

## PRODUCT/PROCESS CHANGE NOTIFICATION (PCN)

Control No.: ND-2020-030

Issued by Chrisada P., PD Eng., [Chrisada.P@liteon.com](mailto:Chrisada.P@liteon.com) #391:Issued date: September 25, 2020 *Chrisada P.*Reviewed by Ponlawit S., Sr.PD Eng., [Ponlawit.S@liteon.com](mailto:Ponlawit.S@liteon.com) #6004:Reviewed date: *Ponlawit*Approved by Warin S., ND Operation Mgr., [Warin.S@liteon.com](mailto:Warin.S@liteon.com) #6027:Approved date: *9/25 '20***Customer name:****1. PCN TITLE (Specify change title):**

EOL device LTP-305(G, Y, HR) and LTP-335S and replace by LTP-305(KG, KE) and LTP-335KD.

**2. PCN PURPOSE:**

To EOL device LTP-305(G, Y, HR) and LTP-335S and replace by LTP-305(KG, KE) and LTP-335KD.

2.1 Due to dice vender OTC \ TYNTEK adjusted their product portfolio production plan and might limited to support traditional GaP dice in near future. Therefore, we had been forced to limited support display accordingly.

2.2 EOL because the wire bond machine AB559 were damaged and spare part were obsoleted from supplier side and market.

For the replacement by design new PCB for support the wire bond current machine version.

**3. EFFECTIVITY (affected Part No., shipment and other):**

EOL: LTP-305G, LTP-305Y, LTP-305HR and LTP-335S.

Replace: LTP-305KG, LTP-305KE and LTP-335KD.

**4. PRODUCT DESCRIPTION:**

ND Display.

**5. DESCRIPTION OF CHANGE:**

To EOL device LTP-305(G, Y, HR) and LTP-335S and replace by LTP-305(KG, KE) and LTP-335KD.

GaP dice Change to AllnGaP dice are on continue production



**6. REASON OF CHANGE:**

To EOL device LTP-305(G, Y, HR) and LTP-335S and replace by LTP-305(KG, KE) and LTP-335KD.

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6.2 EOL because the wire bond machine AB559 were damaged and spare part were obsoleted from supplier side and market.

**7. DEADLINE OF REPLY:**

N/A

**8. AVAILABLE OF SAMPLE AND D/S:**

N/A

**9. EFFECTIVE DATE:**

N/A

**10. OTHER:**

Please see attachment.

**Customer Approval Portion :**

\* Approved (\_\_\_) , Remark : \_\_\_\_\_

\* Rejected (\_\_\_\_) , Reason (\_\_\_\_\_)

CUSTOMER REPRESENTATIVE NAME/TITLE :

SIGNATURE :

DATE :

E-MAIL:

PHONE:



LITE-ON TECHNOLOGY CORPORATION  
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成為世界級卓越的公司

# LTP-305XX & LTP-335XX Propose EOL and Replacement

Report by Thakorn

Sep-10'20

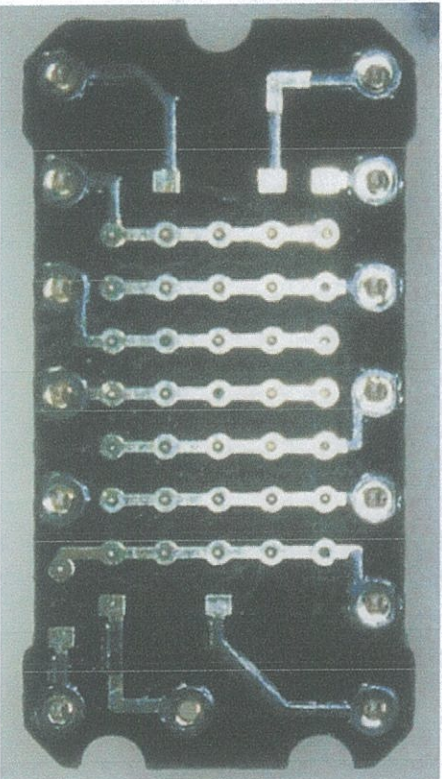


## Subject

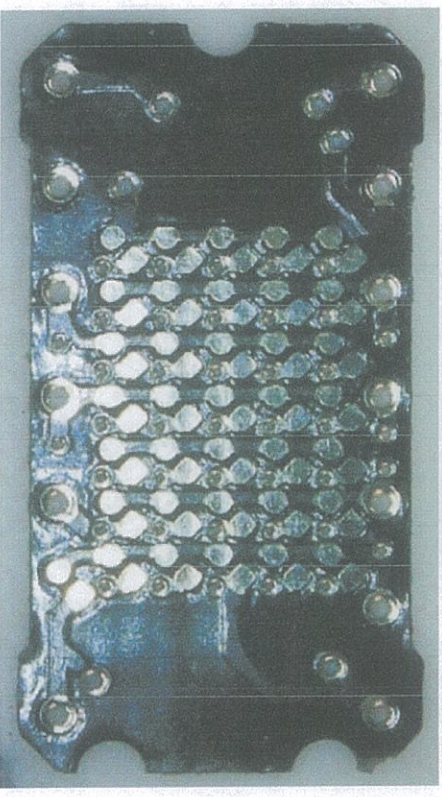
LTP-305(G, Y, HR) and LTP-335S designed with butterfly wire bonding by AB559 machine, but key spare part of AB559 were obsoleted and can't buy anymore from ASM and market.

Now we have new machine(cheetah machine) but it can't produce with butterfly wire bonding. So we need to EOL the device P/N and propose new device P/N (designed with single wire bonding)

Current PCB design



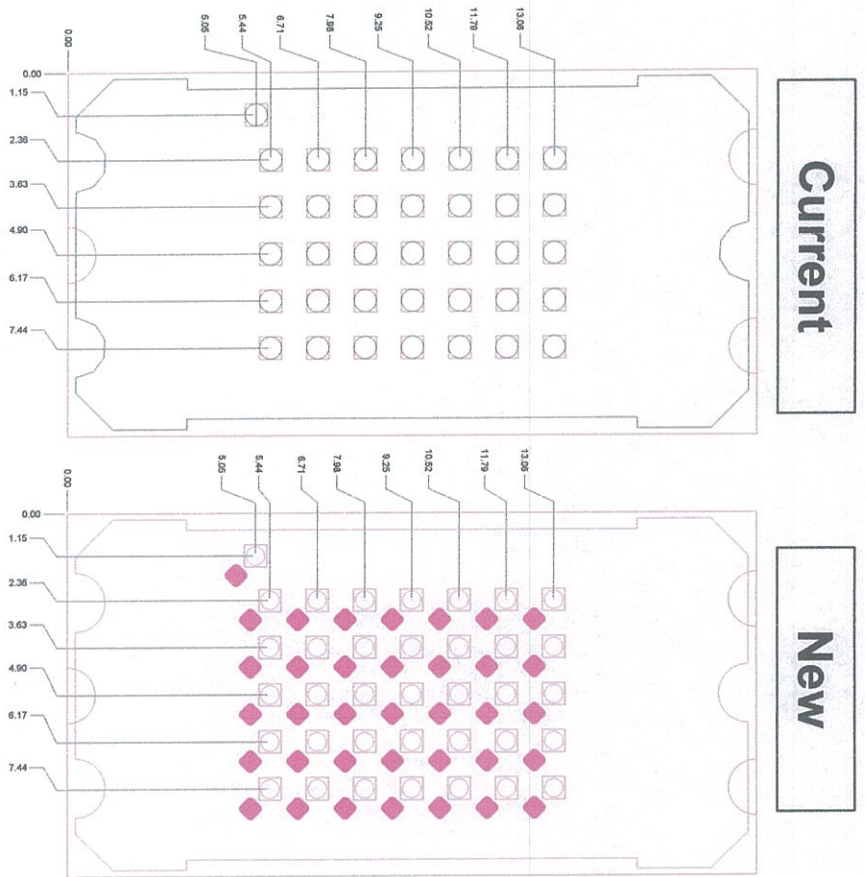
New PCB design





# Simulation LED location compare

Location	Current		New		Compare
	X	Y	X	Y	
C1R1	2.36	13.06	2.36	13.06	Same
C2R1	3.63	13.06	3.63	13.06	Same
C3R1	4.90	13.06	4.90	13.06	Same
C4R1	6.17	13.06	6.17	13.06	Same
C5R1	7.44	13.06	7.44	13.06	Same
C1R2	2.36	11.79	2.36	11.79	Same
C2R2	3.63	11.79	3.63	11.79	Same
C3R2	4.90	11.79	4.90	11.79	Same
C4R2	6.17	11.79	6.17	11.79	Same
C5R2	7.44	11.79	7.44	11.79	Same
C1R3	2.36	10.52	2.36	10.52	Same
C2R3	3.63	10.52	3.63	10.52	Same
C3R3	4.90	10.52	4.90	10.52	Same
C4R3	6.17	10.52	6.17	10.52	Same
C5R3	7.44	10.52	7.44	10.52	Same
C1R4	2.36	9.25	2.36	9.25	Same
C2R4	3.63	9.25	3.63	9.25	Same
C3R4	4.90	9.25	4.90	9.25	Same
C4R4	6.17	9.25	6.17	9.25	Same
C5R4	7.44	9.25	7.44	9.25	Same
C1R5	2.36	7.98	2.36	7.98	Same
C2R5	3.63	7.98	3.63	7.98	Same
C3R5	4.90	7.98	4.90	7.98	Same
C4R5	6.17	7.98	6.17	7.98	Same
C5R5	7.44	7.98	7.44	7.98	Same
C1R6	2.36	6.71	2.36	6.71	Same
C2R6	3.63	6.71	3.63	6.71	Same
C3R6	4.90	6.71	4.90	6.71	Same
C4R6	6.17	6.71	6.17	6.71	Same
C5R6	7.44	6.71	7.44	6.71	Same
C1R7	2.36	5.44	2.36	5.44	Same
C2R7	3.63	5.44	3.63	5.44	Same
C3R7	4.90	5.44	4.90	5.44	Same
C4R7	6.17	5.44	6.17	5.44	Same
C5R7	7.44	5.44	7.44	5.44	Same
DP	1.15	5.05	1.15	5.05	Same

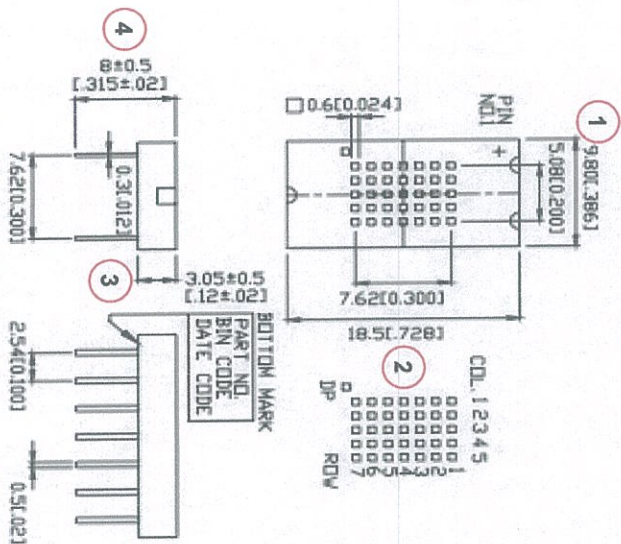


LED location for current PCB and new PCB are same



# Package dimension compare

## PACKAGE DIMENSIONS



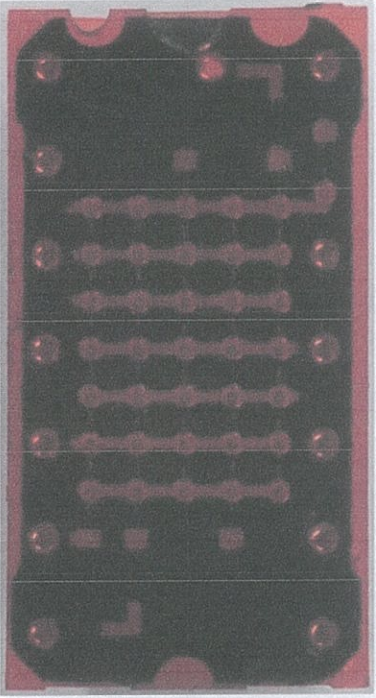
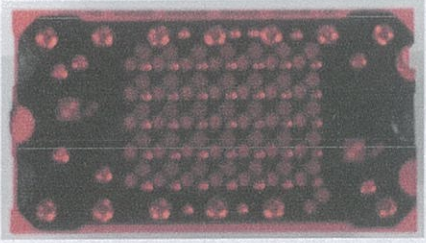
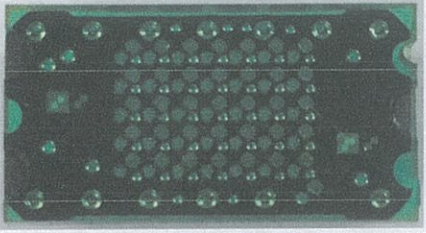
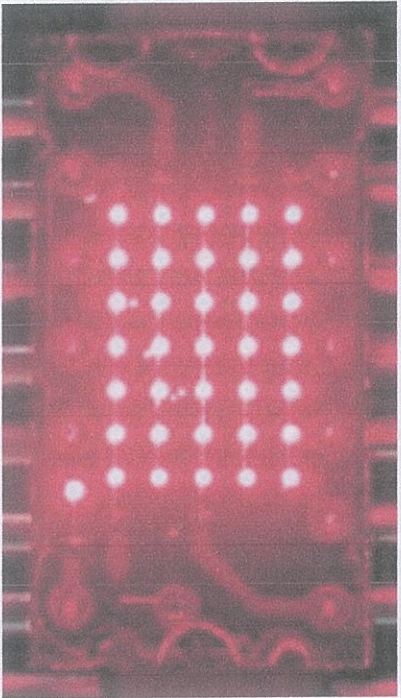
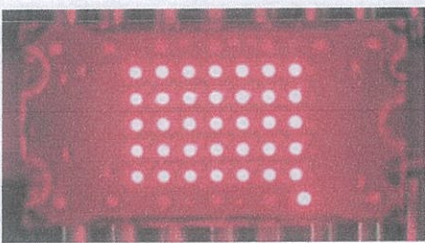
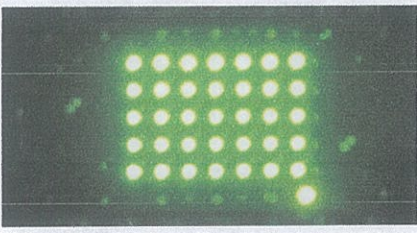
NOTES: All dimensions are in millimeters. Tolerances are ± 0.25 mm (0.01") unless otherwise noted.

No.	Spec	DS			Actual					Compare
		min	max		1	2	3	4	5	
1	9.80	9.55	10.05		9.82	9.87	9.86	8.88	9.77	Pass
2	18.50	18.25	18.75		18.43	18.42	18.45	18.48	18.44	Pass
3	3.05	2.55	3.55		2.94	2.96	3.01	2.98	3.03	Pass
4	8.00	7.50	8.50		8.18	8.19	8.15	8.20	8.19	Pass

Package dimension are in spec with DS







# Appearance and function compare

Current design	New Design
<p>PCB design : butterfly-wire</p> 	<p>PCB design : single-wire</p>  
	 



## Propose replacement

Current	New
LTP-305G 	LTP-305KG
LTP-305Y 	No propose (This device not ever build)
LTP-305HR 	LTP-305KE
LTP-335S 	LTP-335KD



# LTP-305G & LTP-305KG

Electrical / Optical characteristics	Current	New	Compare																																																																																																								
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**Result:** 1. Package dimension → Same

2. Appearance → Same

3. Function → Same

4. PCB material → Same

5. LED material → LED material change

6. Pin material → Same

7. Epoxy material → Same

8. Luminous intensity → Same IV rank (Test condition Ip=32mA, 1/16 duty)

9. Dominant wavelength → Not significantly different



# LTP-305HR & LTP-305KE

Electrical / Optical characteristics	Current	New	Compare																																																																																																								
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**Result:** 1. Package dimension → Same

2. Appearance → Same

3. Function → Same

4. PCB material → Same

5. LED material → LED material change

6. Pin material → Same

7. Epoxy material → Same

8. Luminous intensity → LTP-305KE Higher than (Test condition I<sub>p</sub>=32mA, 1/16 duty)

9. Dominant wavelength → Not significantly different



# LTP-335S & LTP-335KD

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**Result:** 1. Package dimension → Same

2. Appearance → Same

3. Function → Same

4. PCB material → Same

5. LED material → LED material change

6. Pin material → Same

7. Epoxy material → Same

8. Luminous intensity → LTP-335KD Higher than (Test condition I<sub>p</sub>=32mA, 1/16 duty)

9. Dominant wavelength → Not significantly different



## Conclusion

We would like to EOL device LTP-305(G, Y, HR) and LTP-335S, due to the P/N produced with butterfly wire bonding by AB559 machine, but key spare part of AB559 were obsoleted and can't buy anymore from ASM and market. So we will propose new device P/N as below with same appearance, function and improved luminous intensity.

EOL	Replacement to
LTP-305G ➡	LTP-305KG
LTP-305Y ➡	No propose (This device not ever build)
LTP-305HR ➡	LTP-305KE
LTP-335S ➡	LTP-335KD