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OS-PCN-2019-009-A

**Introduction of next generation High Power Thinfilm
and UX:3 chips in OSRAM OSTAR Projection compact
and Stage packages**

Customer information package

OS QM CQM | 15.05.2019

Light is OSRAM

OSRAM
Opto Semiconductors

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Introduction of next generation High Power Thinfilm and UX:3 chips in OSRAM OSTAR Projection compact and Stage packages



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Reason for change Thinfilm chips

- Brightness increase

Description of change Thinfilm chips

- 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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Reason for change UX:3 chips

- Brightness increase
- Quality improvement due to adapted design

Remarks:

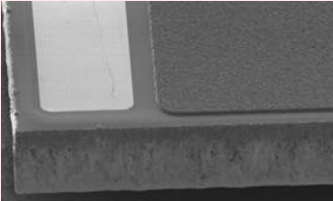
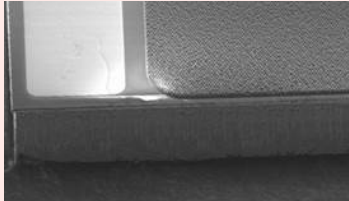
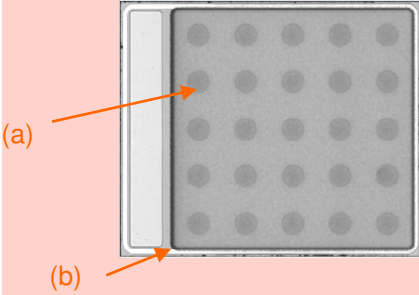
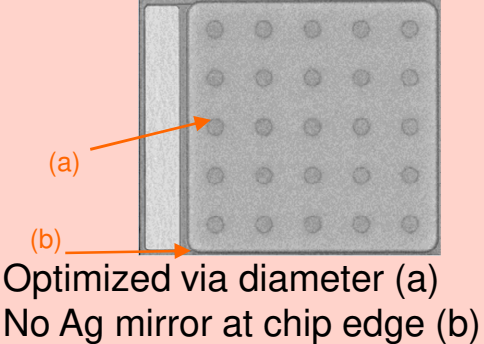
- LEDs with old and new chips are considered mixable in application
- no change in fit / form / function or reliability

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Description of change UX:3 chips:

Change item	Current status	New status
Chip singulation technology	 Laser dicing	 Plasma dicing
Chip design improvements		 Optimized via diameter (a) No Ag mirror at chip edge (b)
Chip dimension [μm]	1000 x 1200 x 120	1000 x 1200 x 120

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List of affected products

OSRAM OSTAR Projection compact	OSRAM OSTAR Stage
KP CSLNM1.F1) ¹	LE RTDUW S2WN) ^{1,2}
KW CSLNM1.TG) ¹	LE RTDUW S2WP) ²
KB CSLNM1.14) ¹	LE RTDCY S2WN) ^{1,2}
KR CSLNM1.23) ²	

1: Introduction of UX:3 chip

2: Introduction of Thinfilm chip

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PCN Samples

OSRAM OSTAR Projection compact	OSRAM OSTAR Stage
KP CSLNM1.F1	LE RTDUW S2WN
KW CSLNM1.TG	LE RTDUW S2WP
KB CSLNM1.14	LE RTDCY S2WN
KR CSLNM1.23	



available



on request

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Changes in the datasheets:

Updated Datasheet Version

Product type	Data sheet version before PCN	Data sheet version after PCN
KP CSLNM1.F1	1.7	No change in DS
KW CSLNM1.TG	1.2	No change in DS
KB CSLNM1.14	1.7	No change in DS
KR CSLNM1.23	1.5	1.6
LE RTDUW S2WN	1.5	1.6
LE RTDUW S2WP	1.8	1.9
LE RTDCY S2WN	1.6	1.7

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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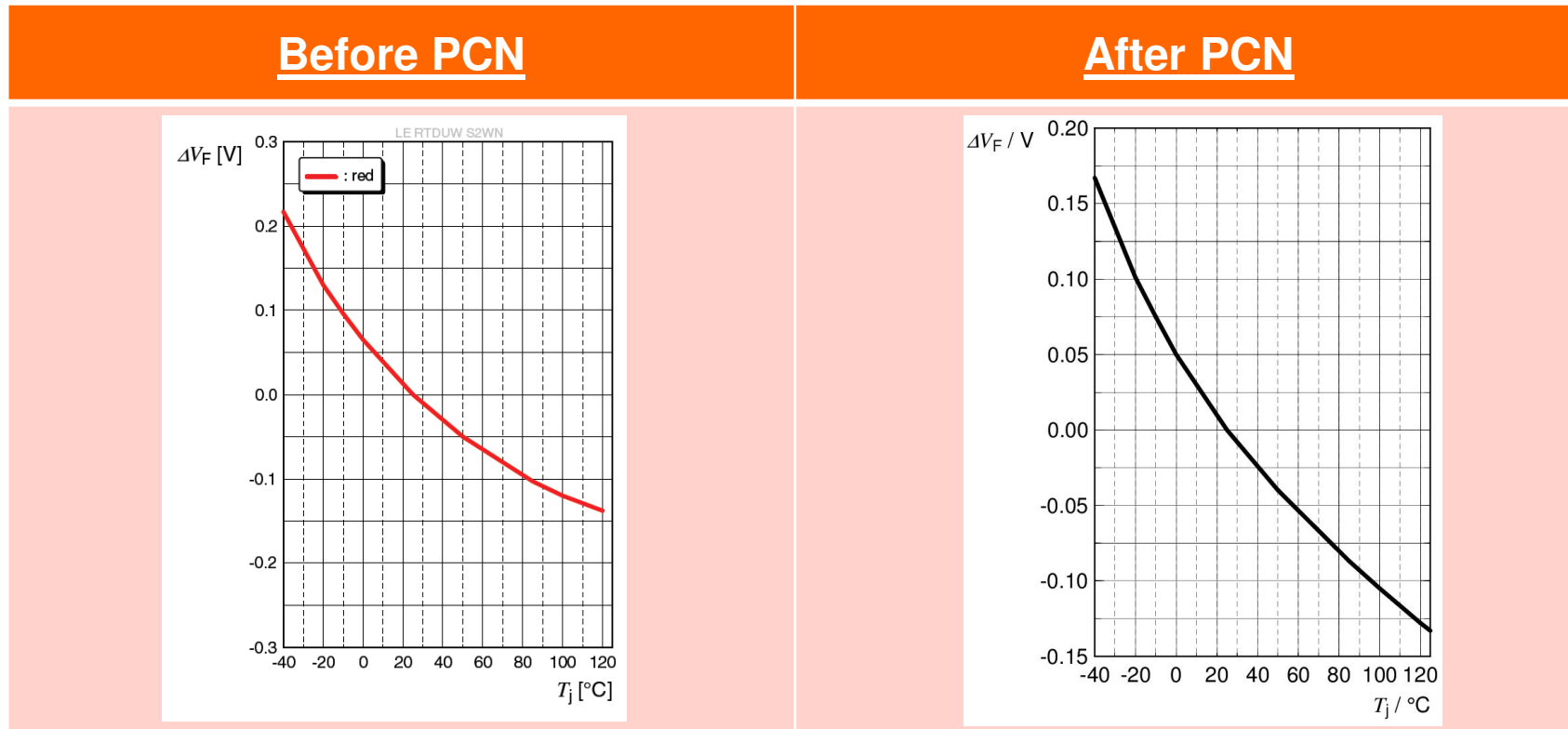
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Changes in the datasheets: Exemplary data for LE RTDUW S2WN

Forward Voltage

$$\Delta V_F = V_F - V_F(25\text{ }^\circ\text{C}) = f(T_j); I_F = 1000\text{ mA}$$



Note: Characteristic curves in the datasheets of LE RTDCY S2WN have also been updated. Please review new datasheets for further details/changes

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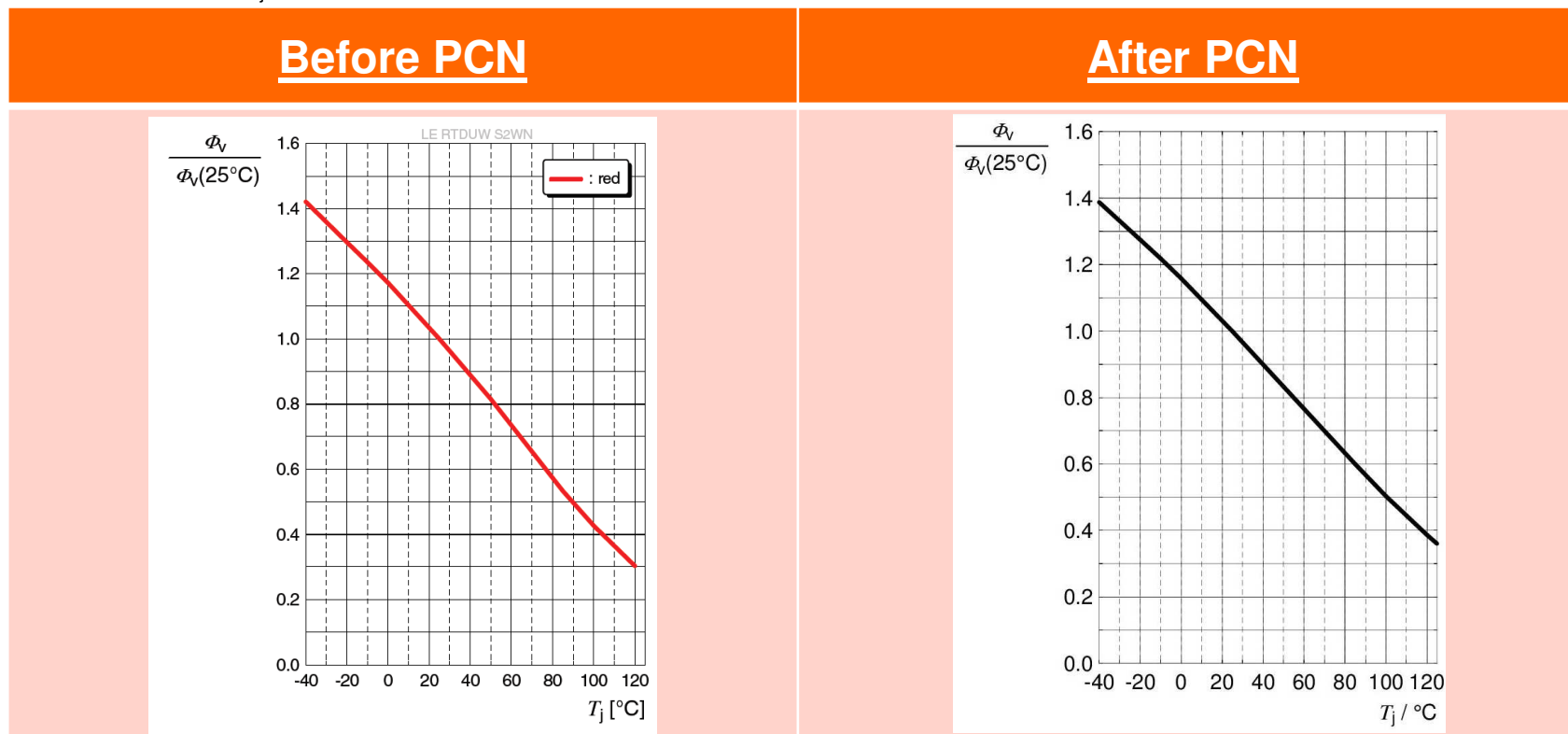
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Changes in the datasheets: Exemplary data for LE RTDUW S2WN

Relative Luminous Flux

$$\Phi_V / \Phi_V(25^\circ\text{C}) = f(T_j); I_F = 1000\text{ mA}$$



Note: Characteristic curves in the datasheets of LE RTDCY S2WN have also been updated. Please review new datasheets for further details/changes

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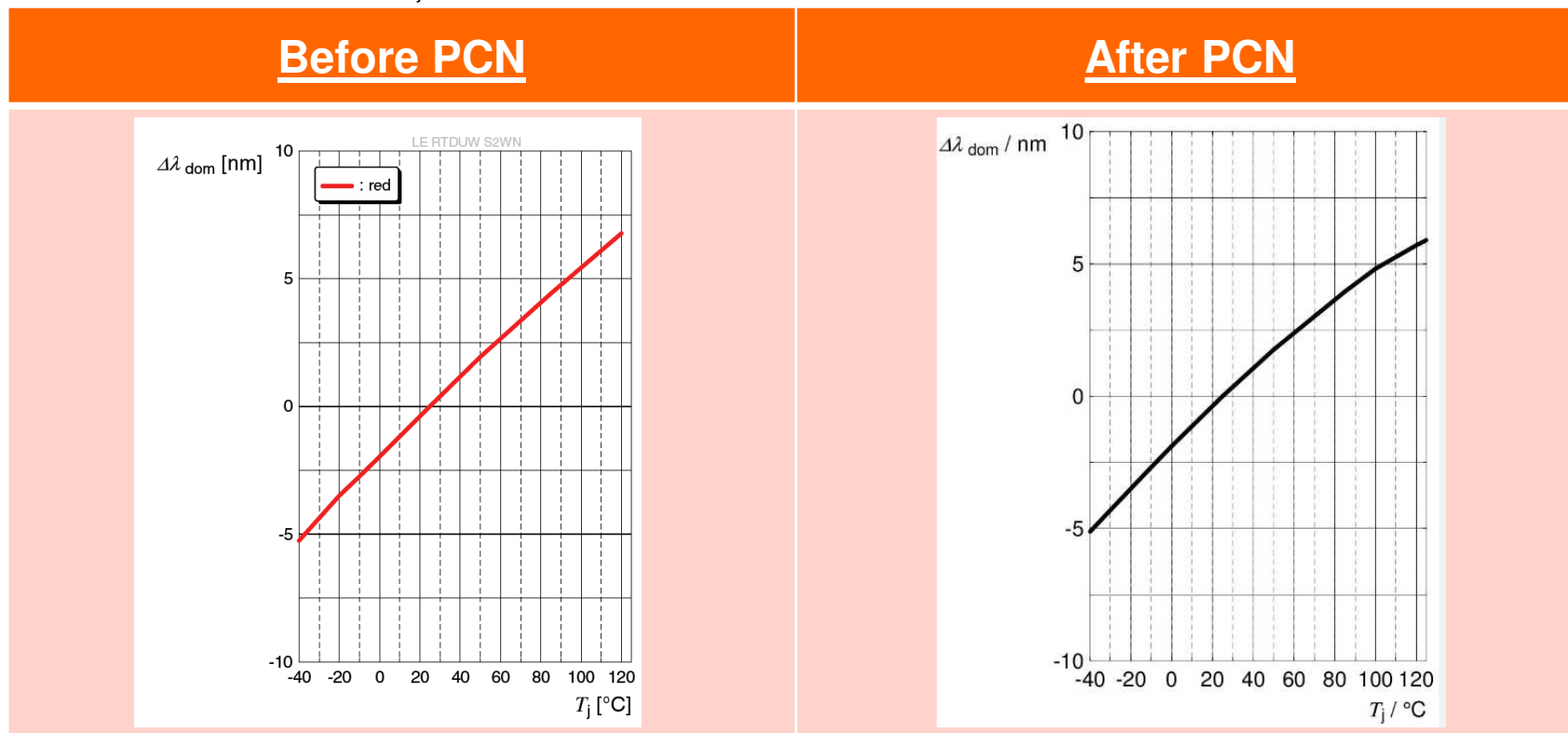
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Changes in the datasheets: Exemplary data for LE RTDUW S2WN

Dominant Wavelength

$$\Delta\lambda_{\text{dom}} = \lambda_{\text{dom}} - \lambda_{\text{dom}}(25\text{ }^\circ\text{C}) = f(T_j); I_F = 1000\text{ mA}$$



Note: Characteristic curves in the datasheets of LE RTDCY S2WN have also been updated. Please review new datasheets for further details/changes

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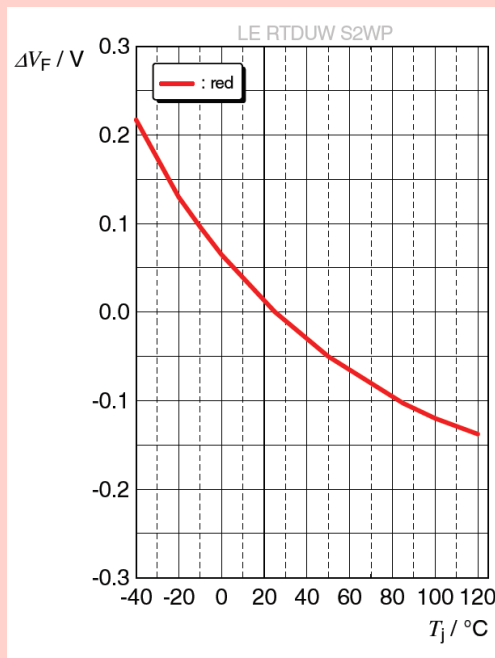


Changes in the datasheets: Exemplary data for LE RTDUW S2WP

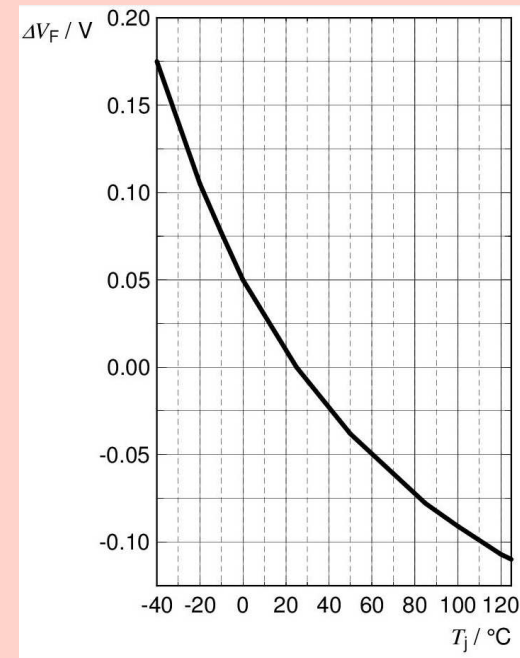
Forward Voltage

$$\Delta V_F = V_F - V_F(25^\circ\text{C}) = f(T_j); I_F = 1400\text{ mA}$$

Before PCN



After PCN



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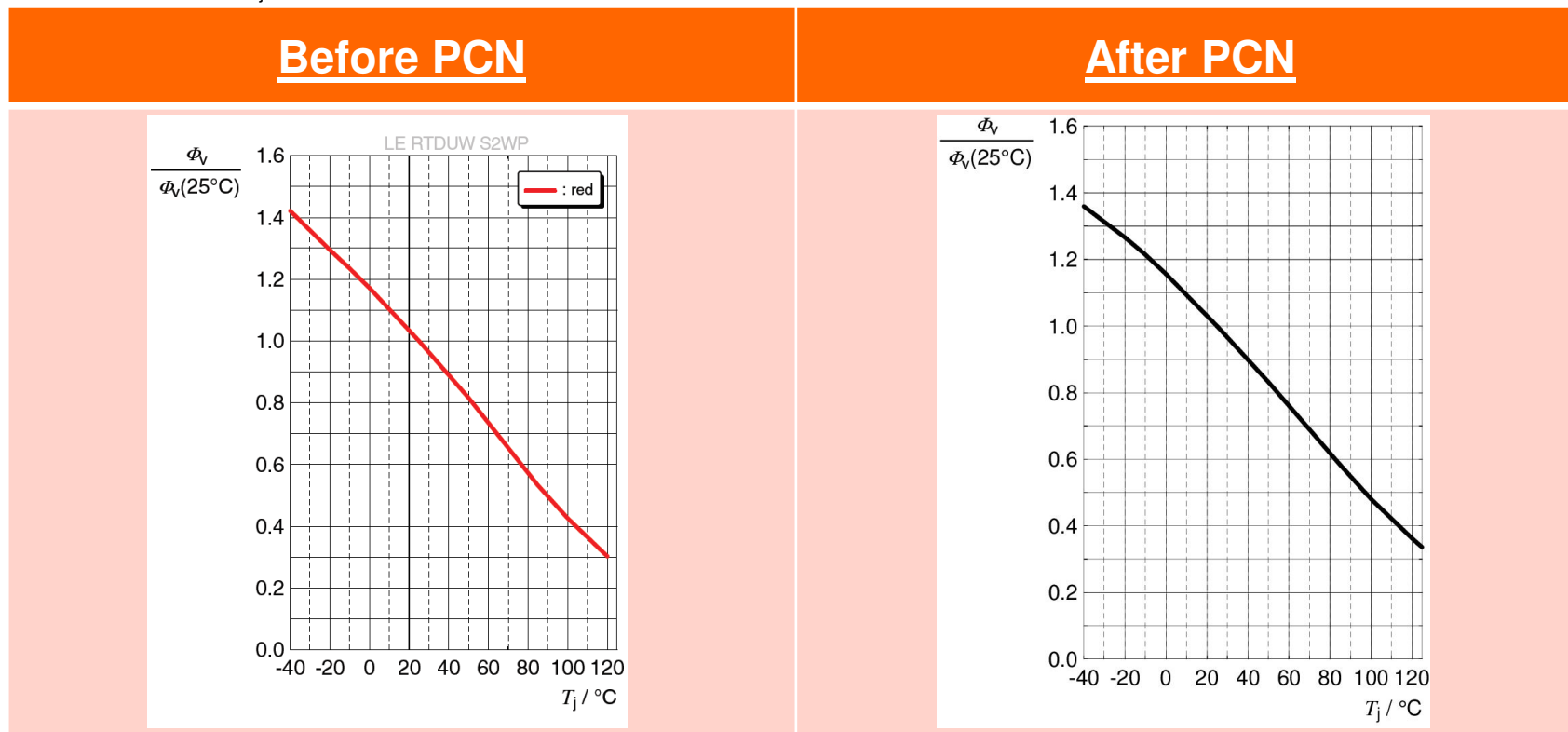
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Changes in the datasheets: Exemplary data for LE RTDUW S2WP

Relative Luminous Flux

$$\Phi_V / \Phi_V(25^\circ\text{C}) = f(T_j); I_F = 1400\text{ mA}$$



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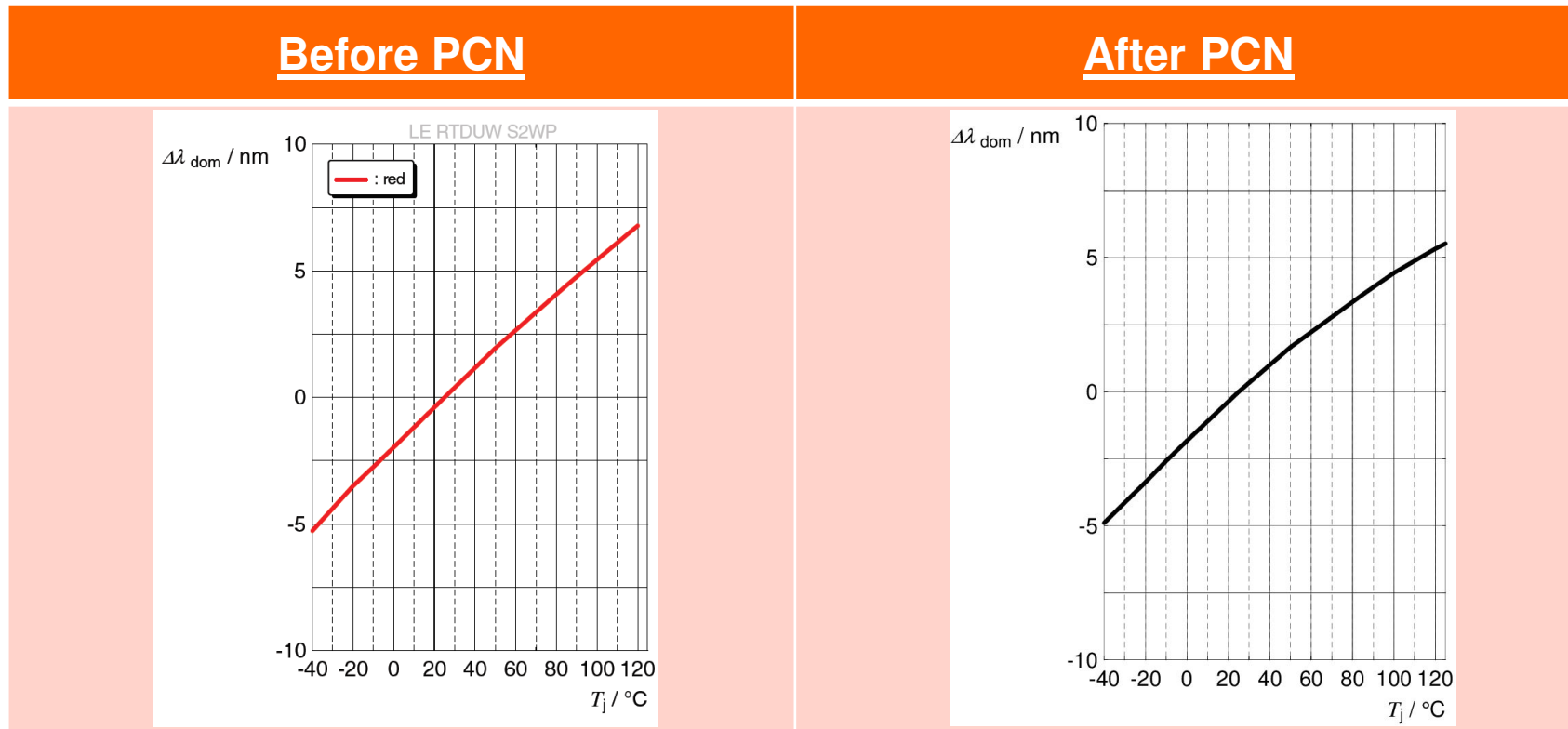
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Changes in the datasheets: Exemplary data for LE RTDUW S2WP

Dominant Wavelength

$$\Delta\lambda_{\text{dom}} = \lambda_{\text{dom}} - \lambda_{\text{dom}}(25\text{ }^\circ\text{C}) = f(T_j); I_F = 1400\text{ mA}$$



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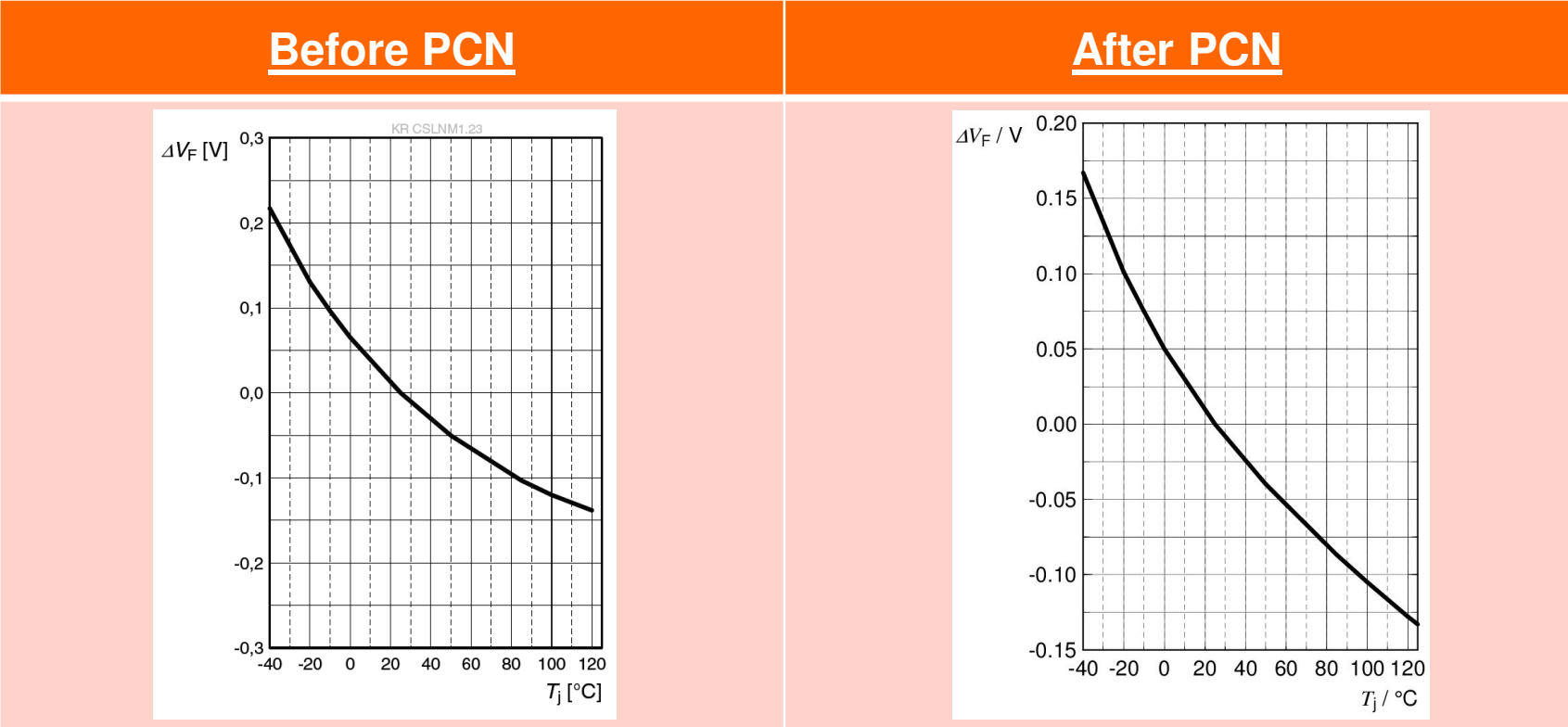
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Changes in the datasheets: KR CSLNM1.23

Forward Voltage

$$\Delta V_F = V_F - V_F(25\text{ }^\circ\text{C}) = f(T_j); I_F = 1000\text{ mA}$$



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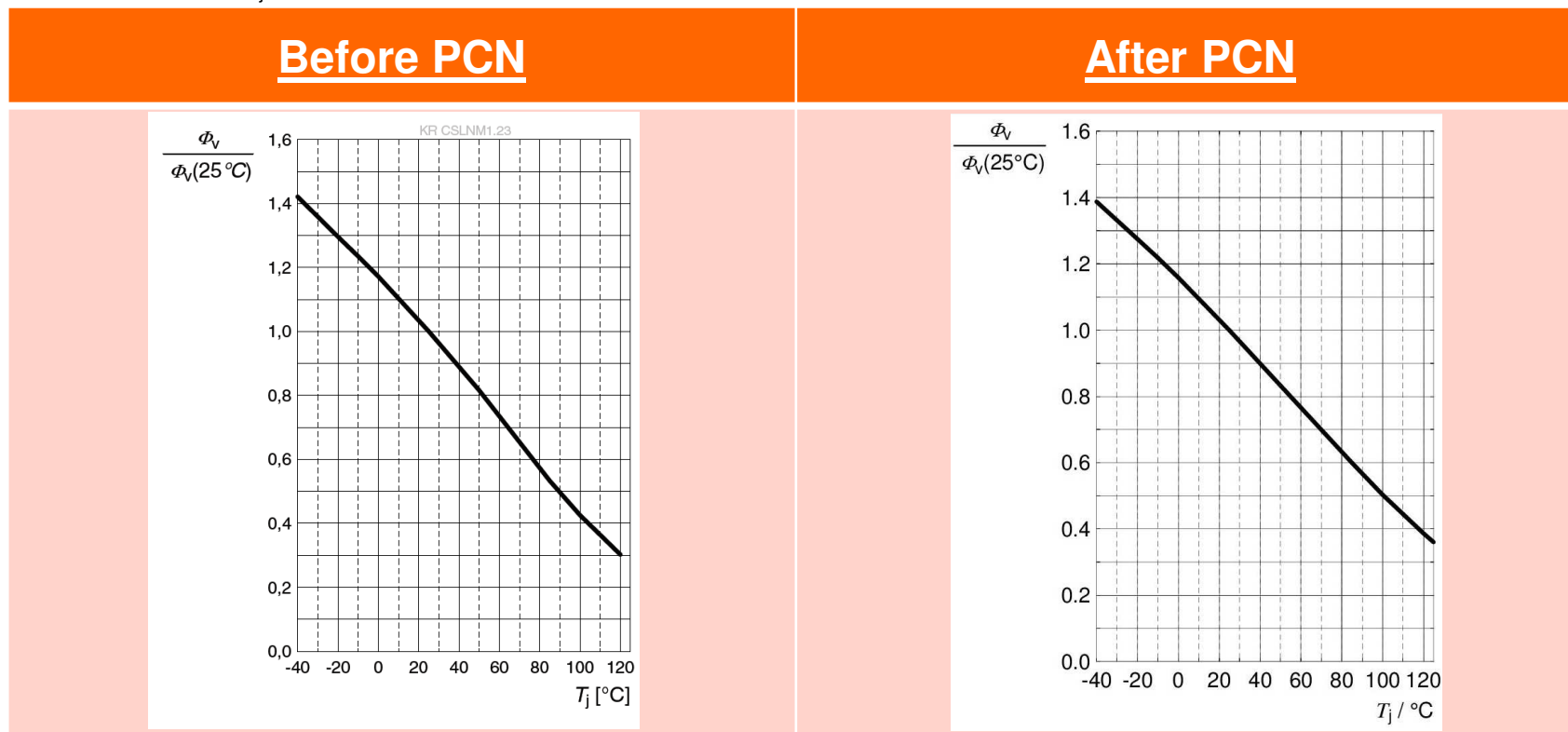
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Changes in the datasheets: KR CSLNM1.23

Relative Luminous Flux

$$\Phi_V / \Phi_V(25^\circ\text{C}) = f(T_j); I_F = 1000\text{ mA}$$



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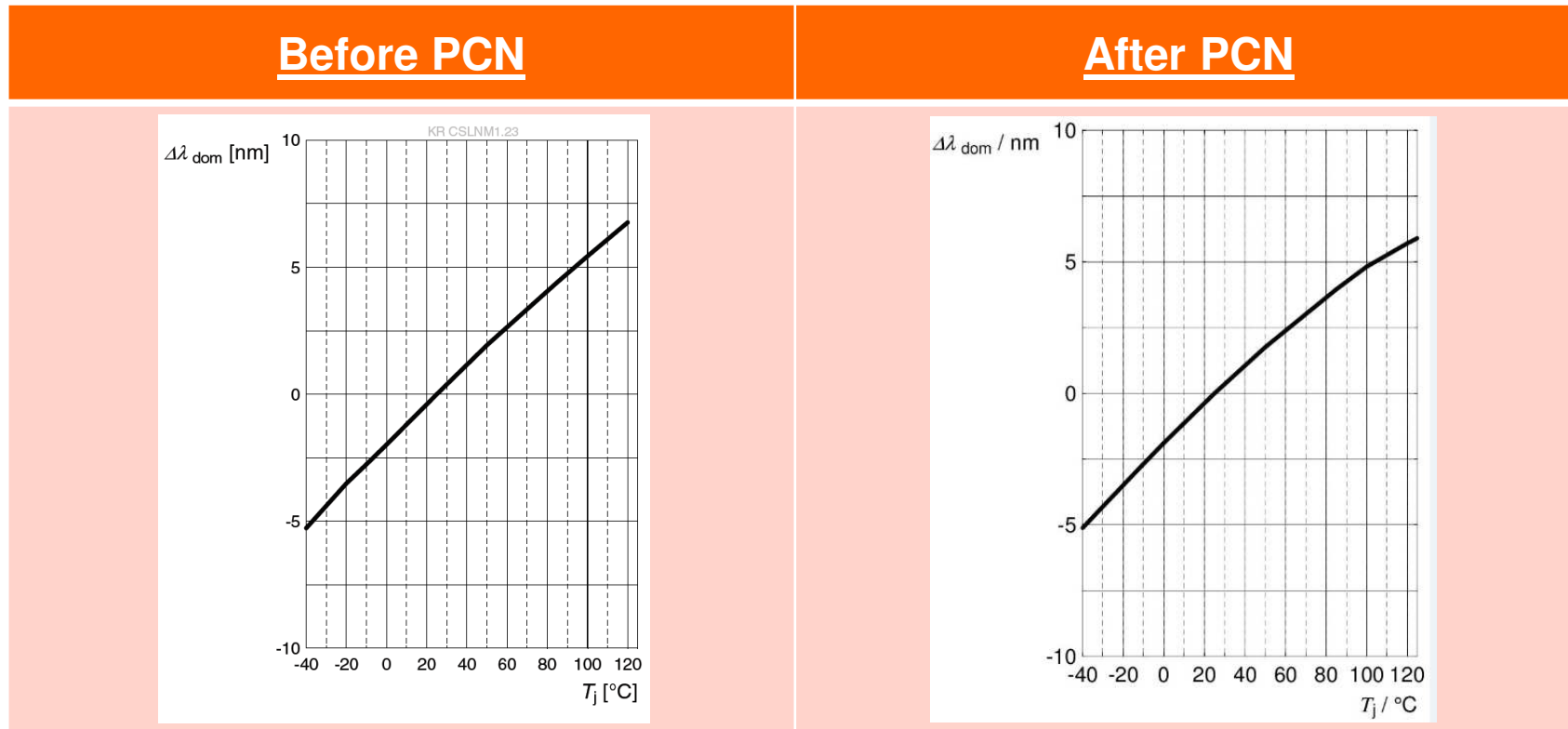
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Changes in the datasheets: KR CSLNM1.23

Dominant Wavelength

$$\Delta\lambda_{\text{dom}} = \lambda_{\text{dom}} - \lambda_{\text{dom}}(25\text{ °C}) = f(T_j); I_F = 1000\text{ mA}$$



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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	15.07.2019 <small>*) or earlier if released by customer and upon mutual agreement</small>

for <u>Pre-PCN material</u> (prior to implementation of change):	Last time order date (LTO)	15.10.2019 **) <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)	15.12.2019 ***) <small>***) planned last date for delivery of products of current status</small>

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.

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Thank you.

Products Affected by Product Change Notification

Number: OS-PCN-2019-009-A

Name: Introduction of next generation High Power Thinfilm and UX:3 chips in OSRAM
OSTAR Projection compact and Stage packages

Release Date: 5/15/2019

Response Due Date: 6/15/2019

Implementation Date: 7/15/2019

<i>Product</i>	<i>QNumber</i>	<i>QNumber Description</i>	<i>Part Number</i>
LE RTDCY S2W	Q65112A1814	LE RTDCY S2WN	LE RTDCY S2WN
LE RTDUW S2W	Q65111A8802	LERTDUWS2WN-KBLA-1+LBMA-4+AXAY-	LERTDUWS2WN-KBLA-1+LBMA-4+AXAY-
	Q65111A8803	LE RTDUW S2WN-KBLA-1+LBMA-P+VIAX-	LE RTDUW S2WN-KBLA-1+LBMA-P+VIAX-
	Q65111A9322	LERTDUWS2WN-KBLA-1+LBMB-4+AXAY-	LERTDUWS2WN-KBLA-1+LBMB-4+AXAY-
	Q65111A9879	LERTDUWS2WN-KBLA-1+LBMB-3+VIAY-3	LERTDUWS2WN-KBLA-1+LBMB-3+VIAY-3
	Q65112A1539	LERTDUWS2WN-LALB-1+LBMA-P+AXAY-	LERTDUWS2WN-LALB-1+LBMA-P+AXAY-
LE RTDUW S2W	Q65111A6297	LE RTDUW S2WP	LE RTDUW S2WP
	Q65111A7189	LERTDUWS2WP-KBMA+1-MBNB-P+AABA	LERTDUWS2WP-KBMA+1-MBNB-P+AABA
	Q65112A0542	LERTDUWS2WP-KBMA+1-MBNB-4+AABA-	LERTDUWS2WP-KBMA+1-MBNB-4+AABA-