

Product Change Notice

Issue Date: 28-October-2022

Change Description:

New dice replacement for Leadframe Seven Segment Display and Annunciator.

Parts Affected:

Group I (Green)

HDSP-4850	HDSP-3600	HDSP-5623	HDSP-A513	HDSP-H513
HDSP-4850-HI000	HDSP-3601	HDSP-5623-GH000	HDSP-A901	HDSP-H513-GH000
HDSP-4850-HIC00	HDSP-4600	HDSP-7801	HDSP-A903	HDSP-K511
HLMP-2500	HDSP-4601	HDSP-7801-JK000	HDSP-F501	HDSP-K511-GH000
HLMP-2500-FG000	HDSP-4603	HDSP-7801-KK000	HDSP-F501-JK000	HDSP-K513
HLMP-2550	HDSP-4603-IJ000	HDSP-7803	HDSP-F503	HDSP-K513-GH000
HLMP-2550-FG000	HDSP-5601	HDSP-7803-JK000	HDSP-F503-JK000	HDSP-U501
HLMP-2800	HDSP-5601-GH000	HDSP-7803-JKC00	HDSP-F503-JK016	HDSP-U501-JOC00
HLMP-2820	HDSP-5603	HDSP-7807	HDSP-F511	HDSP-U501-KL000
HLMP-2820-FG000	HDSP-5603-GH000	HDSP-7808	HDSP-F511-IJ000	HDSP-U503
HLMP-2855	HDSP-5607	HDSP-8601	HDSP-F511-IJC00	HDSP-U503-KL000
HLMP-2855-FG000	HDSP-5607-GH000	HDSP-8601-EF000	HDSP-F513	HDSP-U511
HLMP-2870	HDSP-5608	HDSP-8603	HDSP-F513-IJ000	HDSP-U511-KL000
HLMP-2870-FG000	HDSP-5621	HDSP-8603-EF000	HDSP-H511	HDSP-U513
HLMP-2885	HDSP-5621-GH000	HDSP-A511	HDSP-H511-GH000	HDSP-U513-KL000
HLMP-2885-FG000	HDSP-5621-GH400	HDSP-A511-JK000		

Group II (Red)

HDSP-4830	5082-7651	HDSP-5507-GH000	HDSP-7507	HDSP-F213-DE000
HDSP-4830-GH000	5082-7651-DE000	HDSP-5508	HDSP-7508	HDSP-F213-EF000
HDSP-4830-HH000	5082-7653	HDSP-5508-GH000	HDSP-7511	HDSP-H211
HLMP-2300	5082-7653-DE000	HDSP-5521	HDSP-7511-CD000	HDSP-H211-GH000
HLMP-2300-EF000	HDSP-3351	HDSP-5521-GG000	HDSP-7513	HDSP-H213
HLMP-2350	HDSP-3353	HDSP-5521-GH000	HDSP-7513-CD000	HDSP-H213-GH000
HLMP-2350-EF000	HDSP-3901	HDSP-5523	HDSP-7517	HDSP-K211
HLMP-2600	HDSP-3901-EF000	HDSP-5523-GH000	HDSP-A211	HDSP-K211-GH000
HLMP-2620	HDSP-3903	HDSP-5551	HDSP-A213	HDSP-K213
HLMP-2620-EF000	HDSP-3903-EF000	HDSP-5553	HDSP-A213-CD000	HDSP-K213-GH000
HLMP-2655	HDSP-5501	HDSP-5553-BC000	HDSP-F201	HDSP-U201
HLMP-2655-EF000	HDSP-5501-GG000	HDSP-5558	HDSP-F201-DE000	HDSP-U203
HLMP-2670	HDSP-5501-GH000	HDSP-7501	HDSP-F203	HDSP-U203-CD000
HLMP-2685	HDSP-5503	HDSP-7501-CD000	HDSP-F203-DE000	HDSP-U211
HLMP-2685-EF000	HDSP-5503-GG000	HDSP-7501-CDZ00	HDSP-F207	HDSP-U211-CD000
5082-7610	HDSP-5503-GH000	HDSP-7503	HDSP-F211	HDSP-U213



Group II (Red) cont.

5082-7611	HDSP-5507	HDSP-7503-CD000	HDSP-F211-DE000	HDSP-U213-CD000
5082-7611-DE000	HDSP-5507-GG000	HDSP-7503-DD000	HDSP-F213	QDSP-U221-DE000
5082-7650				

Group III (Multicolor/ Bicolor)

HDSP-4832 (Red/Yellow/Green)
HDSP-4836 (Red/Yellow/Green)
QLCP-M096 (Red/Yellow/Green)
HLMP-2950 (Red/ Yellow)
HLMP-2965 (Red/Green)

Description and Extent of Change:

The new die (AlInGaP) will replace current die (GaP) for part numbers above.

Reasons for Change:

1. Supply of assurance.
2. Obsolescence of existing Epi by dice supplier (Yellow color).

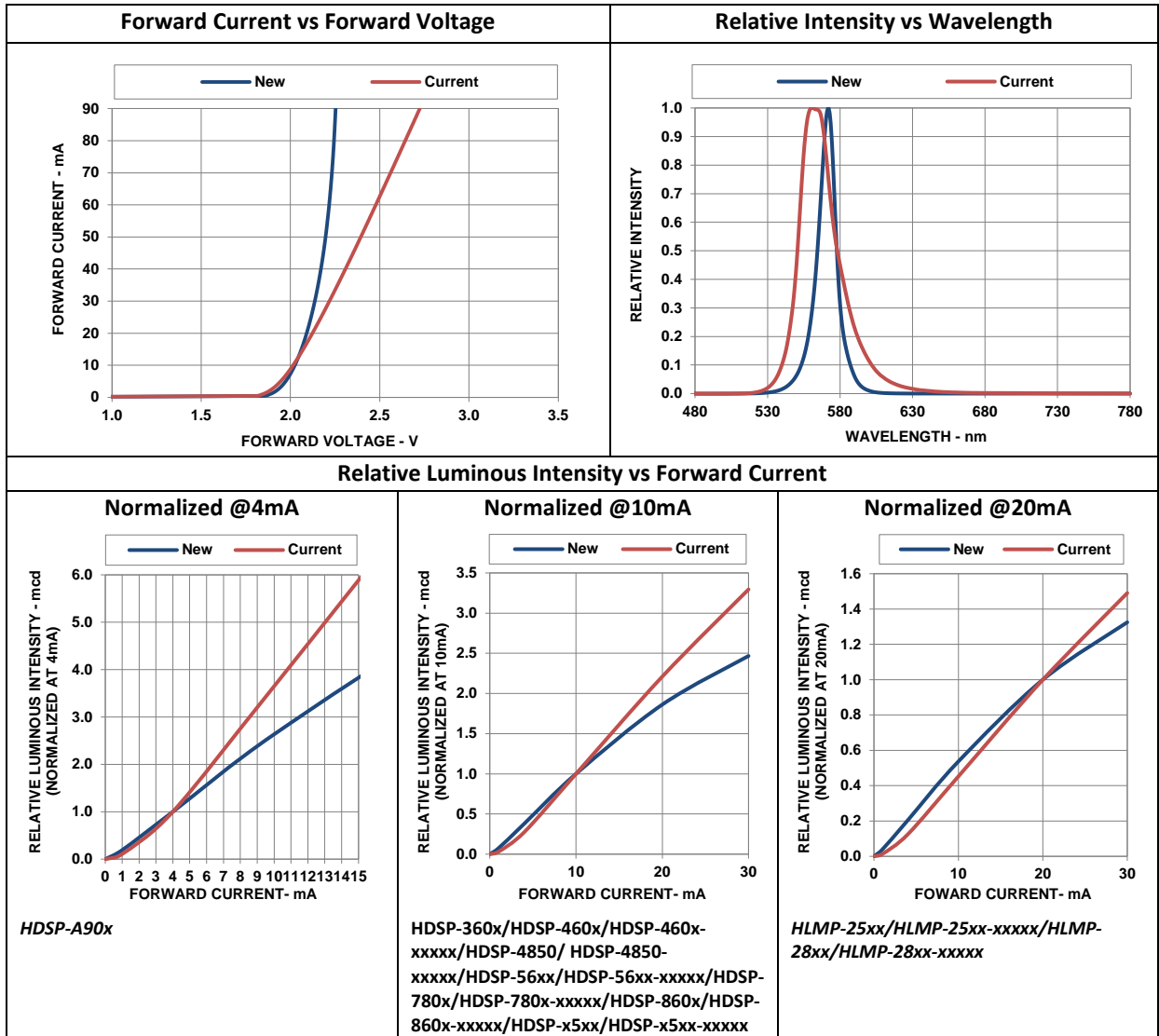
Effect of Change on Fit, Form, Function, Quality, or Reliability:

There is no change in the product fit & form.

Following are changes in product characteristic:

1. Forward Current vs Forward Voltage
2. Relative Intensity vs Wavelength
3. Relative Intensity vs Forward Current
4. Peak forward current
5. 1 to 5 lv bin higher with the new die source

Group I (Green)



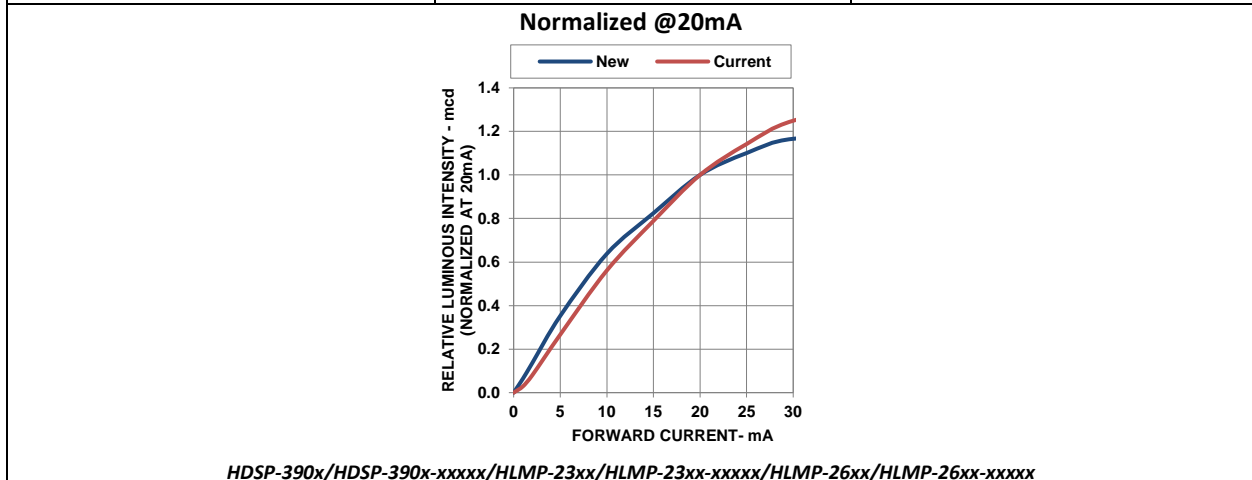
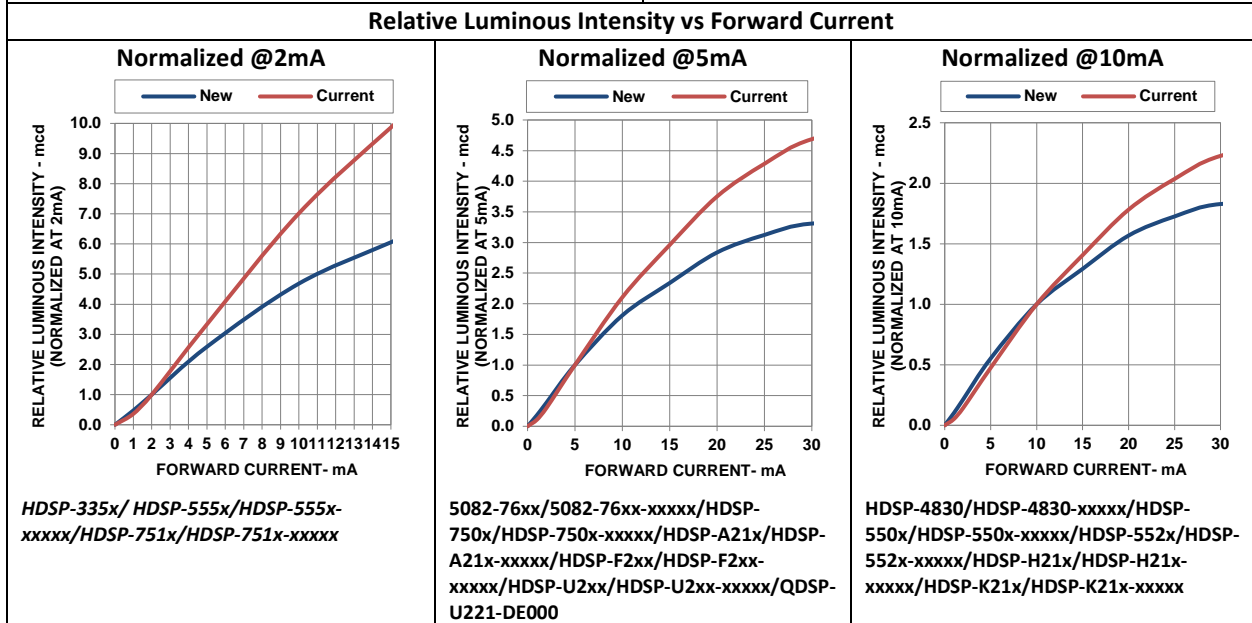
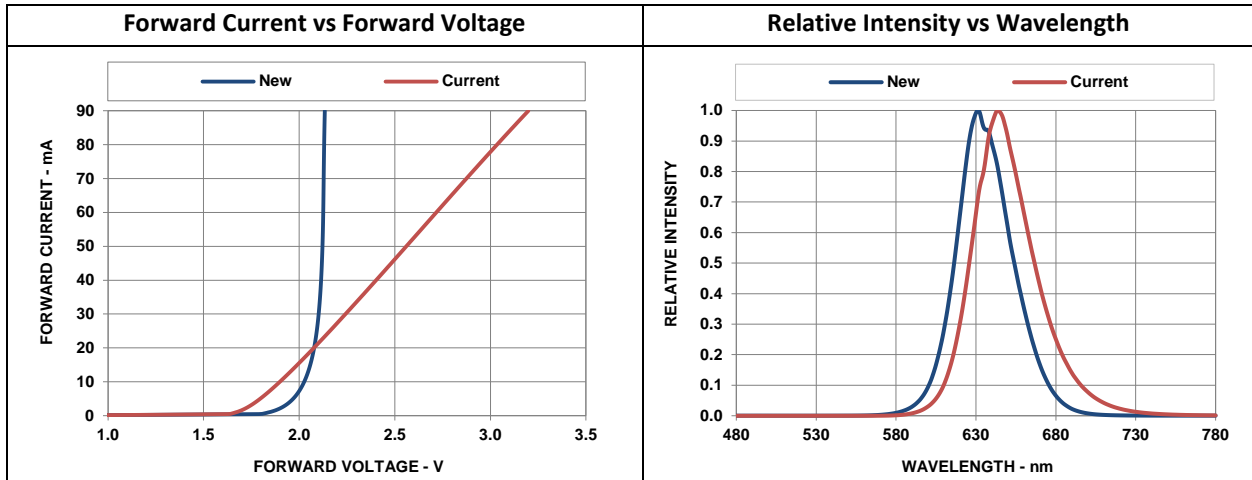
Part#	Peak forward current	
	Current die	New die
HDSP-A90x	45mA	90mA
HDSP-360x/HDSP-460x/HDSP-460x-xxxxx/HDSP-4850/ HDSP-4850-xxxxx/HDSP-56xx/HDSP-56xx-xxxxx/HDSP-780x/HDSP-780x-xxxxx/HDSP-860x/HDSP-860x-xxxxx/HDSP-x5xx/HDSP-x5xx-xxxxx/ HLMP-25xx/HLMP-25xx-xxxxx/HLMP-28xx/HLMP-28xx-xxxxx	90mA	90mA



Option part # (Current die) will be replaced with option part # (New die) once the PCN is effective and / inventory of current die is fully depleted. Information on option part # (New die) is as tabulated per table below:

Option part # (Current die)	Option part # (New die)
HDSP-4850-HI000	HDSP-4850-JK000
HDSP-4850-HIC00	HDSP-4850-JKC00
HLMP-2500-FG000	HLMP-2500-GH000
HLMP-2550-FG000	HLMP-2550-GH000
HLMP-2820-FG000	HLMP-2820-GH000
HLMP-2855-FG000	HLMP-2855-GH000
HLMP-2870-FG000	HLMP-2870-HI000
HLMP-2885-FG000	HLMP-2885-HI000
HDSP-4603-IJ000	HDSP-4603-KL000
HDSP-5601-GH000	HDSP-5601-IJ000
HDSP-5603-GH000	HDSP-5603-IJ000
HDSP-5607-GH000	HDSP-5607-IJ000
HDSP-5621-GH000	HDSP-5621-IJ000
HDSP-5621-GH400	HDSP-5621-IJ400
HDSP-5623-GH000	HDSP-5623-IJ000
HDSP-7801-JK000	HDSP-7801-LM000
HDSP-7801-KK000	HDSP-7801-MM000
HDSP-7803-JK000	HDSP-7803-LM000
HDSP-7803-JKC00	HDSP-7803-LMC00
HDSP-8601-EF000	HDSP-8601-GH000
HDSP-8603-EF000	HDSP-8603-GH000
HDSP-A511-JK000	HDSP-A511-LM000
HDSP-F501-JK000	HDSP-F501-LM000
HDSP-F503-JK000	HDSP-F503-LM000
HDSP-F503-JK016	HDSP-F503-LM016
HDSP-F511-IJ000	HDSP-F511-LM000
HDSP-F511-IJC00	HDSP-F511-LMC00
HDSP-F513-IJ000	HDSP-F513-LM000
HDSP-H511-GH000	HDSP-H511-IJ000
HDSP-H513-GH000	HDSP-H513-IJ000
HDSP-K511-GH000	HDSP-K511-IJ000
HDSP-K513-GH000	HDSP-K513-IJ000
HDSP-U501-JOC00	HDSP-U501-LOC00
HDSP-U501-KL000	HDSP-U501-MN000
HDSP-U503-KL000	HDSP-U503-MN000
HDSP-U511-KL000	HDSP-U511-MN000
HDSP-U513-KL000	HDSP-U513-MN000

Group II (Red)



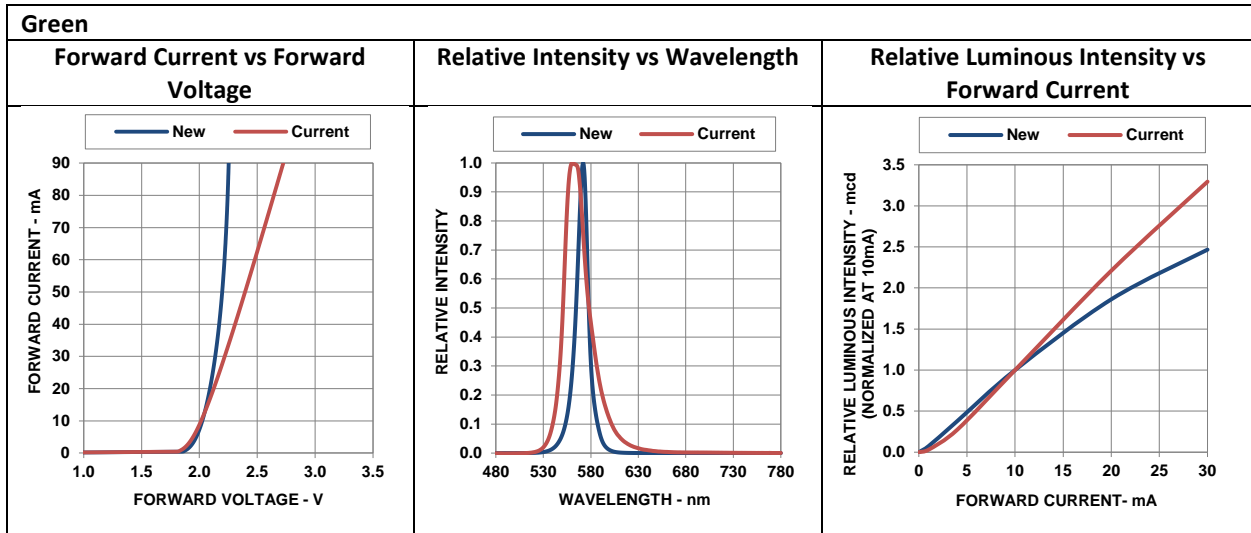
Part#	Vf max		Peak forward current	
	Current die	New die	Current die	New die
HDSP-335x/ HDSP-555x/HDSP-555x-xxxxx/HDSP-751x/HDSP-751x-xxxxx	2.5V@20mA	2.5V@20mA	45mA	90mA
HDSP-390x/HDSP-390x-xxxxx	3.5V@100mA	2.5V@20mA	135mA	90mA
5082-76xx/5082-76xx-xxxxx/HDSP-750x/HDSP-750x-xxxxx/HDSP-A21x/HDSP-A21x-xxxxx/HDSP-F2xx/HDSP-F2xx-xxxxx/HDSP-U2xx/HDSP-U2xx-xxxxx/QDSP-U221-DE000/HDSP-4830/HDSP-4830-xxxxx/HDSP-550x/HDSP-550x-xxxxx/HDSP-552x/HDSP-552x-xxxxx/HDSP-H21x/HDSP-H21x-xxxxx/HDSP-K21x/HDSP-K21x-xxxxx	2.5V@20mA	2.5V@20mA	90mA	90mA
HLMP-23xx/HLMP-23xx-xxxxx/HLMP-26xx/HLMP-26xx-xxxxx	2.6V@20mA	2.6V@20mA	90mA	90mA

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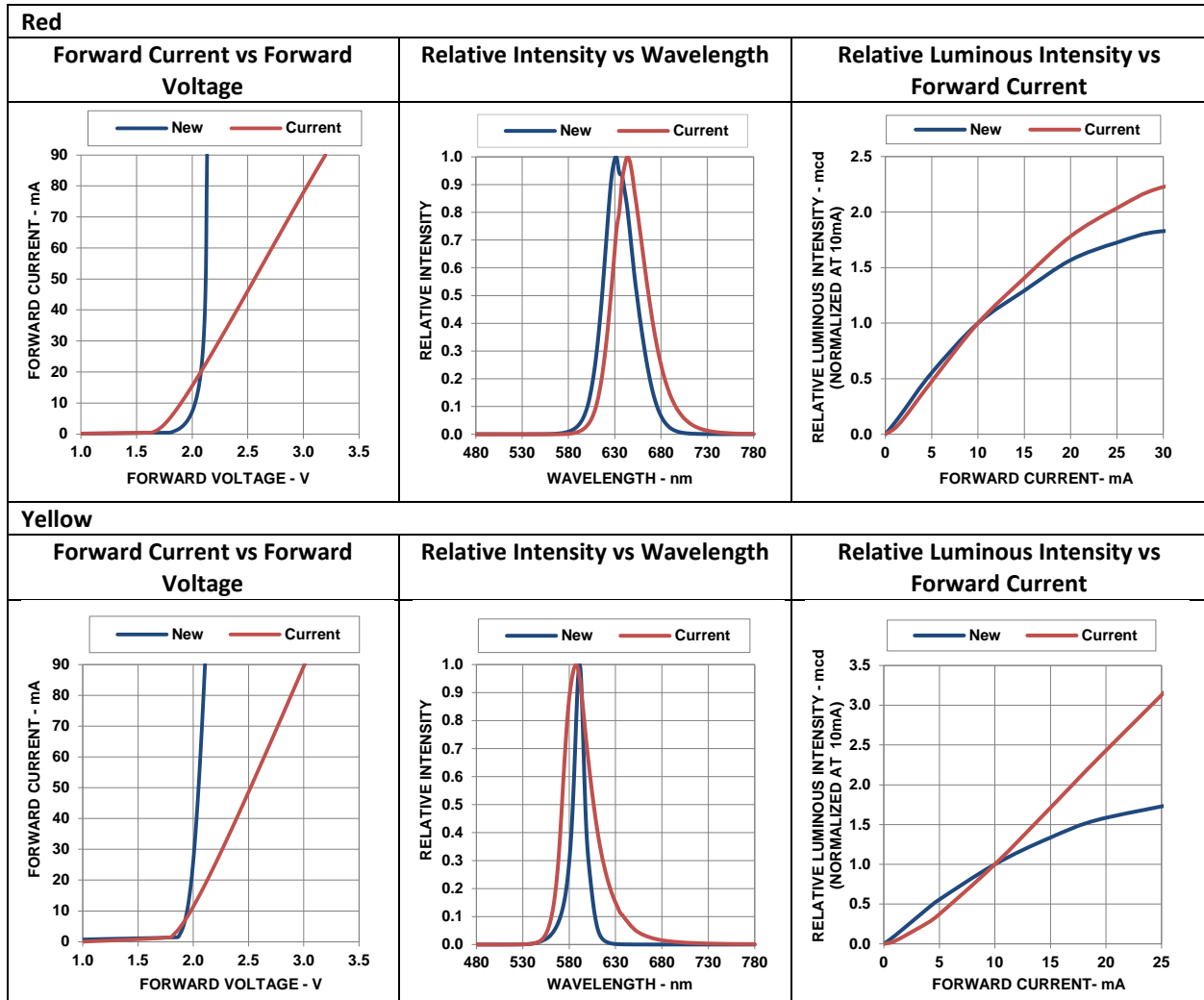
Option part # (Current die)	Option part # (New die)
HDSP-4830-GH000	HDSP-4830-JK000
HDSP-4830-HH000	HDSP-4830-JJ000
HLMP-2300-EF000	HLMP-2300-GH000
HLMP-2350-EF000	HLMP-2350-GH000
HLMP-2620-EF000	HLMP-2620-FG000
HLMP-2655-EF000	HLMP-2655-FG000
HLMP-2685-EF000	HLMP-2685-GH000
5082-7611-DE000	5082-7611-GH000
5082-7651-DE000	5082-7651-GH000
5082-7653-DE000	5082-7653-GH000
HDSP-3901-EF000	HDSP-3901-FG000
HDSP-3903-EF000	HDSP-3903-FG000
HDSP-5501-GG000	HDSP-5501-JJ000
HDSP-5501-GH000	HDSP-5501-IJ000
HDSP-5503-GG000	HDSP-5503-JJ000
HDSP-5503-GH000	HDSP-5503-IJ000
HDSP-5507-GG000	HDSP-5507-JJ000
HDSP-5507-GH000	HDSP-5507-IJ000
HDSP-5508-GH000	HDSP-5508-IJ000
HDSP-5521-GG000	HDSP-5521-JJ000
HDSP-5521-GH000	HDSP-5521-JK000
HDSP-5523-GH000	HDSP-5523-JK000
HDSP-5553-BC000	HDSP-5553-FG000
HDSP-7501-CD000	HDSP-7501-GH000
HDSP-7501-CDZ00	HDSP-7501-GHZ00
HDSP-7503-CD000	HDSP-7503-GH000
HDSP-7503-DD000	HDSP-7503-HH000
HDSP-7511-CD000	HDSP-7511-HI000

Group II (Red) Option part # cont.

HDSP-7513-CD000	HDSP-7513-HI000
HDSP-A213-CD000	HDSP-A213-GH000
HDSP-F201-DE000	HDSP-F201-HI000
HDSP-F203-DE000	HDSP-F203-HI000
HDSP-F211-DE000	HDSP-F211-HI000
HDSP-F213-DE000	HDSP-F213-HI000
HDSP-F213-EF000	HDSP-F213-HI000
HDSP-H211-GH000	HDSP-H211-IJ000
HDSP-H213-GH000	HDSP-H213-IJ000
HDSP-K211-GH000	HDSP-K211-IJ000
HDSP-K213-GH000	HDSP-K213-IJ000
HDSP-U203-CD000	HDSP-U203-HI000
HDSP-U211-CD000	HDSP-U211-GH000
HDSP-U213-CD000	HDSP-U213-GH000
QDSP-U221-DE000	QDSP-U221-GH000

Group III (Multicolor/ Bicolor)


Group III (Multicolor/ Bicolor) cont.

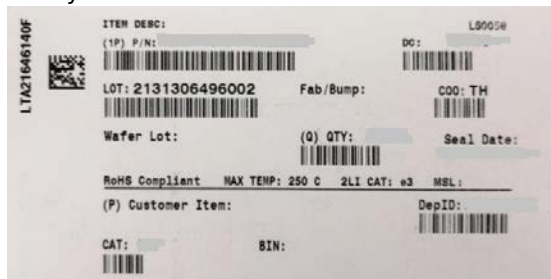


Effective Date of Change:

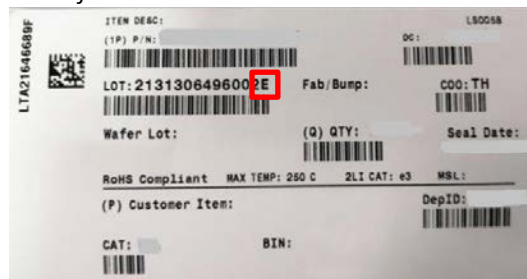
Shipment may contain product from current die and new die starting 31st January 2023 until the inventory of current die is fully depleted. There will be no mixed die within the same tube/ lot.

Part identification:

Label for current die



Label for new die



Prefix "E" will be added to the Lot number

Qualification Data:

Reliability Test	Stress Condition	Result
Temperature Cycle	-55°C /100°C;15 5 15min -40°C /85°C;15 5 15min	100x (PASSED)
Temperature Humidity Operating Life	85°C/85%RH; 17mA(Yellow) 85°C/85%RH; 13mA(Green) 85°C/85%RH; 15mA(Red)	500hrs (PASSED)
High Temperature Operating Life	55°C; 20mA (Yellow) 55°C; 25mA (Green) 55°C; 30mA (Red)	1000hrs (PASSED)
Temperature Humidity Storage Life	85°C/85%RH	1000hrs (PASSED)
Low Temperature Operating Life	-40°C; 20mA (Yellow) -40°C; 30mA (Green) -40°C; 40mA (Red)	1000hrs (PASSED)

Please contact your Broadcom field sales engineer or Contact Center for any questions or support requirements. Please acknowledge the receipt of the notice within 30 days of delivery. Lack of acknowledgement within 30 days constitutes acceptance of the change per JEDEC J-STD-046.