PCN-294003

Product Change Notice

Issue Date: 3-Nov-2026

Change Description:

To use a different source IC from alternative wafer fab and LED from the same manufacturing site.

Parts Affected:

HCPL-7800-000E, HCPL-7800-300E, HCPL-7800-500E
HCPL-7800A-000E, HCPL-7800A-300E, HCPL-7800A-500E
HCPL-7840-000E, HCPL-7840-060E, HCPL-7840-300E, HCPL-7840-500E, HCPL-7840-560E
QCPL-7847-000E, QCPL-7847-300E, QCPL-7847-500E
QCPL-RB5C-000E, QCPL-RB5C-300E, QCPL-RB5C-500E

Description and Extent of Change:

All electrical specifications and physical characteristics remain unchanged except for the parameters listed below.

Parameters	Symbol	Unit	Existing IC	New IC	Remarks
Mold Compound (Color)	-	-	White	Black	Product performance is similar to existing IC except for the appearance.
Recommended Operating Ambient Temperature	Ta	℃	-40 to 85	-40 to 105	Wider operating temperature
Maximum Input Voltage before V_{OUT} Clipping	$\lvert V_{IN+} \rvert_{MAX}$	mV	308	313	
Typical Input Supply Current	I_{DD1}	mA	10.86	9.2	
Maximum Input Supply Current		mA	16	15.5	
Typical Output Supply Current	I_{DD2}	mA	11.56	7.5	
Maximum Output Supply Current		mA	16	15.5	
Typical Input Offset Drift	$\lvert dV_{OS}/dT_A \rvert$	µV/℃	3.0	1.5	
Typical 200mV Nonlinearity	NL_{200}	%	0.0037	0.021	
Typical 200mV Nonlinearity Drift	$\lvert dNL_{200}/dT \rvert$	%/℃	0.0002	0.00003	
Typical 100mV Nonlinearity	NL_{100}	%	0.0027	0.011	
Typical Input Current	I_{IN+}	µA	-0.5	-0.7	
Typical Input Current Drift	$\lvert dI_{IN+}/dT \rvert$	nA/℃	0.45	0.13	
Typical Output Short-Circuit Current	$\lvert I_{OSC} \rvert$	mA	18.6	16	
Typical Output Resistance	R_{OUT}	Ω	15	1.26	
Typical Output Noise	N_{OUT}	mV_{RMS}	31.5	3	V_{IN+} = V_{IN-} = GND1, Bandwidth = 100kHz for the new IC.
Typical Input DC Common-Mode Rejection Ratio	$CMRR_{IN}$	dB	76	80	
Typical Power Supply Rejection	PSR	-	170mV_{RMS}	-80dB	100mVpp, 10kHz ripple is applied to both V_{DD1} and V_{DD2} for the new IC.

Reasons for Change:
To have a different source IC from alternative wafer fab and LED from the same manufacturing site as part of Business Continuity Plan.

Effect of Change on Fit, Form, Function, Quality, or Reliability:
Both quality and reliability of the affected parts are assured.

Effective Date of Change:
Product shipments using this change will begin with date-code starting from 2708 [YYWW].

Qualification Data:
Qualification Data has been generated and approved.

Software / Firmware Update:
No software or firmware updates are required because of this change.

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.