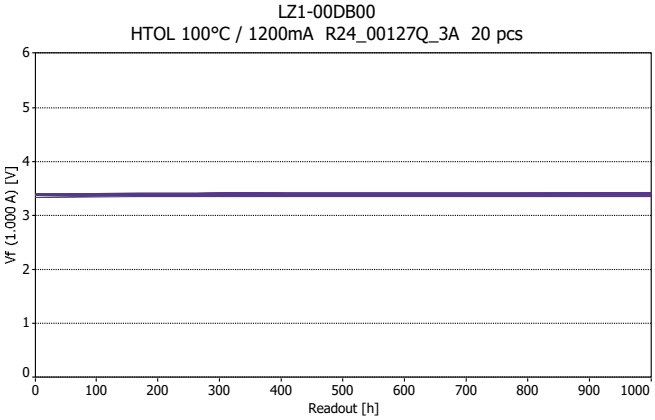




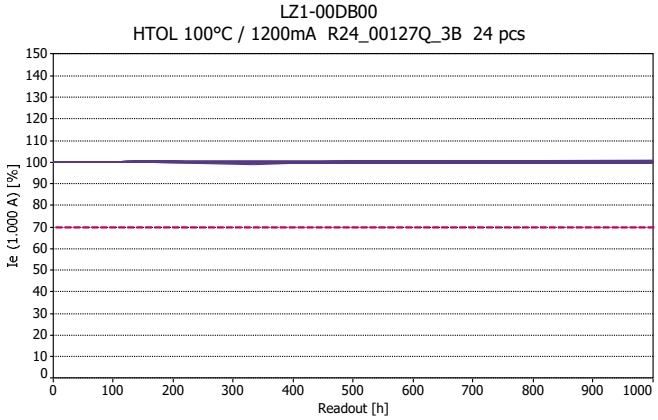
HTOL T = 100°C; I = 1200mA

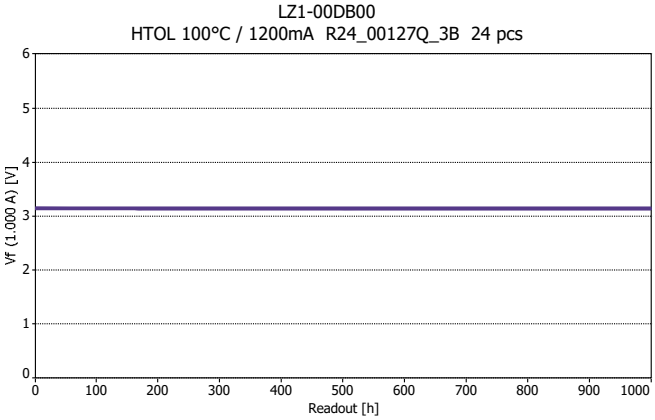
Lot A





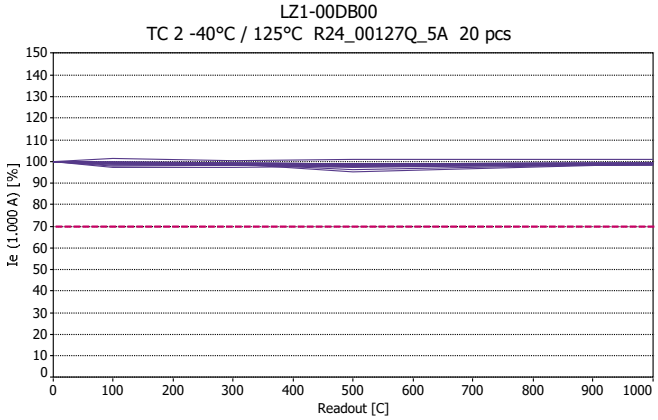
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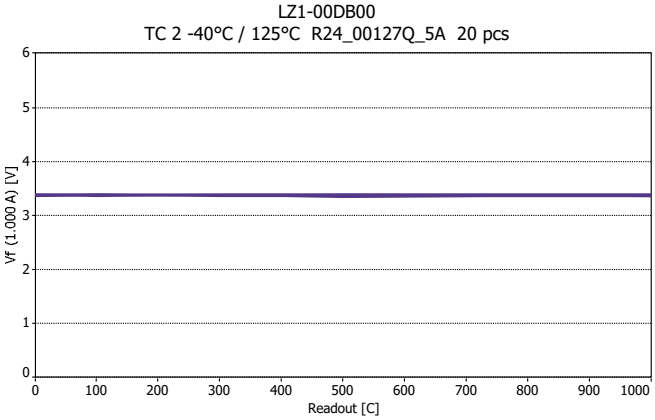




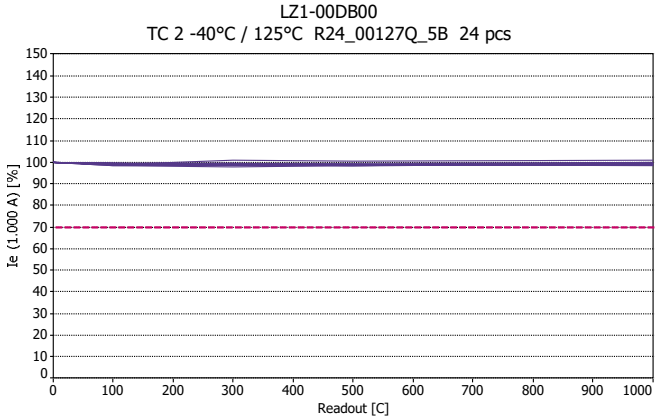
TC -40°C/125°C

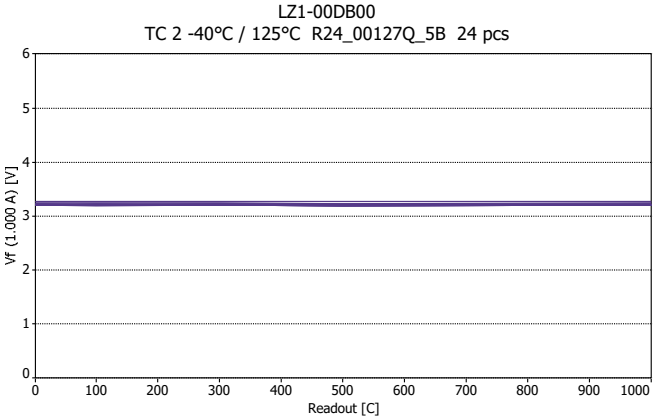
Lot A





Lot B





END OF DOCUMENT

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