



The DNA of tech.™

Product Change Notification



Product Group: OPT/Thu Jun 6, 2024/PCN-OPT-1335-2024-REV-0

Standardization of Materials for PCB based 0402 and 0603 ChipLEDs

For further information, please contact your regional Vishay office.

CONTACT INFORMATION

Americas

Vishay Intertechnologies, Inc., Business Marketing The Americas - Opto
2585 Junction Avenue
-
San Jose California United States 95134-1923
Phone: +1-408-567-8358
Fax: +1-408-240-5687
-

Europe

VISHAY Semiconductor GmbH Business Marketing Europe - Opto
Theresienstraße 2
-
Heilbronn Germany 74072
Phone: +4971317498645
Fax: +49-7131-67-3144
LED@vishay.com

Asia

VISHAY Intertechnology Asia Pte. Ltd. Business Marketing Asia/Japan
25 Tampines Street 92
Keppel Building # 02-00
Singapore Singapore 528877
Phone: +65 6780 7879
Fax: +65 6780 7897
-

Description of Change: VISHAY is standardizing the materials for the PCB-based 0402 and 0603 ChipLEDs. Details of the changes are described in the attached document.

Annotations about time schedule:

The components covered by this PCN will start shipping on or after Oct 1st, 2024. The exact date will be a function of the depletion of the existing product inventories.

Exception: Due to unexpected high orders for white ChipLEDs, the LTB quantity of the discontinued TAG converter has been consumed earlier as expected. Deliveries of VLMW15.. series before October 1, 2024 can only be maintained with the new YAG converter, requiring a waiver from customer.

Reason for Change: Standardization of the materials for PCB-based 0402 and 0603 ChipLEDs to ensure the availability of the materials and maintain long term delivery capability.

Expected Influence on Quality/Reliability/Performance: There is no impact on Form/Fit and Function.

The optical and electrical characteristics remain the same as before.

There is no impact on product performance and reliability level.

We still request the customers to test the parts in their applications.

Part Numbers/Series/Families Affected: Please see materials list on the succeeding page.

Vishay Brand(S): Vishay Semiconductors

Time Schedule:

Start Shipment Date: Tue Oct 1, 2024

Sample Availability: 03-JUN-2024

Product Identification: tracking by date code/batch on label

Qualification Data: Qualification data available on request

This PCN is considered approved, without further notification, unless we receive specific customer concerns before Wed Jun 26,



Product Change Notification



Product Group: OPT/Thu Jun 6, 2024/PCN-OPT-1335-2024-REV-0

The DNA of tech.™

2024 or as specified by contract.

Issued By: Harald Lunt, harald.lunt@vishay.com



Product Change Notification



Product Group: OPT/Thu Jun 6, 2024/PCN-OPT-1335-2024-REV-0

The DNA of tech.™

VLMTG1501-GS08	VLMW1500-GS08	VLMW1501-GS08	VLMW1502-GS08	VLMW1503-GS08
VLMG1500-GS08	VLMO1500-GS08	VLMS1500-GS08	VLMS1501-GS08	VLMS1502-GS08
VLMY1500-GS08	VLMY1501-GS08	VLMB1500-GS08	VLMB1501-GS08	VLMTG1500-GS08
VLMG1300-GS08	VLMO1300-GS08	VLMS1300-GS08	VLMY1300-GS08	VLMY1301-GS08
VLMB1300-GS08	VLMB1302-GS08	VLMB1310-GS08	VLMTG1300-GS08	VLMW1300-GS08
VLMW1301-GS08	VLMTG1400-GS08	VLMTG1401-GS08	VLMTG1402-GS08	



Details to PCN HN-1335-2024 Standardization of Materials for PCB based 0402 and 0603 ChipLEDs

Description of Change:

VISHAY is standardizing the materials for the PCB-based 0402 and 0603 ChipLEDs. A detailed description about the affected parts and materials is shown on the succeeding pages.

Reason for Change:

To ensure the availability of the materials and maintain long term delivery capability.

Expected influence on Quality/ Reliability/ Performance:

There is no impact on Form/Fit and Function.
The optical and electrical characteristics remain the same as before.
There is no impact on product performance and reliability level.

Qualification Data:

Available on request

Effective Date of the Change:

The effective date will be October 1, 2024

Annotation about Time Schedule:

The components covered by this PCN will start shipping on or after Oct 1st, 2024. The exact date will be a function of the depletion of the existing product inventories.

Exception: Due to unexpected high orders for white ChipLEDs, the LTB quantity of the discontinued TAG converter has been consumed earlier as expected. Deliveries of VLMW15.. series before October 1, 2024 can only be maintained with the new YAG converter, requiring a waiver from customer.

Product Identification:

The changes can be tracked by the date code/batch number from the product identification labels.

Response Date:

This PCN is considered approved, without further notification, unless we receive specific customer concerns before June 26, 2024.



Details to PCN HN-1335-2024 Standardization of Materials for PCB based 0402 and 0603 ChipLEDs

Matrix of Changes --- 0402 ChipLED series

#	Part Number	Chip Size	Gold Wire Diameter	Phosphor TAG to YAG	Mold Compound
1	VLMG1500-GS08	from: 8mil to: 7mil	from: 1.0mil to: 0.8mil		from: with wax to: without wax
2	VLMO1500-GS08		from: 1.0mil to: 0.8mil		from: with wax to: without wax
3	VLMS1500-GS08	from: 8mil to: 7mil	from: 1.0mil to: 0.8mil		from: with wax to: without wax
4	VLMS1501-GS08	from: 8mil to: 7mil	from: 1.0mil to: 0.8mil		from: with wax to: without wax
5	VLMS1502-GS08	from:8mil to: 7mil	from: 1.0mil to: 0.8mil		from: with wax to: without wax
6	VLMY1500-GS08	from: 8mil to: 7mil	from: 1.0mil to: 0.8mil		from: with wax to: without wax
7	VLMY1501-GS08	from: 8mil to: 7mil	from: 1.0mil to: 0.8mil		from: with wax to: without wax
8	VLMB1500-GS08	from: 8mil to: 7mil	from: 1.0mil to: 0.8mil		from: with wax to: without wax
9	VLMB1501-GS08		from: 1.0mil to: 0.8mil		from: with wax to: without wax
10	VLMTG1500-GS08		from: 1.0mil to: 0.8mil		
11	VLMTG1501-GS08		from: 1.0mil to: 0.8mil		
12	VLMW1500-GS08		from: 1.0mil to: 0.8mil	from: TAG T3 to: YAG Y462	
13	VLMW1501-GS08		from: 1.0mil to: 0.8mil	from: TAG T3 to: YAG Y462	
14	VLMW1502-GS08		from: 1.0mil to: 0.8mil	from: TAG T3 to: YAG Y462	
15	VLMW1503-GS08		from: 1.0mil to: 0.8mil	from: TAG T3 to: YAG Y462	



Details to PCN HN-1335-2024 Standardization of Materials for PCB based 0402 and 0603 ChipLEDs

Matrix of Changes --- 0603 ChipLED series

#	Part Number	Chip Size	PCB	Gold Wire Diameter	Phosphor TAG to YAG
16	VLMG1300-GS08	from: 8mil to: 7mil	new supplier, same layout	from: 0.9mil to: 0.8mil	
17	VLMO1300-GS08		new supplier, same layout	from: 0.9mil to: 0.8mil	
18	VLMS1300-GS08		new supplier, same layout	from: 0.9mil to: 0.8mil	
19	VLMY1300-GS08		new supplier, same layout	from: 0.9mil to: 0.8mil	
20	VLMY1301-GS08		new supplier, same layout	from: 0.9mil to: 0.8mil	
21	VLMB1300-GS08		new supplier, new Layout	from: 0.9mil to: 0.8mil	
22	VLMB1302-GS08		new supplier, new Layout	from: 0.9mil to: 0.8mil	
23	VLMB1310-GS08	from: 8mil to: 7mil	new size before sawing, same final layout	from: 1.0mil to: 0.8mil	
24	VLMTG1300-GS08	from: 10mil to: 7mil	new supplier, new Layout	from: 1.0mil to: 0.8mil	
25	VLMW1300-GS08	from: 7mil to: 6mil		from: 0.9mil to: 0.8mil	from: TAG T3 to: YAG Y462
26	VLMW1301-GS08			from: 0.9mil to: 0.8mil	from: TAG T3 to: YAG Y462
27	VLMTG1400-GS08			from: 0.9mil to: 0.8mil	
28	VLMTG1401-GS08			from: 0.9mil to: 0.8mil	
29	VLMTG1402-GS08			from: 0.9mil to: 0.8mil	

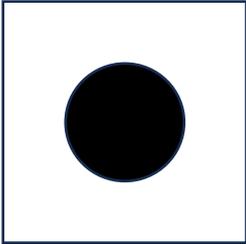
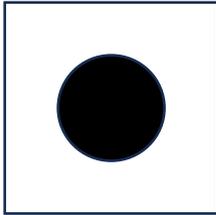


Details to PCN HN-1335-2024 Standardization of Materials for PCB based 0402 and 0603 ChipLEDs

Details of Chip Size and PCB Layout Changes:

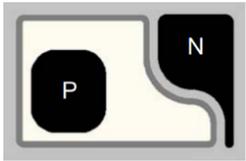
Chip size from 8mil to 7mil (AlInGaP)

Affected parts: VLMG1500-GS08, VLMS1500-GS08, VLMS1501-GS08, VLMS1502-GS08, VLMY1500-GS08, VLMY1501-GS08, VLMG1300-GS08

From	To
	
Chip size: 8 mil x 8 mil x 3.9 mil	Chip size: 7 mil x 7 mil x 3.9 mil
P bonding pad size: Ø3.9 mil	P bonding pad size: Ø3.5 mil

Chip size from 8mil to 7mil (InGaN)

Affected parts: VLMB1500-GS08, VLMB1310-GS08

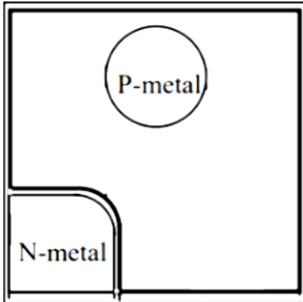
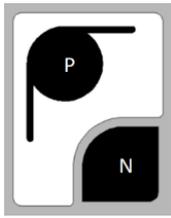
From	To
	
Chip size: 8 mil x 12 mil x 3.1mil	Chip size: 7mil x 9mil x 3.1 mil
P bonding pad size: Ø 3.9 mil	P bonding pad size: Ø 3.1 mil
N bonding pad size: Ø 3.5 mil	N bonding pad size: Ø3.3 mil



Details to PCN HN-1335-2024 Standardization of Materials for PCB based 0402 and 0603 ChipLEDs

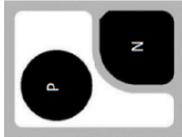
Chip size from 10mil to 7mil (InGaN)

Affected parts: VLMTG1300-GS08

From	To
	
Chip size: 9.8mil x 10.6mil x 3.5 mil	Chip size: 7 mil x 9mil x 3.5 mil
P bonding pad size: Ø3.5mil	P bonding pad size: Ø3.0 mil
N bonding pad size: Ø3.5mil	N bonding pad size: Ø3.0mil

Chip size from 7mil to 6mil

Affected parts: VLMW1300-GS08

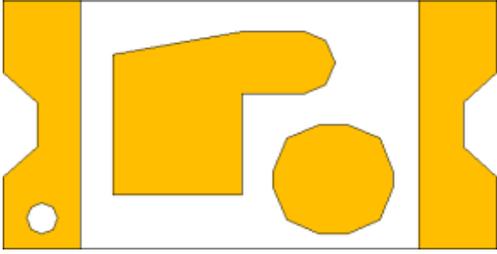
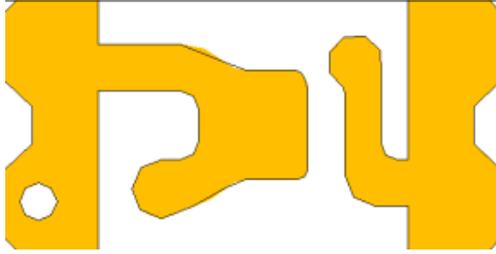
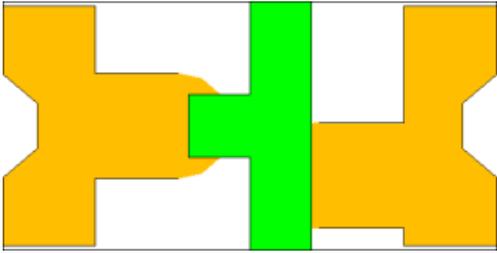
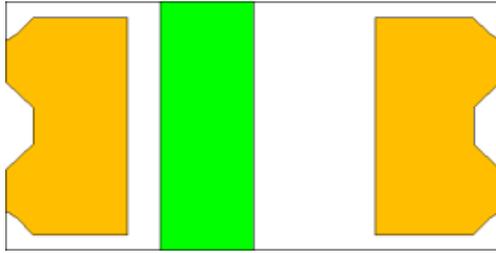
From	To
	
Chip size: 7mil x 9 mil x 3.1 mil	Chip size: 6 mil x 8 mil x 3.1 mil
P bonding pad size: Ø3.1 mil	P bonding pad size: Ø3.0 mil
N bonding pad size: Ø3.3 mil	N bonding pad size: Ø3.1 mil



Details to PCN HN-1335-2024 Standardization of Materials for PCB based 0402 and 0603 ChipLEDs

PCB layout

Affected parts: VLMB1300-GS08, VLMB1302-GS08, VLMTG1300-GS08

From	To
<p>TOP</p> 	<p>TOP</p> 
<p>BOTTOM</p> 	<p>BOTTOM</p> 
<p>Ni: 4 ~ 13μm Au: 0.2μm min. Cu: 15 ~ 40μm</p>	<p>Ni: 2.5μm Min Ag: 2.5μm Min Au: 0.05μm Min</p>