Alternative die bond paste for UV-LEDs

For further information, please contact your regional Vishay office.

CONTACT INFORMATION

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Description of Change: Vishay is introducing an alternative die bond paste for UV-LEDs. See also attachment "Details to PCN HN-1381-2025".

Annotations about time schedule:
The components covered by this PCN will start shipping on or after the specified start shipment date. The exact date will be a function of the depletion of the existing product inventories.

Reason for Change: The current die bond paste will become EOL and has to be changed to an alternative solution.

Expected Influence on Quality/Reliability/Performance: No influence on quality / reliability and performance. Form/Fit/Function are not affected.

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

Vishay Brand(S): Vishay Semiconductors

Time Schedule:

Start Shipment Date: Tuesday June 10, 2025

Sample Availability: PCN samples are available. If required, these must be ordered via the contacts given in this PCN or via customer service with reference to the PCN number.

Product Identification: Datecode

Qualification Data: available, see attachment

This PCN is considered approved, without further notification, unless we receive specific customer concerns before Sunday March 23, 2025 or as specified by contract.

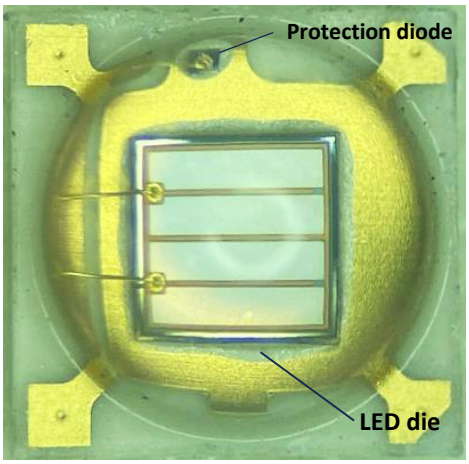
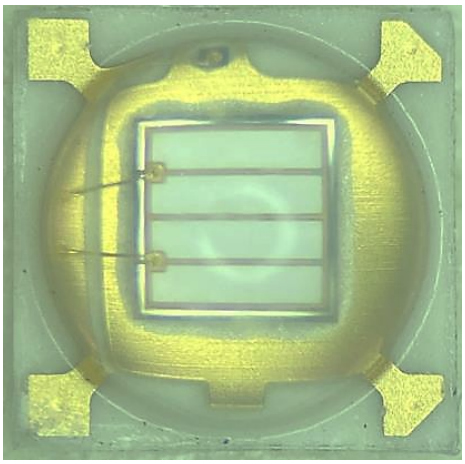
Issued By: Harald Lunt, harald.lunt@vishay.com

VLMU1610-365-135	VLMU1611-365-135	VLMU3510-365-130	VLMU3511-365-130	VLMU35A10-385-130
VLMU35A10-395-130	VLMU35A10-405-130	VLMU35CL20-275-120	VLMU35CB20-275-120	VLMU35CB21-275-120
VLMU35CT20-275-120	VLMU35CT21-275-120	VLMU35CR40-275-120	VLMU35CR41-275-120	

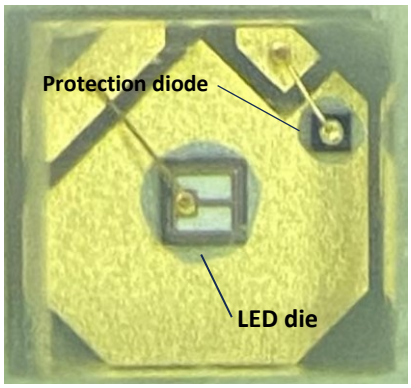
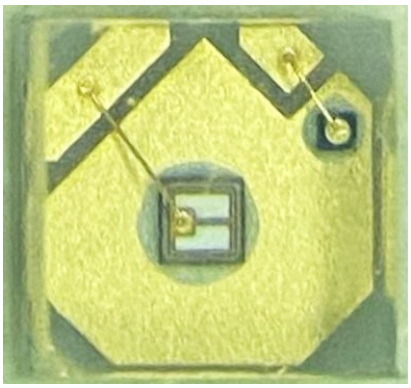
Details to PCN HN-1381-2025
Alternative die bond paste for UV-LEDs

Details:

VLMU351.-365-130 (*also representative for VLMU35A10-...-120 series*)**:**

From	To
	
Current silver epoxy	New silver epoxy

VLMU161.-365-135:

From	To
	
Current silver epoxy	New silver epoxy

For the UVC-LED-series **VLMU35C..-275-120** only the die attach paste for the protection diode is affected, because the eutectic flip chip assembly for the LED emitter die does not change. The UVA LED series VLMU351.-365-130 and VLMU161.-365-135 have been used as test vehicle for generic release. The qualification results follow on the next pages.

Details to PCN HN-1381-2025
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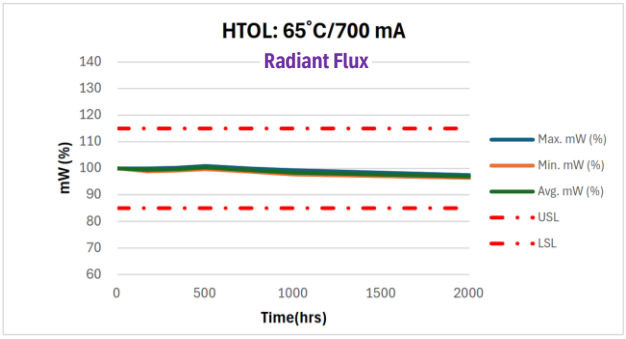
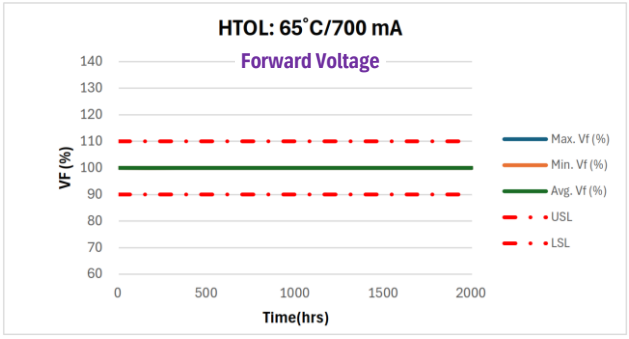
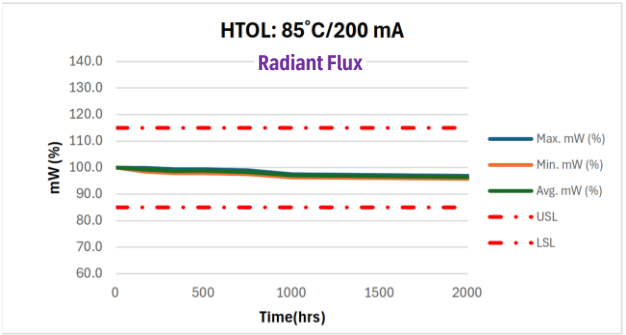
Qualification Results VLMU351.-365-130:

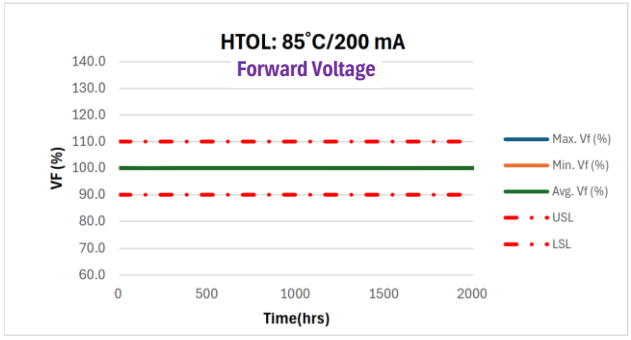
No.	Test Item	Condition	n-c	Criteria	Duration	Result
1	High Temperature Operating Life (HTOL)	T_a = 65°C, I_F = 700mA	12 - 0	ΔV_F < 10% $\Delta \Phi_e$ < 15%	2000h	PASSED
2	High Temperature Operating Life (HTOL)	T_a = 85°C, I_F = 200mA	12 - 0	ΔV_F < 10% $\Delta \Phi_e$ < 15%	2000h	PASSED
3	High Temperature & Humidity Operating Life (WHTOL)	T_a = 60°C/90% RH, I_F = 350mA	12 - 0	ΔV_F < 10% $\Delta \Phi_e$ < 15%	2000h	PASSED
4	Thermal Shock Test (TS)	-40°C ~ 125°C, 30min ~ 30min	12 - 0	ΔV_F < 10% $\Delta \Phi_e$ < 15%	500x	PASSED

Drift Charts VLMU351.-365-130:



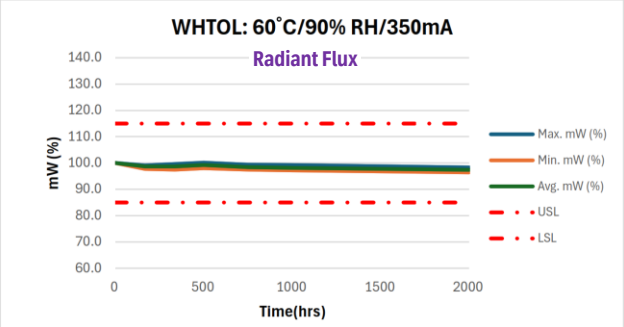


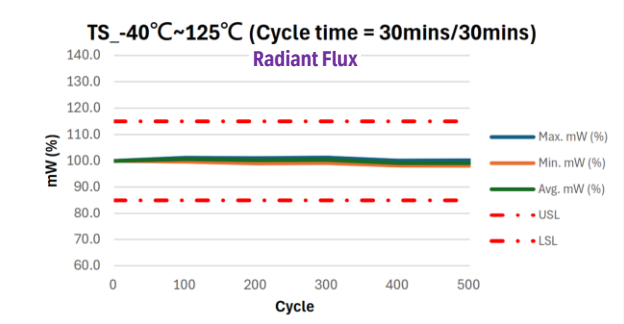


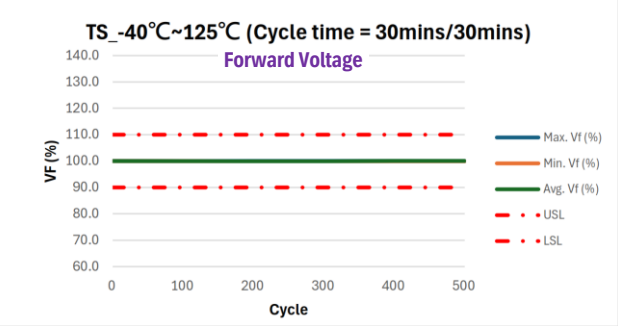


Details to PCN HN-1381-2025
Alternative die bond paste for UV-LEDs

Drift Charts VLMU351.-365-130 --- continued:







Qualification Results VLMU161.-365-135:

No.	Test Item	Condition	n-c	Criteria	Duration	Result
1	High Temperature Operating Life (HTOL)	T_a = 85°C, I_F = 25mA	12 - 0	ΔV_F < 10% $\Delta \Phi_e$ < 15%	1000h	PASSED
2	High Temperature & Humidity Operating Life (WHTOL)	T_a = 60°C/90% RH, I_F = 60mA	12 - 0	ΔV_F < 10% $\Delta \Phi_e$ < 15%	1000h	PASSED
3	Thermal Shock Test (TS)	-40°C ~ 125°C, 30min ~ 30min	12 - 0	ΔV_F < 10% $\Delta \Phi_e$ < 15%	500x	PASSED

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Drift Charts VLMU161.-365-135: